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August 21, 2009

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

PROJECT NAME : Populatic Street Well (No. 12) – Site I-86
PROJECT MUNICIPALITY : Franklin
PROJECT WATERSHED : Charles River
EEA NUMBER : 14454
PROJECT PROPONENT : Town of Franklin
DATE NOTICED IN MONITOR : July 22, 2009

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of an Environmental Impact Report (EIR). Although the project does not exceed mandatory EIR thresholds, I am requiring an EIR to provide additional information and analysis of potential impacts and mitigation as further detailed in the Scope below. If the Draft EIR adequately addresses the Scope, I will consider the options available to me pursuant to Section 11.08(8)(b) of the MEPA regulations, and may review the Draft EIR as a Final EIR.

Project Description

The Town of Franklin (the Town) proposes installation of a new water supply well on a 3.4-acre parcel off Populatic Street. The proposed withdrawal is 864,000 gallons per day (gpd) with an approved capacity of 600 gallons per minute (gpm). The Town is seeking an amendment to its Water Management Act (WMA) Permit to add Well #12 as a new source. No increase in the Town's overall permitted withdrawal volume is being proposed. The purpose of the additional well, as proposed in the Environmental Notification Form (ENF), is to develop sufficient supply within Town boundaries to provide source redundancy and management flexibility, and to meet water emergency and summer average day needs with the largest source out of service. The site for the proposed well is located adjacent to the Charles River and approximately 200 feet south of the Medway town boundary.

MEPA History

The project underwent MEPA review in 1998 and the Secretary's Certificate on the ENF, dated February 9, 1998, required an EIR. The Town subsequently decided to forego development of Well #12 and an EIR was never filed. Another well (#11) had been reviewed under MEPA in 1997 and no EIR was required. The Town pursued development of this well. However, permit limits on the withdrawal from Well # 11 require long shut-down periods due to its influence on stream levels in Miscoe Brook. Because of this, the Town has decided to reconsider development of Well 12, and filed a new ENF due to the time lapse since the previous filing, as required by the MEPA regulations.

Permits and Jurisdiction

The proposed project is undergoing environmental review because it requires State Agency action and exceeds MEPA review thresholds for water withdrawal. The project is under review pursuant to Section 11.03(4)(b) of the MEPA regulations because it involves a new withdrawal of 100,000 or more gpd from a water source that requires new construction for the withdrawal. The project requires a Water Management Act (WMA) Permit amendment from the Massachusetts Department of Environmental Protection (MassDEP) to add Well # 12 as a new source. The project also requires an Order of Conditions from the Franklin Conservation Commission for work in the wetlands Buffer Zone (and, on appeal only, a Superseding Order of Conditions from MassDEP).

The project is not receiving financial assistance from the Commonwealth. Therefore, MEPA jurisdiction is limited to those aspects of the project that are within the subject matter of any required or potentially required state permits and that may cause Damage to the Environment as defined in the MEPA regulations. In this case, MEPA jurisdiction extends to water supply and wetlands.

Review of the ENF

The site currently contains a gravel-packed production well and water mains connecting to the Town's distribution system. The ENF proposes construction of a 500 square-foot pumping station building and withdrawal of 864,000 gpd. The ENF summarizes the results of a pump test conducted in 1994 and indicates that the proposed withdrawal would have no significant impact on water levels in Populatic Pond or Kingsbury Pond. The ENF indicates that Medway Well # 3 may be impacted by as much as one foot under a Zone II condition (i.e. 180 days of pumping Well #12 with no recharge). As noted in its comment letter, MassDEP will be reviewing the Pump Test report, which was submitted in 1997, to determine if it meets current MassDEP Guidelines and Policies. At a minimum, current water quality data and land use and zoning information will be required by MassDEP.

Water Management Plan

The ENF includes a summary of the Town's Water Management Plan and discusses a study undertaken by the Town in 2001 (Water System Capital Improvement Plan), which

involved a review of the Town's water distribution system, current and projected water demands, a water supply evaluation and prioritized list of improvements. The study concluded that the town did not have sufficient water resources to meet its projected demands and had difficulty meeting its existing demands at the time. The Town committed to a 4-pronged approach to address its water supply needs: water conservation; new source development; contamination correction; and regional water supplies.

Water Conservation: The Town's water conservation program includes annual lawn watering restrictions, a leak detection program, a water mains replacement program, water rate pricing adjustments, and public outreach and education. The ENF indicates that the conservation measures in place will not reduce its future demand for water as the Town's population continues to grow.

New Source Development: The Town has conducted test well exploratory programs and evaluations since the 1980's and with the exception of wells already developed, and wells #11 and 12, no other sites within the Town were considered feasible for development as a water supply. The Town considers Well #12, located within a gravel high-yield aquifer, to be the most viable alternative to supplement its water supply.

Contamination Correction: A \$4.5 million water treatment facility (funded under the Drinking Water State Revolving Fund program) was constructed to remove iron and manganese from the groundwater supply at Wells 1 and 2, which allows the Town to utilize these well as their full capacity. Other measures implemented by the Town include replacement wells to address lost capacity resulting from iron fouling and a corrosion control study. The ENF indicates that even with these improvements, the Town requires additional water sources to meet future demands, provide redundancy and allow effective management of all its wells.

Regional Water Supplies: The Town has participated in a United States Geological Survey (USGS) study relating to optimization of withdrawals and discharges within the region. While the Town considers regional agreements a way to supplement water supply during peak seasonal demand periods and emergency situations, it does not see purchase agreements as a permanent solution to meet future water supply needs. The ENF indicates that the Town is pursuing possible interconnections with neighboring communities.

SCOPE

General

The Town of Franklin should prepare a Draft EIR (DEIR) in accordance with the general guidance for outline and content found in Section 11.07 of the MEPA regulations as modified by this Scope. The DEIR should include a project summary and schedule, a list of permits required, a description of any changes since the filing of the ENF, a copy of this Certificate, a copy of each comment letter received on the ENF, and a response to comments.

The DEIR should include maps, plans and other graphics at a reasonable scale to facilitate review and comment. The DEIR should include graphics that clearly locate the project site, identify land uses within a 0.5 mile radius of the project site, and identify the Zone I and II of existing and proposed wells. Site plans should clearly locate and delineate project elements in relation to wetlands and other sensitive resources, and surrounding land uses. The DEIR should discuss any Conservation Restrictions and/or other mechanisms proposed for permanent protection of the project site and Zone I/II areas.

The Town's WMA Permit in the Charles River Basin is currently under review by MassDEP as part of a 20-year cycle. MassDEP indicates that the projected authorization is 3.44 million gpd. The DEIR should include information on historical, current and future water demand.

Alternatives

The ENF estimates that average and maximum day demands, with water restrictions in place, will reach 4.75 mgd and 6.70 mgd respectively by 2020. This is based on a study conducted for the Town's Water System Capital Improvement Plan in 2001. The DEIR should discuss future water demand and the need for Well #12 in light of the Department of Conservation and Recreation (DCR) Office of Water Resources water needs forecast for the Town of Franklin, which are significantly lower. DCR projects a demand of 3.2 mgd in 2023 (as indicated in its letter to the Town dated November 18, 2008) assuming water use at 65 residential gallons per capita per day and 10 percent unaccounted for water, a demand of 3.03 mgd in 2023 assuming current system efficiencies are maintained.

The DEIR should include an evaluation of additional measures to maximize opportunities for water conservation, and quantify, to the maximum extent feasible, the demand reductions expected from existing and proposed conservation measures. The DEIR should consider additional measures for residential water conservation as well as potential water savings by municipal, industrial and commercial users through such measures as audits and water reuse.

The DEIR should evaluate alternative pumping regimes to avoid and minimize impacts to the Charles River. The DEIR should expand on the analysis of alternative supplies from neighboring communities and include an update on discussions with the towns of Millis and Norfolk regarding water purchase agreements.

The ENF indicates that Well #12 is being proposed in part to meet the Town's goal of adequate water supply if its largest source is out of service. The DEIR should explain why this is necessary given that the Town has existing emergency supply sources and is pursuing agreements with other communities to supplement its water supplies for routine and emergency needs.

Water Supply and Wetlands

The DEIR should assess withdrawal impacts on site hydrology, surface waters, wetlands resource areas, and public water supplies in the project area. The DEIR should analyze impacts

on shallow private wells surrounding Populatic Pond. The Town should complete an inventory of the locations and depths of each of the private wells surrounding Populatic Pond and within the Zone II and propose mitigation for potential impacts. The Town should consult with MassDEP regarding the methodology for the analysis.

The DEIR should demonstrate how the proposed project will meet stormwater management requirements pursuant to 310 CMR 10.05(6)(k). The DEIR should quantify impacts to Riverfront Area as outlined in 310 CMR 10.58(4). The DEIR should describe long-term monitoring plans to assess the impact of withdrawal on streamflow and wetland water levels over time.

The Secretary's Certificate on the ENF in 1998 noted that impacts to wetlands had not been fully investigated and required additional analysis in an EIR. The ENF currently under review does not include any new data or analysis of wetlands impacts. MassDEP recommends that due to the close proximity of the well to wetland resource areas, the Town should monitor adjacent wetlands. The DEIR should include the results of monitoring including a baseline study with a photographic record consistent with Wetlands Protection Act (310 CMR 10.03 (1)(3)) and WMA permit requirements to ensure that work within the upland area does not impact adjacent Bordering Vegetated Wetlands (BVW).

Pump Test Report

The Proponent should consult with MassDEP regarding its review of the 1997 pump test report. Given that the data is approximately fifteen years old (the actual pump test was conducted in 1994), it may be necessary to conduct a new pump test for the hydraulic analyses. At a minimum, MassDEP will require that the well is pumped for five days to obtain water quality data.

The DEIR should include an update on consultations with MassDEP, current water quality and current land use and zoning information. The DEIR should include the pump test report for Well #12, including any additional testing and revisions required by MassDEP, and an analysis of the impacts of the proposed withdrawals on groundwater and wetland resources in the vicinity of the wells. The DEIR should include supporting data and modeling to substantiate the report's conclusions. The DEIR should include an assessment of the impact of the proposed withdrawal on water levels within Bordering Vegetated Wetlands (BVW) and potential impacts on flows within the Charles River (including impacts during low flow summer months). The 1998 Certificate and the comment letter from the Charles River Watershed Association (CRWA) note that water withdrawn during the pump test was discharged to Populatic Pond throughout the test. The DEIR should discuss the effect this discharge may have had on water levels observed in the pond during the pump test and the study's conclusion on wetlands impacts. The DEIR should describe expected water levels in Populatic Pond under normal operating conditions when the water withdrawn would be discharged elsewhere. The CRWA has provided very detailed comments on the ENF, the pump test report and modeling results, which I expect the Town to consider and respond to in the DEIR.

I note CRWA comments on the 1997 pump test report, which indicated increased streamflow loss from 6 percent to 18 percent. The DEIR should describe the potential ecological

effects of such a change, especially in low flow summer months. CRWA also noted the report's conclusion that the 7Q10 (the lowest flow over a seven day period in a ten year cycle) would decrease by 35 percent from 3.8 cubic feet per second (cfs) to 2.49 cfs as a result of the proposed withdrawal. The DEIR should discuss 7Q10 changes including any revisions based on updated analysis. The DEIR should also discuss stream flow requirements to sustain fisheries, habitat, wetlands and water quality. The DEIR should discuss potential impacts to the wasteload allocation and National Pollutant Discharge Elimination System (NPDES) permit for the downstream Charles River Pollution Control District wastewater facility, which is based on the existing 7Q10.

Zone I Protection

MassDEP indicates that the Town does not own or control the entire Zone I area, which includes a roadway. The DEIR should describe in detail how the Town will meet MassDEP's wellhead protection requirements.

Town of Medway Well Impacts

The DEIR should discuss the implications of the projected drawdown on Medway Well No. 3. The Town should consult with the Town of Medway, include an update on consultations in the DEIR, and described how potential impacts to Medway's water quality and quantity will be avoided, minimized, or mitigated.

Cumulative Impacts

The DEIR should discuss the cumulative impacts of the proposed Well #12 withdrawal in conjunction with other withdrawals from the watershed and the safe yield of the basin. The DEIR should clarify how much of the Town's water withdrawal is discharged out of basin.

The DEIR should provide more detailed information on the proposed water systems management plan to switch off among wells and balance their use for water supply and ecological protection purposes. The DEIR should discuss the trade-offs in environmental impacts, for example, potential wetlands and streamflow impacts in the vicinity of Well#12 in order to avoid certain impacts at other well sites (such as impacts to Kingsbury Pond associated with Well #4 withdrawals).

Water Management Plan

The DEIR should include a copy of the Water Management Plan, including the 2001 study referenced in the ENF. The DEIR should describe the likely operations of the system under various hydrological, seasonal and demand conditions and an analysis of the firm yield expected under different operating scenarios. The DEIR should report on any modeling necessary to develop the Water Management Plan.

The DEIR should include a revised Well Management Plan (Table 2 in the ENF) that includes the proposed Well #12, with pump rates as percentage of safe yield and total supply for

all wells for each calendar month. The table should show how rates for other wells will be modified if the Well #12 is brought on line.

Streamflow Monitoring and Well Management

The ENF indicates that Well # 12 would cease pumping when flow in the Charles River falls below the minimum streamflow threshold of 0.21 cubic feet per second per square mile (cfs/sm) established by the Charles River Basin Plan. Based on monitoring and streamflow data available, the DEIR should include a reasonable projection for the schedule of operation of Well # 12, including for example, how many days/months, and during what time of year, it may need to be shut down or have pumping reduced.

Regional Water Supplies

The DEIR should provide an update on existing and proposed water supply arrangements with other municipalities, including the amount available on a year-long, seasonal basis or emergency basis. The DEIR should identify the percentage of Franklin's demand that regional supplies can support under current and future build-out conditions.

Greenhouse Gas Emissions

Projects requiring an EIR are generally subject to the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol. Although the policy technically applies to this project, the Town is not proposing any increase in the volume of water withdrawal to be permitted and the project will likely result in minimal GHG emissions. Therefore it falls within the de minimus exception of the policy. However, the DEIR should address energy efficiency of the proposed pumping equipment, as well as secondary growth impacts as outlined below.

Secondary Impacts and Growth Management

The ENF indicates that activation of Well # 12 will provide redundancy and the ability to rest other wells but will not result in increased withdrawal overall. However, the ENF also indicates that an increase in water supply will be needed in the future to accommodate projected increases in population. The DEIR should evaluate potential secondary growth resulting from installation of a new well, and describe the Town's Growth Management strategy and plans to avoid and minimize the need for additional water supply sources and infrastructure in the future. The assessment should consider GHG emissions and mitigation measures.

Climate Change

The DEIR should discuss potential climate change impacts such as increased temperature, evaporation and reduced streamflow, and how such changes and their effects on water resources will be considered in assessing the impacts of future withdrawals from Well # 12.

Mitigation and Section 61 Findings

The DEIR should include a detailed description of measures to mitigate potential impacts associated with the proposed withdrawal and include proposed Section 61 Findings for the MassDEP WMA Permit. The mitigation section of the DEIR should contain clear commitments to mitigation measures and a schedule for implementation, and identify parties responsible for funding and implementing the mitigation measures. The proposed Section 61 Findings will serve as the primary template for permit conditions. Final Section 61 Findings will be included with all state permits issued for this project and will include conditions considered binding upon the proponent as mitigation commitments.

Response to Comments


In order to ensure that the issues raised by commenters are addressed, the DEIR should include a response to comments to the extent they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to, enlarge the scope of the EIR beyond what has been expressly identified in this Certificate.

Circulation

The DEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should be sent to the list of "comments received" below. A copy of the DEIR should be made available for public review at the Franklin and Medway Public Libraries.

August 21, 2009

DATE


for Ian A. Bowles, Secretary

Comments Received:

- 8/11/09 Department of Environmental Protection, Central Regional Office
- 8/07/09 Charles River Watershed Association

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