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January 30, 2009

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
ON THE PHASE IV: FINAL EIR/FACILITIES PLAN

PROJECT NAME : Comprehensive Wastewater Management Plan  
PROJECT MUNICIPALITY : Tyngsborough  
PROJECT WATERSHED : Merrimack  
EOEA NUMBER : 11788  
PROJECT PROPONENT : **Town of Tyngsborough**  
DATE NOTICED IN MONITOR : December 24, 2008

As Secretary of the Executive Office of Energy and Environmental Affairs (EEA), I hereby determine that the Phase IV: Final Environmental Impact Report (EIR)/Comprehensive Wastewater Management Plan (CWMP) submitted for this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00).

Project Description

This project involves the development of a town-wide CWMP for Tyngsborough. The goal of the CWMP is to examine the full range of wastewater management needs and identify environmentally sustainable treatment and disposal alternatives that respond to the community's needs while meeting water quality and public health standards. The Town has identified alleviating non-point source pollution, protecting water quality, and promoting groundwater recharge as priorities. The Final EIR presents a recommended wastewater management plan that outlines how the Town of Tyngsborough will treat and dispose of its wastewater over the next 20 years.

Currently, one-third of the Town's wastewater management needs are met through existing sewers in the areas of Mascuppic Lake, Dunstable Road and the southern end of Pawtucket Boulevard. The Tyngsborough Sewer Commission is responsible for administering, maintaining, and operating these sewage collection systems. Sewage is conveyed from Tyngsborough to the Lowell Regional Wastewater Utility (LRWU) for treatment via sewage collection systems Dracut, Chelmsford and Lowell. Wastewater flow limits are established through intermunicipal agreements (IMAs) with each of these communities. The remaining two thirds of the wastewater management needs are met through on-site systems located throughout the town. Seventy percent of the Town's water needs are met through local aquifers and, as noted previously, protection of groundwater resources is an important priority of the CWMP.

The Final EIR concludes that the Town should manage existing and future wastewater needs through a combination of sewer extensions and continued use of on-site disposal systems. The Town is proposing to extend sewers within seven of the Needs Areas, and convey wastewater flows to the LRWU for treatment and discharge, subject to the limitations contained in the IMAs. The Final Plan has been refined since the filing of the previous document and indicates that the project will include construction of more than 93,000 linear feet (lf) of sewers (gravity and low pressure), over 10,000 lf of force mains, 4 new pump stations (and 1 expanded pump station) and 161 low-pressure pump stations.<sup>1</sup> The current cost estimate for the plan is \$39.1 million dollars. The construction of wastewater infrastructure is proposed in the following phases: Phase 1: 2009 - 2013, Phase 2: 2011 - 2015, Phase 3: 2015 – 2018, Phase 4: 2019 to 2022, Phase 5: 2023 to 2025 and Phase 6: 2026 to 2028.

### Procedural History

In the fall of 1998, the Town of Tyngsborough filed an Environmental Notification Form (ENF) for the CWMP. In December of that year, a Certificate on the ENF was issued defining a Special Review Procedure (SRP) for the CWMP and allowing a portion of the proposed plan, east of the Merrimack River, to proceed as Phase I prior to completion of the EIR for the overall project. On April 6, 2001, a Certificate was issued on a Notice of Project Change (NPC) granting the Town's request to add a section of sewers to the Phase I project to support the development of Sycamore Networks, a campus-style office park off Potash Hill Road.

The SRP required the Town of Tyngsborough to file four documents. Phase I: Needs and Growth Management Analysis included an assessment of existing conditions and an analysis of wastewater management needs. On May 15, 2003, a Certificate was issued on the Phase I document which indicated that it adequately and properly complied with MEPA regulations and established the Scope for the Phase II document. Phase II: Screening of Alternatives included the development and screening of water resources and wastewater management alternatives to address

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<sup>1</sup> These estimates are based on data provided in Table 4-6 Estimated Project Costs.

the needs defined in the Phase I document. The report assessed 10 potential sites for locating wastewater management facilities and concluded that none of these sites were appropriate for one or several of the following reasons: soils (moderate to severe), land use restrictions (many sites are under conservation restrictions), water supply impacts (many are located within Interim Wellhead Protection Areas (IWPA)) or other environmental impacts (endangered species habitat, proximity to surface waters). On July 28, 2006, a Certificate was issued on the Phase II document which indicated that it adequately and properly complied with MEPA, required the Town to re-evaluate some of the sites that were proposed to be sewer and directed the Town to prepare and submit the Phase III: Draft EIR/Facilities Plan. The Draft EIR/Facilities Plan was filed in June 2008. It provided additional analysis of the options for wastewater management and presented a draft plan. On August 1, 2008, a Certificate was issued on the Phase III document which indicated that it adequately and properly complied with MEPA and its implementing regulations. The Scope for the Final EIR consisted primarily of responding to comments raised by state agencies.

### Permits and Jurisdiction

The project is undergoing MEPA review and subject to preparation of a mandatory EIR pursuant to Section 11.03 (5)(a)(3) because it requires a state agency action and will include construction of one or more new sewer mains ten or more miles in length. It will require Sewer Extension and Connection permits from the Department of Environmental Protection (MassDEP) and review by the Natural Heritage and Endangered Species Program (NHESP). It may require a Chapter 91 License and a 401 Water Quality Certificate from MassDEP, Construction Access Permits from the Massachusetts Highway Department (MHD) and review by the Massachusetts Historical Commission (MHC). Work proposed on conservation land is subject to the EEA Article 97 Policy.

The project will require Orders of Conditions from the Tyngsborough Conservation Commission (and a Superseding Order of Conditions from MassDEP if the local Order is appealed). In addition, it may require National Pollutant Discharge Elimination System (NPDES) permits from the U.S. Environmental Protection Agency (EPA).

Because the project will receive funding or financial assistance from MassDEP through the State Revolving Fund (SRF), MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment as defined in the MEPA regulations.

### Review of the Phase IV: Final EIR/CWMP

The Final EIR provides a final plan for wastewater management, identifies associated potential environmental impacts, identifies measures to minimize environmental impacts and includes responses to comments on the previous document. It indicates that environmental

impacts associated with this project are minimized because the majority of work will take place within existing roadways. It includes a separate section on mitigation measures, including draft Section 61 Findings for state permits, and a summary table of proposed mitigation. Comments from MassDEP indicate that the proposed wastewater management plan is reasonable and appropriate and identify issues that should be addressed in project permitting. Comments from NHESP identify rare species that may be affected by the project and identify project elements that will be or may be subject to its review.

The report identifies sewer capacity available through existing intermunicipal agreements (IMAs) and describes associated flow limits. Total available capacity within existing IMAs is 1,430,000 gallons per day (gpd) and existing flows are estimated at 458,000 gpd. Remaining capacity for existing sewered areas and needs areas is 972,000 gpd. Projected wastewater flow based on full build-out is 1,775,200 gpd which exceeds the current available capacity of 1,430,000 gpd in the IMAs.

Based on the review of alternatives and technologies and the site selection analysis, the report identifies expansion of the existing sewer system for seven of the study areas and use of on-site wastewater disposal systems for the remaining areas. Expansion of the sewer system is proposed for:

- Needs Area 1 – Norris Road;<sup>2</sup>
- Needs Area 2 - Merrimack East;
- Needs Area 6 - Althea Lake;
- Needs Area 7 - Merrimack West;
- Needs Area 8 - Middlesex North;
- Needs Area 9 – Locust North;<sup>3</sup> and
- Needs Area 11 - Flint Pond.

Corresponding flow allocations have been developed for each of the IMAs and are included in a table below. To ensure that flow limits will not be exceeded, the Town will establish sewer districts and require monitoring and reporting of flows when 75% to 80% of the IMA capacity is allocated. The Town will develop and implement Septage Management Plans (SMPs) to effectively track and manage the construction, operation, and maintenance of these systems for areas that will continue to depend on them. The Final EIR includes a general description of proposed sewer districts and SMPs but does not identify specifically how these programs will be developed and implemented.

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2 Sewering is limited to the south central portion (Sunset Park) of the Needs Area.

3 Sewering is limited to the area east of Route Three within this Needs Area.

### Proposed Flow Allocations to Intermunicipal Agreements

IMA	IMA Capacity	Average Existing Flows	Available Capacity	Allocated Flow for Existing Sewered Areas	Allocated Flow for Needs Areas
North Chelmsford	350,000	56,000	294,000	184,000	110,000
Dracut	1,000,000	382,000	618,000	171,585	446,515
Lowell	80,000	20,000	60,000	45,489	14,511
<b>TOTAL</b>	<b>1,430,000</b>	<b>458,000</b>	<b>972,000</b>	<b>401,074</b>	<b>571,026</b>

To minimize extraneous clean water (Infiltration/Inflow (I/I)) within the system and to secure additional capacity, the Town is continuing efforts to study sources of I/I and develop a plan to eliminate sources of I/I. The Town has been approved by MassDEP for funding to build on its October 2002 I/I study and further evaluate I/I within the Mascuppic Trail, Willowdale Avenue and Elm Street areas. The Final EIR includes a Scope of Work for this effort which includes continuous flow metering, rainfall monitoring, ground water modeling and analysis of the data to estimate the amount of I/I within these systems.

Comments from MassDEP indicate that prior to permitting each phase of the project, it will review current information on wastewater flows which must demonstrate that sufficient capacity remains within the Town's IMA to allow for the connection of new flows. MassDEP comments express support for establishment of sewer districts and implementation of SMPs to ensure the effectiveness of the wastewater management program and recommends that the proponent consider institution of a sewer district earlier in the implementation phase. The Town should provide a draft of these plans to MassDEP for review prior to implementation.

The Final EIR identifies proposed sewer alignments that extend into the Zone I, Zone II and Interim Wellhead Protection Areas (IWPAs) of public water supplies. The Final EIR does not provide confirmation that any extensions into Zone I areas are necessary to eliminate existing sources of pollution in accordance with 314 CMR 7.06(3). MassDEP comments indicate that the Town will need to provide documentation that these extensions are necessary to abate *existing* public health risks and that there are no feasible alternatives to align the sewer outside of the Zone I.

*Wetlands*

The Final EIR identifies potential impacts to wetland resource areas, describes the nature of the impacts (temporary or permanent) and identifies the areas of proposed construction in the vicinity of the wetlands on a site plan at a readable scale. Work is proposed within the buffer zone to wetlands, riverfront area, 100-year floodplain and within rare species habitat. Measures to avoid, minimize and mitigate impacts include avoiding impacts by locating infrastructure within existing roadways, locating pump stations in previously disturbed areas and/or as far from streams as possible, use of erosion controls during construction, installation of stormwater management systems to minimize runoff and restoration of disturbed areas. Sewers located within the 100-year floodplain will include manholes with rim elevations at or above the 100-year floodplain or, where this is not feasible, will include watertight covers and frames as well as waterproofing material. Phase 2 will include installation of a twin force main under the Merrimack River. To avoid and minimize impacts, the force mains will be installed with directional drilling.

*Rare Species*

The Draft EIR included a water balance impact analysis, as required. The Merrimack River watershed has been identified as a non-stressed basin. The analysis indicated that under full build-out there will continue to be an export of water out of the Needs Areas within the Merrimack River watershed although the water will remain within the watershed. The analysis assumes that all developed and developable lots in Tyngsborough are or will become customers of the municipal water system. The Final EIR confirms that the Town will coordinate water supply and wastewater planning and, as requested by NHESP, includes additional information regarding assumptions included in the water balance impact analysis.

Since the filing of the Phase III document, the 13<sup>th</sup> Edition of the MA Natural Heritage Atlas was issued (effective October 1, 2008). According to comments from NHESP, Needs Areas 2, 6, 7, 8, 9, 10, and 11 are located within Priority and Estimated Habitat. NHESP continues to express concern that extension of the sewer system has the potential to affect the hydrology within the sub-basins of the watershed, which may affect state-listed species and their habitats; however, these comments acknowledge that, to the extent that new development is served by municipal water as proposed, these impacts would be avoided.

NHESP comments reiterate that construction or replacement of sewer lines and septic systems is exempt from the Massachusetts Endangered Species Act (MESA) review pursuant to 321 CMR 10.14(6) and 10.14(5). They indicate that only portions of the proposed project that require review are the construction of the Middlesex Road Pump Station, the River Road Pump Station and the construction of the entrance and/or exit pit associated with the directional drilling below the Merrimack River. In addition, proposed stream crossings located within Priority Habitat may also require MESA review. The proponent should continue consultations with NHESP as the project phases are proposed.

*Article 97 Land*

The Final EIR indicates that the project may impact conservation land which is protected under Article 97 of the Articles of Amendment to the Constitution of the Commonwealth of Massachusetts. Potential impacts area associated with the proposed River Road Pump Station which will be located on town-owned conservation land (the Hunter Property). Other work will occur within roadways near the Lowell/Dracut/Tyngsboro State Forest, the Times Farm Area and the Hunter Property; however, it will not directly impact these properties. The Final EIR indicates that construction of the River Road parcel would impact approximately 7,500 to 10,000 square feet. It indicates that the site was selected to align with the right-of-way on the east side of the Merrimack River for the force main alignment. The Final EIR indicates that a privately owned parcel that abuts the Hunter Parcel could be acquired by the Town for construction of the pump station to avoid impacts to conservation land. In addition, it indicates that the Town has identified a vacant parcel approximately 1,000 feet to the south of the Hunter Parcel that could be acquired and preserved as open space to serve as mitigation for Article 97 impacts. The 1.23 acre parcel would provide mitigation on a greater than 1:1 basis.

Article 97 addresses the high value placed upon the preservation of existing protected open space lands. To further the Commonwealth's open space goals, EEA's Article 97 Land Disposition Policy requires that all feasible options to avoid the transfer/change in use of public land have been examined. The Final EIR does not suggest that location of the pump station on the privately owned parcel is infeasible. As this would avoid impacts to Article 97 land, the proponent should pursue this alternative to avoid impacts to the Hunter Parcel. In the event the Town cannot acquire this or another suitable parcel for location of the pump station, the Town should file a Notice of Project Change (NPC) that addresses the EEA Article 97 Policy in detail and proposes a compensatory mitigation plan.

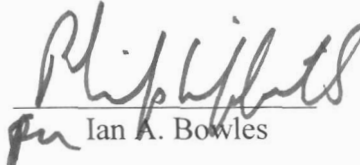
*Greenhouse Gases (GHG)*

The Final EIR does not include an assessment of how greenhouse gas emissions (GHG) associated with the project can be minimized; however, it does include a commitment that the Town will explore opportunities to reduce greenhouse gas emissions by evaluating equipment to optimize energy efficiency. This will include consideration of the use of premium efficiency motors and variable frequency drives as applicable for mechanical equipment such as pumps and HVAC/odor control fans. I strongly encourage the Town to utilize high-efficiency equipment wherever feasible to reduce energy usage and associated GHG emissions.

Conclusion

Based on a review of the Final EIR, consultation with state agencies and a review of comment letters, I hereby determine that the Final EIR adequately and properly complies with MEPA and its implementing regulations. The project may proceed to permitting.

January 30, 2009  
Date



Ian A. Bowles

Comments received:

- 1/23/09      Department of Environmental Protection/Northeast Regional Office (DEP/NERO)
- 1/22/09      Division of Fisheries & Wildlife/Natural Heritage & Endangered Species Program (DFW/NHESP)
- 1/23/09      Northern Middlesex Council of Governments (NMCOG)

IAB/CDB/cdb