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December 7, 2012

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

PROJECT NAME : New Water and Wastewater Solutions
PROJECT MUNICIPALITY : North Reading
PROJECT WATERSHED : Ipswich
EEA NUMBER : 14975
PROJECT PROPONENT : Town of North Reading
DATE NOTICED IN MONITOR : November 7, 2012

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and Section 11.03 of the MEPA Regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of a mandatory Draft Environmental Impact Report (DEIR).

Project Description

As described in the Environmental Notification Form (ENF), the Town of North Reading (the Town) has commenced an investigation of alternative drinking water supply sources outside the Ipswich River basin to provide a reliable and safe long-term water supply. Concurrently, the Town commenced an investigation of alternative wastewater disposal options including alternatives outside the Town and the Ipswich River basin. The Town intends to pursue full-time membership as a Massachusetts Water Resources Authority (MWRA) water system customer. Membership as an MWRA wastewater customer is not a viable option given the capacity constraints on the existing MWRA wastewater treatment system.

According to the ENF, the Town currently withdraws approximately 0.50 million gallons per day (mgd) from its own groundwater wells and purchases approximately 1.0 mgd from the Town of Andover through an Interbasin Transfer Act (IBTA) approval.¹ The Town currently has a 0.96 mgd Water Management Act (WMA) Registration for a withdrawal from the Ipswich River basin. The Town intends to forfeit this WMA Registration to the Massachusetts Department of Environmental Protection (MassDEP) upon approval of MWRA membership and proven ability to utilize MWRA water. Wastewater within the Town is presently treated through the use of on-site septic systems. The Town is seeking alternative discharge and treatment options for approximately 0.50 mgd of wastewater.

Jurisdiction and Permitting

This project is subject to MEPA review and requires the preparation of a mandatory EIR because it requires a State Agency Action and exceeds several MEPA EIR review thresholds including:

- New interbasin transfer of water of 1,000,000 or more gpd or any amount determined to be significant by the Water Resources Commission (301 CMR 11.03(4)(a)(2));
- Provided that the Project is undertaken by an Agency, New water service to a municipality or water district across a municipal boundary through New or existing pipelines, unless a disruption of service emergency is declared in accordance with applicable statutes and regulations (301 CMR 11.03(4)(a)(4));
- Construction of one or more New sewer mains ten or more miles in length (301 CMR 11.03(5)(a)(3)); and
- Provided that the project is undertaken by an Agency, New sewer service to a municipality or sewer district across a municipal boundary through New or existing pipelines, unless an emergency is declared in accordance with applicable statutes and regulations (301 CMR 11.03(5)(a)(4));

The project will require several permits from MassDEP including: a Sewer System Extension, Connection, or Industrial Wastewater permit (BRP WP 55, 71, 74) and an Abandonment of a Water Source permit (BRP WS 36). The project must undergo the Admission of New Community to Waterworks System (OP-10) from the MWRA. The project will also require approval in accordance with the Interbasin Transfer Act (ITA) (M.G.L. c.21 ss. 8B-D; 313 CMR 4.00). The project is also subject to the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol.

It is likely that the project will require Financial Assistance from the State Revolving Fund (SRF) for subsequent planning and construction of all or portions of the project. 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. In the case that the Town can provide proof of non-State funding sources for the

¹ I note that the comment letter from the Town of Andover indicates that the Towns of Andover and North Reading currently have a contract that allows North Reading to purchase up to 1.5 mgd per the Interbasin Transfer Act permit held by North Reading for withdrawal of water from the Merrimack River basin (the watershed from which Andover withdraws its water).

project's components in their entirety, the Town may file a Notice of Project Change (NPC) in accordance with 301 CMR 11.10 with a request to modify the scope for the DEIR.

Review of the ENF

Given the nascent nature of the water supply and wastewater planning processes by the Town, the content of the ENF was relatively limited with regard to quantification of potential environmental impacts and proposed infrastructure improvements. At the MEPA scoping session held on November 14, 2012, the Town expressed concerns regarding the timing and implementation of the two distinct project components: connection to the MWRA water supply and overall community wastewater management. Based upon discussions at this scoping session and upon review of comments received and the MEPA regulations, I am requiring that the Town file a DEIR that addresses the potential environmental impacts of both the water supply and wastewater disposal projects. Data gathered as part of the existing conditions, Needs Area, and environmental constraints analyses will inform the recommended action plans and alternatives analyses for both the water supply and wastewater disposal projects. Upon completion of the DEIR review, the Town may choose to separate the water supply review process from the wastewater disposal review process due to the increased certainty and likelihood of joining the MWRA system prior to determination of the best course of action with regard to wastewater management. At the Town's request, I will consider reviewing an FEIR that addresses the water supply impacts only, with an expectation that an NPC will be filed by the Town when further study is advanced regarding wastewater disposal treatment options.²

SCOPE

General

The DEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this scope.

Project Description and Permitting

The DEIR should include a detailed description of the proposed project. This description should include: a project history, a description of the overall project scope, a discussion of key planning initiatives and reports completed to date regarding water supply planning and wastewater management, and project objectives and goals.

The DEIR should include a description of the existing environment in accordance with 301 CMR 11.07(6)(g). The DEIR should describe proposed conditions for each project alternative to allow for an accurate assessment of potential environmental impacts including, but not limited to, the location of water and sewer mains, the proposed locations of pump stations or other related equipment, and wastewater treatment facilities. These descriptions should encompass all areas of potential project impact, including areas beyond the boundaries of North

² I reserve the right pursuant to 301 CMR 11.08(8)(b)(3) and 301 CMR 11.08(8)(c)(2) to require supplemental review in the form of a Supplemental DEIR or Supplemental FEIR if I find either the DEIR or FEIR to be inadequate

Reading.³ According to MassDEP, the Town intends to update and expand a Draft Comprehensive Wastewater Management Plan (CWMP) (prepared in 2008) as part of the DEIR. The Town also indicated that a water supply and demand management/master plan (Water Master Plan) will be prepared to assess, among other items, water supply demand, conservation measures, and infrastructure requirements. The existing and proposed conditions assessments should be performed consistent with the results of these two planning documents.

The DEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the project will meet those standards. The DEIR should include a list of potentially required State permits, Financial Assistance, or other State approvals associated with completion of any portion of the overall projects components. While design may be conceptual in nature, the Town should use available environmental data to identify areas of impact that may result in permitting requirements beyond the water and wastewater-related permits identified in the ENF (i.e., Massachusetts Endangered Species Act (MESA) permits, Wetlands Protection Act (WPA) permits (e.g., Orders of Conditions, 401 Water Quality Certification), etc.). Additionally, the DEIR should identify any additional MEPA review thresholds not disclosed in the ENF upon review of existing conditions data and the proposed project scope.

Alternatives Analysis

The DEIR should include an alternatives analysis informed by the data gathered as part of the updated and revised Draft CWMP, Water Master Plan, and Town Master Plan processes conducted (or in progress) by the Town and in accordance with 301 CMR 11.07(6)(f). As part of the alternatives analysis, the DEIR should consider combinations of various alternatives to meet project goals. Recommended alternatives for analysis include:

Water Supply Alternatives:

- 1) No-Build Alternative (status quo) – the DEIR should evaluate a No-Build Alternative that assesses impacts associated with maintaining current groundwater withdrawals from Town wells and water purchased from the Town of Andover. This alternative should address the ability of the Town to supply future growth and demand (a period of approximately 20 years) without changes to permitted withdrawal limits. The DEIR should also address reliability concerns expressed in the ENF with regard to both the Town of Andover and the Town's groundwater wells as supply sources;
- 2) In-Town Alternative – the DEIR should evaluate an In-Town Alternative that assesses the ability of the Town to meet current and future water supply demand through groundwater or surface water withdrawals solely from sources within the Town (i.e., no longer sourcing a portion of the water supply from the Town of Andover); and

³ To connect to MWRA infrastructure, work may be required within the Town of Reading. It is unclear from the ENF if any of the wastewater disposal alternatives may include use or modification to infrastructure in other communities.

- 3) MWRA Alternative – the DEIR should evaluate a connection to the MWRA water supply system that assesses the ability of the MWRA to meet current and future water demand for the Town in a manner consistent with the ITA.

Wastewater Disposal Alternatives:

- 1) No-Build Alternative (status quo) – the DEIR should evaluate a No-Build Alternative that assesses impacts associated with maintaining the current wastewater disposal mechanisms (e.g., septic systems) to treat current and future demand for a period of approximately 20 years;
- 2) In-Basin Alternatives – the DEIR should evaluate the use of the following wastewater management technologies located within the Ipswich River basin to meet current and future demand:
 - a. decentralized facilities (including, but not limited to, conventional on-site systems, tight tanks (off-site treatment and disposal); Innovative/Alternative (I/A) systems, and cluster (shared) systems);
 - b. satellite facilities (i.e., groundwater discharge facilities capable of treating an average design flow of up to 150,000 gpd); and
 - c. centralized (groundwater or surface water discharge) capable of treating an average design flow in excess of 150,000 gpd.
- 3) Out-of-Basin Alternatives – the DEIR should evaluate regional facilities located outside the Ipswich River basin capable of treating wastewater generated by the Town to meet current and future demand; and
- 4) Water Reuse Alternatives – the DEIR should evaluate opportunities for use of reclaimed treated wastewater effluent as a means to offset Town water demand.

Interbasin Transfer Act

A connection to the MWRA's water supply triggers the ITA, as the Town is located in the Ipswich River basin and the MWRA's sources are located in the Chicopee and Nashua River basins. As requested in the Water Resources Commission (WRC) comment letter, the DEIR should clarify if the Town intends to undergo MassDEP's formal source decommissioning process for discontinuing use of its existing groundwater sources. If decommissioning will occur, the DEIR should discuss how decommissioning of abandoned wells will be conducted in a manner consistent with MassDEP's *Guidelines for Public Water Systems*. The DEIR should also clarify if the Town intends to discontinue its WRC-approved interbasin transfer from the Town of Andover. The DEIR should provide a clear explanation of the volumes and sources of water to be transferred, and those volumes and sources that will cease to be transferred as requested in the WRC comment letter.

The DEIR should also provide additional details and documentation clarifying if any of the proposed wastewater disposal alternatives will also be subject to ITA review. As noted by the WRC, if the Town gives up its Water Management Act (WMA) registration and decommissions its in-basin source, the WRC would consider this portion of the project to be a secondary transfer not subject to the ITA. Otherwise, the transfer of wastewater originating in the Ipswich River basin to another basin may be subject to ITA review.

The DEIR will serve as the project's ITA application to the WRC. The WRC comment letter includes ITA application scopes for both a Request for Admission to the MWRA and for a Wastewater Transfer (if required, see above). The MWRA will provide the donor basin analysis required as part of the ITA/DEIR review. I hereby incorporate by reference these two ITA scopes into the DEIR scope.

Water Supply

Comment letters received are generally supportive of the Town's proposal to connect to the MWRA's water supply and forfeit its WMA registration of 0.96 mgd. While the MWRA has confirmed capacity to serve the Town's request to purchase approximately 1.5 mgd of water on an annualized basis, additional information is required in the DEIR to evaluate the potential impacts of constructing and operating this new water supply for the Town. The comment letters also note the positive environmental benefits of reducing water withdrawals from the stressed Ipswich River basin. As noted by MassDEP, reducing water withdrawals from the subbasin within which North Readings wells are located will benefit stream flow and habitat conditions. Additionally, currently authorized water withdrawals within the Ipswich River basin are up to 32.8 mgd, 3.4 mgd more than the draft safe yield for the basin. MassDEP indicated that while actual water withdrawal volumes have been significantly lower than allocated volumes, efforts to reduce active allocations below safe yield are needed.

The MWRA's Policy #OP-10 explains the criteria and process the MWRA will use to evaluate a request for admission of a new community to the MWRA water system. The DEIR should discuss, and provide supporting data or documentation as necessary, how the Preferred Alternative will meet the approval criteria outlined in OP-10. I expect that much of this information will overlap with data prepared as part of the Water Master Plan or Draft CWMP. The Town should emphasize existing and expanded water conservation efforts to reduce demand in a manner consistent with the WRC's performance standards. Compliance with the WRC's *Water Conservation Standards* should be addressed as part of the ITA application and included in the DEIR. The DEIR should also discuss plans regarding how the Town will maintain an emergency water supply. Finally, the DEIR should discuss how the project will be consistent with the goals of the State's Sustainable Water Management Initiative (SWMI).

Wastewater

As noted previously, MassDEP reviewed a Draft CWMP prepared by the Town in 2008. The Town is currently evaluating wastewater disposal options for up to 500,000 gpd. The Town has already dismissed an option of connecting to the MWRA sanitary sewer system due to capacity issues within the system. MassDEP directly addressed this issue in a March 10, 2009 letter that was provided as an attachment to the MassDEP comment letter on the ENF. MassDEP acknowledged that an assessment of treatment alternatives that extend beyond the Ipswich River basin is necessary due to the complexities and cost of long-term wastewater management. However, some out-of-basin alternatives will present significant challenges to implementation due to lack of capacity at other regional sewer authorities, impacts to multiple communities, and potential impacts to donor and receiving basins. Integration of drinking water master plans will

be an essential component of any plan to pursue out-of-basin wastewater management and the DEIR analyses should reflect this important relationship.

The Town should develop a detailed scope of work, in consultation with MassDEP, to update and revise the 2008 Draft CWMP. As recommended by MassDEP, the wastewater elements should build upon information developed for the Draft CWMP, and should include, at a minimum the following elements:

- An updated Needs Analysis, including reassessment of the existing and future wastewater flows and loads;
- An Expanded Alternatives Assessment, to include an update and review of the costs and impacts of the in-basin alternatives, and detailed development of out-of-basin alternatives; and
- Development of a recommended plan and schedule for long-term wastewater management facilities, including costs, impacts, permitting requirements, and in the case of any out-of-basin alternative, a discussion of any legal agreements needed to support the such alternatives.

I note the concerns raised by the Ipswich River Watershed Association (IRWA) regarding the potential for increased exportation of wastewater out of the Ipswich River basin. The IRWA strongly supports an in-basin wastewater treatment option. The Town should perform a robust and thorough alternatives analysis to support a recommended wastewater disposal alternative with consideration of long-term costs and benefits to the Town's fiscal and environmental health. I also encourage the Town to consider opportunities associated with hybrid wastewater treatment approaches in its analysis with potential combinations of in-basin and out-of-basin wastewater disposal options. As recommended by the IRWA, the Town should review the efforts and results of water and wastewater planning undertaken by the Town of Wilmington to inform its decision making and planning processes moving forward.

Land Impacts

The DEIR should discuss the potential impacts of the project on Article 97 lands, open space, or other recreational space. As part of the CWMP and/or Water Master Plan processes, the Town will be required to evaluate existing land uses, perform a build-out analysis, and discuss growth management strategies. These data should be presented in the DEIR. The MassDEP comment letter provides guidance and permitting requirements associated with the sale or transfer of any water supply land following well abandonment. The DEIR should address the potential sale or transfer of these properties or present a plan of how water supply protection properties will be managed if certain alternatives are selected.

Wetlands

The DEIR should describe and quantify potential wetland resource areas impacts along the alternative water and wastewater routes in order to provide a comparative understanding of environmental impacts. The DEIR should include plans at a readable scale that depict areas of wetland resource impacts as they relate to all project elements. The DEIR should explain how

the project will be designed to comply with applicable performance standards in the wetlands regulations (310 CMR 10.00) and demonstrate that alteration of wetland resource areas can be either avoided or minimized. If wetlands replication areas will be required, these areas should be identified in the DEIR, areas of impact estimated, and proposed mitigation measures or replication areas provided in accordance with MassDEP *Massachusetts Inland Wetland Replication Guidelines*, March 2002. The DEIR should identify stream crossings along each alternative project route and the nature of the crossing (i.e., bridge span, culvert, etc.). The DEIR should note if culvert upgrades or other modifications to existing stream crossings will be required (or if new crossings are proposed) and confirm that new construction or modifications will meet MassDEP stream crossing requirements. Finally, I strongly encourage the Town to consider placing critical infrastructure outside of flood-prone areas to the maximum extent practicable.

Stormwater

It is not anticipated that the construction of new water or sewer mains will result in large new areas of impervious surfaces. However, the DEIR should describe Best Management Practices (BMPs) that the Town will implement to reduce erosion and manage stormwater runoff during the construction period for each project phase. The DEIR should also discuss stormwater management BMP's proposed for potential pump stations or wastewater management facilities.

Historic and Archaeological Resources

The DEIR should assess whether the project will impact historic resources that are included in the Massachusetts Historical Commission's (MHC) *Inventory of Historic and Archaeological Assets of the Commonwealth* or listed in the State Register of Historic Places. It is likely that various components of the project may be located within and/or adjacent to recorded archeological sites and archaeologically sensitive areas. The Town should continue to consult the *Inventory of Historic and Archeological Assets of the Commonwealth* during the planning and design process. The Town should coordinate with MHC to ensure appropriate review of any potential historic impacts from the project and the DEIR should provide an update on the status of these discussions. If MHC determines that the project will have an "adverse effect" on historic or archaeological resources, the DEIR should include a discussion of proposed mitigation measures the Town will undertake to address the adverse effect.

Rare Species

The Town should consult the Natural Heritage and Endangered Species Program (NHESP) current Natural Heritage Atlas to identify rare species and *Priority* and/or *Estimated Habitat* areas within the community. The DEIR should characterize known rare species, describe the potential impacts of proposed water supply and wastewater alternatives on rare species and their habitats, and evaluate avoidance and mitigation strategies (both permanent impact and temporary construction impacts). The Town should work directly with the NHESP during design advancement and the preparation of the DEIR to identify necessary project construction and post-construction conditions, commitments to avoid an adverse impact to resource area habitats of State-listed rare species located within and adjacent to the project, or

mitigation requirements associated with potential permitting in accordance with the MESA regulations. The DEIR should report on the results of the Town's consultations with NHESP.

Hazardous Materials

The DEIR should assess the potential for contaminated soil and groundwater along the potential water and sewer main routes. The Town is advised that excavating, removing, and/or disposing of contaminated soil, pumping of contaminated groundwater, or working in contaminated media must be done under the provisions of M.G.L. c.21e (and potentially, c.21c) and OSHA. The DEIR should identify disposal sites within the project impact area, disclose the current status of review under the Massachusetts Contingency Plan (MCP), clarify the responsible party under the MCP, and discuss the anticipated schedule and scope of remediation, if necessary to implement the proposed projects. Construction activities conducted at a disposal site should not prevent or impede the implementation of likely assessment or remedial response actions at the site.

Greenhouse Gas Emissions

The project is subject to the MEPA Greenhouse Gas Emissions Policy and Protocol ("the Policy"). The Policy requires projects to quantify carbon dioxide (CO₂) emissions and identify measures to avoid, minimize or mitigate such emissions. The Town will be required to quantify the direct and/or indirect CO₂ emissions associated with the project's stationary source energy usage (e.g., building energy use, process-related energy use, pump stations, etc.) and transportation-related emissions (mobile sources), if applicable. To facilitate this evaluation, the GHG analysis should include a comparison of CO₂ emissions associated with an established project baseline to estimated CO₂ emissions associated with a final build condition that incorporates feasible mitigation measures to reduce CO₂ emissions.

Unlike many projects reviewed under the Policy, water and wastewater treatment process energy loads and subsequent CO₂ emissions play a large role in the overall project's GHG emissions rather than the buildings that contain the facilities themselves. Therefore, the embedded energy in the treatment and distribution systems for pumping, treating, distributing, and possibly pressurizing water and wastewater should be accounted for in the analysis. The Policy directs proponents to use applicable building codes to establish a project emissions baseline that is "code-compliant." However, there is no building energy code equivalent that applies specifically to wastewater treatment facilities (WWTF) or water treatment plants (WTP). Furthermore, there is no readily available energy use model (such as eQUEST) to estimate the projected energy use of these processing energy loads.

Given the estimated volumes of water withdrawal, distribution and treatment, it is appropriate to evaluate and assess potential GHG emissions to identify mitigation measures to reduce overall GHG emissions. It is anticipated that mitigation measures may be limited to equipment selection or operations modifications associated with proposed groundwater wells or MWRA facilities and transmission infrastructure, but the Town may also contemplate upgrades to existing equipment of its water treatment and transmission infrastructure to achieve GHG emissions reductions.

To evaluate potential groundwater water withdrawals, the DEIR should include a GHG analysis that calculates and compares GHG emissions associated with: 1) a Baseline, or Business As Usual case (direct and indirect emissions from energy consumption based upon a typical pumping and treatment design and operations) and 2) the proposed Preferred Alternative (direct and indirect emissions from energy consumption based upon the implementation of equipment and operations that achieve reduced GHG emissions compared to the Baseline). The GHG analysis should specifically evaluate proposed pumping and treatment equipment and/or operations protocols to determine if indirect GHG emissions can be reduced beyond the Baseline case. To evaluate potential GHG emissions associated with connections to the MWRA system, the Town should review average energy use data for the MWRA treatment and conveyance facilities (i.e., pump stations) to quantify GHG emissions associated with the Town's allotment of water. To evaluate pump station design for the purposes of this analysis, the Town may select a "model" pump station to represent an average pump station that will be included within the proposed distribution system. The DEIR should discuss MWRA's energy and GHG emissions reduction efforts and how the proposed infrastructure and operations will be designed in a manner consistent with MWRA's sustainability goals.

The GHG analysis should clearly demonstrate consistency with the objectives of MEPA review, one of which is to document the means by which the Town plans to avoid, minimize, or mitigate damage to the environment to the maximum extent feasible. The Town should identify the model or methodology used to analyze GHG emissions, clearly state modeling assumptions, and explicitly note which GHG reduction measures have been modeled and will be implemented within the system. If applicable, the DEIR should include the modeling printout for each alternative and emission tables that compare Baseline case emissions in tons with the Preferred Alternative showing the anticipated reduction in tons and percentage by emissions source (direct and indirect). Other tables and graphs may also be included to convey the GHG emissions and potential reductions associated with various mitigation measures as necessary. The Town should set up a pre-filing meeting to discuss assumptions and modeling protocols with Department of Energy Resources (DOER), the MWRA and the MEPA Office in advance of preparing the DEIR to assist in these modeling efforts.

Based upon the limited data regarding future wastewater treatment systems included in the ENF, it is premature at this time to outline a specific scope and methodology to assess GHG emissions associated with proposed wastewater treatment and conveyance infrastructure. As suggested previously, subsequent to advancing the scope of work for the CWMP and performing preliminary evaluations of feasible wastewater treatment options, the Town should meet with the MEPA Office, DOER, and MassDEP to discuss how GHG emissions can be effectively assessed in accordance with the Policy. The MEPA Office is continuing to work with representatives from DOER and MassDEP to determine modeling protocols for various components of the wastewater treatment process and associated pump stations.

In some cases, energy usage associated with treatment technologies can influence overall project costs and result in positive or negative environmental consequences. I strongly encourage the Town to consider power consumption demand for each treatment technology evaluated as part of the Draft CWMP process. I note that MEPA review of recent wastewater management

projects (e.g., Sturbridge CWMP – EEA No. 14407 and Barnstable CWMP – EEA No. 14896), has included the use of the EPA's Energy Star Portfolio Manager (ESPM) computer modeling program to quantify the energy usage associated with wastewater treatment technologies. EPA's ESPM allows proponents to rank the estimated energy use of the proposed facilities and compare this ranking with the energy usage of other wastewater management facilities that have similar fundamental operating parameters and are located in similar climate zones. Often, Towns consider a commitment to minimum equipment performance standards as a method to meet GHG reduction goals given the conceptual nature of project design during the MEPA review process. The Town may also wish to review or conduct energy audits for existing regional facilities considered as part of the out-of-basin alternatives to assist in the identification of potential energy reduction measures that could be implemented into the existing portions of the wastewater treatment system.

The Town should use the energy use models identified in the Policy (such as eQUEST) to perform stationary source modeling for WWTF-related or WTP buildings included in the Preferred Alternatives within the DEIR. In accordance with the Policy, the DEIR should include a GHG emissions analysis that calculates and compares GHG emissions associated with two alternatives as required by the Policy including 1) a Base Case corresponding to the current edition of the Massachusetts State Building Code with all associated amendments and 2) a Preferred Alternative which includes energy efficiency design measures. The DEIR should clearly state the types of modeling software used, the Building Code in effect at the time of the modeling, and emissions factors applied to GHG calculations. The DEIR should state modeling assumptions and explicitly note which GHG reduction measures have been modeled and those that cannot be modeled due to the constraints of the modeling software. The DEIR should include a clear and complete listing of modeling inputs (e.g., R-values, U-values, efficiencies, lighting power density, etc.) for items such as equipment, walls, ceilings, windows, lighting, HVAC units, etc. for both the Base Case and Preferred Alternative. The DEIR should explain, in reasonable detail, any measure not selected- either because it is not applicable to the project or is considered technically or financially infeasible- that would result in a significant reduction of GHG emissions. Further guidance on performing this analysis can be provided by the MEPA Office and DOER and provided at the meeting recommended previously in this Certificate.

The DEIR should include a preliminary feasibility study evaluating opportunities for installation of renewable energy on-site (e.g., solar (photovoltaic (PV)), wind, geothermal) in the case of water or wastewater alternatives that include Town properties. Installation of PV systems on municipal buildings or on municipal properties may achieve cost-savings beneficial to the community and offset ongoing operational costs. The DEIR should include a separate analysis to determine if PV systems (either ground-mounted or building-mounted) are feasible in association with this project. This feasibility analysis should use online DOER resources to calculate potential project cost, payback periods and returns on investment. The Town should consider both first-party and third-party ownership/lease scenarios. The DEIR should state assumptions with regard to available area for PV equipment, efficiencies, etc. If feasible, I encourage the Town to commit to the use of PV systems at its facilities. At a minimum, if proposed, buildings should be "solar ready" to facilitate future installation of PV systems.

The DEIR should also clarify if the project will include measurable transportation-related CO₂ emissions in the form of delivery of septic sludge/waste from septic haulers for treatment at any proposed wastewater facility. The Town should consult with the MEPA Office prior to preparation of the GHG analysis to discuss a potential methodology to calculate these GHG emissions, if applicable.

Public Participation

I note that the State's Revolving Fund (SRF) regulations require the Town to conduct a minimum of one public meeting and one public hearing for this project. The DEIR should include a discussion of the Town's public participation program activities completed and proposed to date.

Construction Period

The DEIR should discuss potential construction period impacts associated with each project alternative and analyze and outline feasible measures that can be implemented to eliminate or minimize these impacts. Specifically, the DEIR should focus on project construction phasing and sequencing, the availability of project staging areas, potential time-of-year constraints (either weather-related or due to potential habitat impacts), coordination with other communities within which work may be conducted, and mitigation of construction-period impacts related to noise, air quality, and traffic management. The project must comply with MassDEP's Solid Waste and Air Quality Control regulations, pursuant to M.G.L. Chapter 40, Section 54, during construction. The DEIR should discuss how water and/or wastewater services will be maintained during the construction period to all customers. Given the potential construction-related impacts near sensitive resources such as wetlands, endangered species habitat, or Article 97 lands, the DEIR should discuss post-construction mitigation measures for these areas with regard to re-seeding, revegetation, or other restoration efforts within the project corridor.

I encourage the Town to mitigate the construction period impacts of diesel emissions to the maximum extent feasible. This mitigation may be achieved through the installation of after-engine emission controls such as diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs). Construction equipment should use ultra low sulfur diesel (ULSD) fuel in off-road engines.

Mitigation

The DEIR should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each State Agency that will issue permits for the project (i.e., MassDEP, etc.). The DEIR should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation. A schedule for implementation is particularly critical given the phased nature of typical infrastructure projects and the fact that this project may have impacts to multiple communities. The DEIR should clearly indicate the implementation of mitigation measures based upon project phasing, either tying mitigation commitments to connections to specific Needs Areas, or water

supply or wastewater demand/generation threshold, etc., to ensure that measures are in place to mitigate the anticipated impact associated with each project phase.

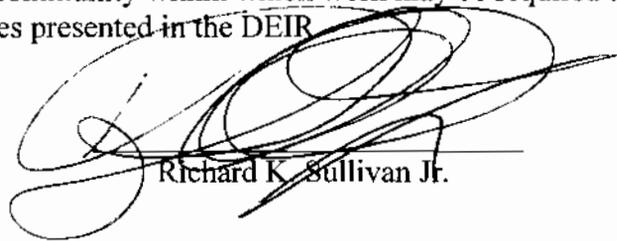
In order to ensure that all GHG emissions reduction measures adopted by the Town in the preferred alternative are actually constructed or performed by the Town, the Secretary requires proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. Specifically, the Secretary will require, as a condition of a Certificate approving an FEIR (or Supplemental FEIR if necessary), the Town to provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures adopted by the Town as the preferred alternative have been incorporated into the project. Alternatively, the Town may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the FEIR, based on the same modeling assumptions, have been adopted. The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated. For those measures that are operational in nature the Town should provide an updated plan identifying the measures, the schedule for implementation and how progress towards achieving the measures will be obtained. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the DEIR.

Responses to Comments/Circulation

The DEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the DEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to, enlarge the scope of the Single EIR beyond what has been expressly identified in this certificate.

The Town should circulate the DEIR to those parties who commented on the ENF, to any State Agencies from which the Town will seek permits or approvals, and to parties specified in section 11.16(2) of the MEPA regulations to ensure adequate review opportunities for all State Agencies. A copy of the DEIR should be made available for review at the North Reading Public Library and the public library of any community within which work may be required to complete any of the proposed project alternatives presented in the DEIR.

December 7, 2012
Date



Richard K. Sullivan Jr.

Comments received:

- 11/21/2012 Water Resources Commission
- 11/26/2012 Ipswich River Watershed Association
- 11/27/2012 Massachusetts Department of Environmental Protection – NERO
- 11/27/2012 Massachusetts Water Resources Authority

11/27/2012 Massachusetts Water Resources Authority Advisory Board
11/27/2012 Water Supply Citizens Advisory Committee (WSCAC)
11/27/2012 Keith Saxon
11/27/2012 Town of Andover – Department of Public Works

RKS/HSJ/hsj