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April 18, 2008

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

PROJECT NAME	: Birch Road Wellfield Re-development and Water Treatment Plant
PROJECT MUNICIPALITIES	: Framingham
PROJECT WATERSHED	: Sudbury
EEA NUMBER	: 14197
PROJECT PROPONENT	: Town of Framingham
DATE NOTICED IN MONITOR	: March 12, 2008

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.03 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project requires the preparation of an Environmental Impact Report (EIR).

As described in the Expanded Environmental Notification Form (EENF), the Town of Framingham proposes to redevelop the Birch Road Wellfield and construct a water treatment plant. The Town is proposing to reactivate the Birch Road Wellfield to withdraw 4.3 million gallons a day of potable water.

Project Description and Background

The Town of Framingham used three municipal wells located off of Birch Road as regular sources of public water supply from 1939 until 1966, and intermittently until 1979 to supplement the Metropolitan District Commission supply. These wells have been variously referred to as the Birch Road Wells, the Cochituate Wells, and the Saxonville Wells. The wells were shut down due to elevated iron and manganese levels that could not be mitigated by treatment. Since 1979, the Town has maintained the wells for emergency use. The wells were last used for a 15-day period in 1984. The wells did not go through Department of Environmental Protection's (MassDEP) well abandonment process.

The Town has concluded that given the present cost of water from the Massachusetts Water Resources Authority (MWRA), it is now cost-effective to install filtration treatment and restore the Birch Road wells as a source of public water supply. The Town is proposing four new wells to replace the existing wells, at locations referred to as TW-1 through TW-4. A 12-inch diameter gravel-developed test well has been installed at each location, at depths ranging from 60 to 74 feet below the ground surface. The Town seeks approval of the wells for a total of 4.3 million gallons per day (MGD). Framingham's average water demand in 2006 was 6.96 MGD, while its maximum day demand was 10.57 MGD. Therefore, the wells would not replace the Town's use of MWRA water entirely, but they would significantly reduce it.

Jurisdiction

The project is undergoing review pursuant to Section 11.03 (4)(a)(1)(b) of the MEPA regulations, because the project involves new withdrawal or expansion in withdrawal of 1.5 MGD or more from a groundwater source. The project will require a Water Management Act permit and a New Source Approval from the Department of Environmental Protection (MassDEP) and a MWRA Sewer Use Discharge Permit. The project will also require a U.S. Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges. MEPA jurisdiction extends to the broad subject matter of the Water Management Act (WMA) permit, including water use and potential drawdown of groundwater and surface water.

Procedural

In accordance with Section 11.05(7) of the MEPA regulations, the Town has submitted an Expanded ENF with a request I allow the Town to fulfill its EIR obligations under MEPA with a single EIR, rather than require the usual two-step Draft and Final EIR process. The Expanded ENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. I have reviewed the Town's request for a Single EIR in accordance with Section 11.06(8) of the MEPA regulations.

Recognizing that one of the central roles of MEPA is to allow public input into the environmental review process, the MEPA regulations establish a two-step EIR process as the standard for MEPA reviews. Section 11.06(8) of the MEPA regulations allows the preparation of a Single EIR, but requires that I make rigorous findings regarding the quality and depth of analysis in the Expanded ENF. In fact, the review standard by which I am to judge the appropriateness of an Expanded ENF to allow a Single EIR is set higher than the review standard for determining the adequacy of a Draft EIR (see Sections 11.06(8), 11.07(3), and 11.08(8)(b)(1) of the MEPA regulations).

In allowing a Single EIR, I am eliminating one of the opportunities for the public to have input into the review process and one of the obligations for the Town to respond to public comment. It is thus particularly important that an Expanded ENF demonstrate quite conclusively that the Town has studied and addressed the environmental impacts of a project; has examined all feasible alternatives to the project; and has incorporated appropriate mitigation for project impacts (see Section 11.06(8) of the MEPA regulations). To make this demonstration, the Expanded ENF must be a comprehensive document which resolves most, if not all, of the major

environmental issues associated with the project. In other words, the Expanded ENF should ordinarily contain the depth of description and analysis associated with an adequate Draft EIR for all aspects of the project (see Sections 11.06(8)(a) and (b), and Sections 11.08(8)(b)(2) and (c)(1) of the MEPA regulations).

While the Expanded ENF submitted by the Town includes a substantial amount of useful environmental information, it does not fully analyze all of the environmental impacts and mitigation associated with the designated preferred alternative. In addition, it does not demonstrate that the preferred alternative minimizes environmental impacts. The Expanded ENF provides a solid start to a standard MEPA review, but it does not meet the higher standard spelled out in the regulations to support the exercise of my authority to allow a Single EIR. Therefore, I am not confident that the outstanding issues that have been identified by state agencies and others can be adequately addressed through a Single EIR. I am, therefore, denying the request for a Single EIR.

I note that the MEPA regulations do provide sufficient flexibility to streamline the review in the future. If the Draft EIR provides a complete and stand-alone description and analysis of the project, project alternatives and environmental impacts, and adequately addresses mitigation and comments, the regulations allow the Draft EIR (DEIR) to be reviewed as a Final EIR.

SCOPE

General

The Town should prepare the DEIR in accordance with the guidelines contained in section 11.07 of the MEPA regulations, as modified by this scope. The DEIR should include a copy of this Certificate. The Town should circulate the DEIR to those who commented on the Expanded ENF and to any state agencies from which the Town will potentially seek permits or approvals. The Town should also make a copy of the DEIR available at the main Framingham Library. In addition, the Town should make a reasonable number of copies of the DEIR available on a first come, first served basis.

Alternatives

The DEIR should examine the no-build alternative to establish baseline conditions. In addition, the DEIR should examine alternative that would have less drawdown impacts on water resources. The DEIR should also present any alternatives analyses that are required as part of any state permitting processes.

Project Description and Permitting

The DEIR should include a thorough description of the project. The EIR should also include a brief description of each state permit or agency action required or potentially required for the project, and should demonstrate that the project meets applicable performance standards. In accordance with Executive Order 385 (Planning for Growth) and section 11.01 (3)(a) of the

MEPA regulations, the DEIR should also discuss the consistency of the project with applicable local and regional growth management and open space plans.

Interbasin Transfer Act

MassDEP has commented that because the existing Birch Road wells were never formally abandoned, new wells that do not exceed the capacity of the original wells may not be considered new capacity, and accordingly may not require permitting under the Interbasin Transfer Act (ITA). MassDEP's comment letter states that the original wells would have to be abandoned in favor of the new wells. However, it is unclear whether the capacity of the existing wells covers the entire 4.3 MGD that is being sought by the Town.

The Water Supply Citizens Advisory Committee (WSCAC) cites the definition in the ITA regulations as a basis for their contention that the project requires an ITA. That definition states: "Present Rate of Interbasin Transfer in a Water Supply System means the hydraulic capacity of an interbasin transfer system which was authorized, constructed and useable for water supply purposes without additional installation of facilities or changes in any authority or operating rule prior to the effective date of the act. "

I strongly advise the Town to consult with the Water Resources Commission (WRC), the Department of Conservation and Recreation (DCR), and MassDEP regarding the question of whether the project requires a permit under the Interbasin Transfer Act prior to the submission of the DEIR. The DEIR should report on the outcome of these discussions and, if the project involves an interbasin transfer, provide an analysis based on direction provided by these agencies.

Water Supply

The proposed Birch Road wellfield lies between Lake Cochituate (located approximately 1,700 feet to the south), and the Sudbury River (located approximately 1,500 feet to the north). The EENF indicates that there are no impacts to water resources from the proposed project. However, proposed groundwater withdrawals of 4.3 MGD will likely have an impact on both of these water resources. DCR has stated in its comment letter that the EENF does not adequately evaluate impacts on Lake Cochituate or the Sudbury River near the wells.

DCR notes that the Source Final Report included in the EENF for the Birch Road Well Reactivation acknowledges that the majority of the recharge for the wells comes from Lake Cochituate and its watershed. Specifically, pages 2-3 of this report notes that the average annual recharge rate for the Lake Cochituate watershed is estimated as 10 MGD. It does not seem reasonable to expect to withdraw 4.3 MGD (43 percent of the total recharge to the basin) without causing both a significant lowering of the water table in the area and surface water impacts.

In addition to the proposed Framingham withdrawals, the Town of Natick also pumps water from the aquifer beneath Lake Cochituate. A United States Geological Survey (USGS) report concluded that 1.0 MGD of South Pond water is infiltrated to the aquifer on average as a source of water to the existing Natick Springvale wells. Natick also operates water withdrawals from the Evergreen Well Field adjacent to Middle Pond. The USGS report indicates that pond and aquifer interactions, on a quantitative basis, occur at shoreline areas of South Pond. Since

their geomorphology is the same, it is reasonable to conclude that a similar situation likely occurs at Middle and North Ponds.

The Source Final Report included as part of the EENF did not include any induced infiltration analysis for Lake Cochituate. Nor was any groundwater model documentation provided with the report. Therefore, the groundwater model could not be fully evaluated technically. The DEIR must address these deficiencies.

The DEIR should address the detailed comments received from DCR and provide additional technical analysis where needed. The DEIR should provide more details on the proposed water quality monitoring program, and should discuss specific management responses where the monitoring program reveals potential problems, as detailed in several comment letters.

Groundwater and Surface Water Withdrawals

I note that maintenance of Lake Cochituate's water levels is critical for boating passage between the three ponds in the Lake Cochituate complex; operation of the boat ramp at the state park; and to allow flow releases from the reservoir to Cochituate Brook, which feeds the Sudbury River. Drawdown of Lake Cochituate via groundwater withdrawals from the proposed project may affect all of these activities. DCR has concluded in its comment letter that withdrawals from the Birch Road wells may have to be limited to avoid exacerbating these problems during dry periods. I also note that the water pumped by the Birch Road wells will be routed out of the area and discharged into the public sewer system, conveyed to the MWRA treatment plant at Deer Island, and lost to the existing watershed. The EENF stated that the Town extended the Zone II wellhead protection area to include the edge of Lake Cochituate and identified it as a source of recharge to the wells, the analysis of long-term pumping conditions does not quantify lake level impacts.

The DEIR must include surveyed elevations for the piezometers used during the pumping test as well as staff gage readings of surface water levels at the piezometer locations. DCR has requested this data because this data was collected specifically to evaluate interactions between surface water and groundwater features. In addition, the DEIR should include the analysis of induced infiltration from Lake Cochituate which was not included in the EENF.

The EENF's Source Final Report concluded that the pumping wells would not influence the Sudbury River based on observations in piezometers during the pumping test. At a minimum the DEIR should include vertical elevation gradients between the river and the aquifer. This should be evaluated to describe the interaction and degree of hydrologic connection between these features. The effects of groundwater interception by the Birch Road Wells on the Sudbury River should also be evaluated. The majority of the water pumped from these wells would have naturally flowed from Lake Cochituate and discharged to the Sudbury River. This loss of recharge could be significant to the Sudbury River, especially during dry summer months. The proposed wells should not be allowed to have a significant impact on flows in the Sudbury River, which is already depleted by other upstream withdrawals. The DEIR should provide analysis sufficient to quantify this potential impact.

Stormwater

The EENF's Source Final Report indicates that Framingham is exploring various best management practices (BMPs) to remediate storm water (quality) entering Lake Cochituate. The Town should implement BMPs for stormwater entering the lake. These should be included in the DEIR.

The Massachusetts Water Resources Authority (MWRA) has stated in its comment letter the proposed facility located in Framingham has access to a storm drain and is not located in a combined sewer area. Therefore, the discharge of groundwater associated with construction dewatering is not allowed in the sanitary sewer system.

Water Management Act Permit

The pumping test final report for the Birch Road Wells and Water Management Act permit application were received by MassDEP on February 4, 2008, and are presently under review. The Water Management Act review will evaluate the wells' potential impacts upon environmental receptors, such as wetlands and streamflow.

MasssDEP has stated in its comment letter that the Town erroneously indicates there is no water-based recreation near the withdrawal in its Water Management Permit application. The Massachusetts Water Management Act regulations require permit applicants to evaluate the potential effect of withdrawals on water-based recreation. As stated previously in this certificate, Lake Cochituate is heavily used for water-based recreation. The impacts of pumping on this recreational resource should be further evaluated and limited in any water withdrawal permit. Due to the limitations of the analyses presented in the EENF's Source Final Report, DCR requests that surface water monitoring and thresholds be applied to both Lake Cochituate and the Sudbury River in the Water Management Act permit, in order to protect these water resources from adverse impacts of pumping at the Birch Road wells. Thresholds for drawdown based on recreational resources, and also to prevent the spread of aquatic invasive species in Lake Cochituate should be established before the permitting process commences.

Both MassDEP and DCR have stated the EENF has not adequately evaluated the potential effect of withdrawals on Lake Cochituate or the Sudbury River, and has not fulfilled the requirements of the DCR issued permit to allow the discharge of pumping test water from the Birch Road wells to Lake Cochituate. The DEIR must adequately evaluate these effects because the permitting agencies cannot reliably conclude that the project will have no impact on water resources.

Water Treatment

I note that the plans and specifications for construction of the permanent pumping facilities and for the water treatment facility must be submitted to MassDEP for review and approval prior to construction. If these plans are available, the Town may include them in the DEIR.

The well water will require treatment for removal of high levels of naturally occurring iron and manganese. The water also is expected to need pH adjustment, (to make the water non-corrosive), and disinfection. There are water quality contaminants (perchlorate and volatile

organic compounds (VOCs)) in the aquifer that also could require additional treatment. The DEIR should include information about the proposed treatment of the well water.

The Town of Framingham owns or controls (via a Conservation Restriction) the Zone I (400-foot) protective radii for the proposed wells. The locations for wells TW-1 through TW-4 were chosen so that the entire Zone I will fall within the land owned or controlled by Framingham. MassDEP has stated in its comment letter that final approval for the Birch Road wells will not be until the Town of Framingham has implemented zoning and non-zoning controls to protect the Zone II from incompatible land uses. The Town must do the following:

- Implement a prohibition on floor drains in existing facilities in the Zone II;
- Revise its Groundwater Protection District overlay map as necessary to include the entire final Zone II for the wells; and
- Demonstrate that it has used its best effort to get the Town of Wayland to apply zoning and non-zoning controls to the portion of the Zone II that lies in Wayland.

In January, 2008 the Town of Framingham met with the MWRA to discuss the possibility of using lands under the MWRA's care, control and custody, specifically Hultman Aqueduct lands, to locate Framingham's treatment plant pipeline. I strongly encourage the Town to meet with the MWRA if the Town intends to further explore this possibility. The DEIR should provide a summary of these discussions.

Wastewater

According to the EENF, the project would discharge an estimated 40,000 gallons per day of wastewater to the Town of Framingham sewer system which flows into the MWRA system and ultimately to the Deer Island Wastewater Treatment Facility. The Town is now required to file a certification statement with MassDEP for a wastewater discharge that is greater than 15,000 gallons per day and less than 50,000 gallons per day in accordance with the revised Sewer Extension and Connection regulations which went into effect on January 12, 2007. The wastewater generated by the project should be confirmed in the DEIR.

MassDEP, in cooperation with MWRA and its member communities (including Framingham), are implementing a flow control program in the MWRA regional wastewater system, to remove extraneous clean water (e.g., infiltration/inflow (I/I)) from the system. The DEIR should evaluate the wastewater system within the service area of the project for opportunities to participate in the I/I reduction effort, in order to ensure that the additional wastewater flows are offset by the removal of I/I. Currently, MassDEP is using a minimum 4:1 ratio for I/I removal to new wastewater flow added. This ratio may be increased if specific flow constrictions/overflows already exist in the sewershed to which the new flow is added. Using this ratio, the Town will need to remove, or cause to be removed, 160,000 gpd of I/I. Commitments to I/I removal should be proposed in a Draft Section 61 Finding for the project.

The Town of Framingham must also submit a completed MWRA Sewer Use Discharge Permit Application for Publicly Owned Drinking Water Treatment Plants. In addition, the project is required to have a MWRA Sewer Use Discharge Permit.

Historical/ Archaeological Resources

The Massachusetts Historical Commission (MHC) has stated in its comment letter that the project area includes undisturbed areas of the property which are archaeologically sensitive and that multiple archaeological sites are recorded in the vicinity of the Sudbury River and the Lake Cochituate. MHC recommends that the Town consider the feasibility of locating project impacts within the previously disturbed area of the site. The DEIR should include an update on the ongoing consultation process with the MHC, and should outline the proposed avoidance/mitigation program.

Comments

The DEIR should include copies of each comment letter received. The DEIR should respond to all substantive comments received within MEPA jurisdiction. I recommend either an indexed response to comments format or direct narrative response.

Mitigation/ Section 61 Findings

The DEIR should include a summary and explanation of all environmental mitigation to which the Town is committed as well as Draft Section 61 Findings.

April 18, 2008
Date

Ian A. Bowles

Comments Received:

03/20/08	Massachusetts Historical Commission
04/08/08	Water Supply Citizen's Advisory Committee
04/11/08	Massachusetts Water Resources Authority
04/11/08	Department of Environmental Protection
04/14/08	Department of Conservation and Recreation

IAB/ACC/acc