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July 10, 2009

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME:	Rice Reservoir Reclamation, Private Pier and Boatshed
PROJECT MUNICIPALITY:	Brookfield
PROJECT WATERSHED:	Quinebaug
EEA NUMBER:	14164
PROJECT PROPONENT:	Fromm Development Company
DATE NOTICED IN THE MONITOR:	June 10, 2009

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (G.L.c.30, ss. 61-62I) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) describing the project hereby determine that it **continues to require** the preparation of an Environmental Impact Report (EIR).

Project History

The project filed an Environmental Notification Form (ENF) in January 2008 and on February 22, 2008 the Secretary determined that the project required the preparation of an EIR. The February 22, 2008 Certificate on the ENF outlined the scope for the preparation of the EIR. This NPC has been filed to address changes in rare species habitat jurisdiction and an expansion of the project area. The Proponent has requested that portions of the scope issued on February 22, 2009 be rescinded due to jurisdictional changes and be modified to reflect the changes in project area. The scope issued within this Certificate on the NPC is responsive to this request.

Description of Previously Reviewed Project

As previously reviewed in the ENF, the project involves dredging in Rice Reservoir in Brookfield. The approximately 60-acre privately-owned, man-made reservoir is located to the east of the intersection of Molasses Hill Road and Fiskdale Road (Route 148). The reservoir was created in the late 1800s when an earthen and concrete dam was constructed across Mason's Brook at the reservoir's north end. In 1955, Hurricane Diane caused flooding of the reservoir resulting in damage to the dam and partial drainage of the reservoir. Following the hurricane, a beaver dam was established in the area of the breach and the water level in the reservoir rose to a level somewhat below its original level. The reservoir was described in the ENF as shallow, weed-choked and swampy.

According to the ENF, in 1966 the Massachusetts Water Resources Commission purchased the land containing the dam and took an easement on a portion of the reservoir for flood control purposes; the Department of Conservation and Recreation (DCR) Office of Dam Safety now owns and manages the dam. In the summer of 2006, DCR found that the beaver dam in the breached area had been illegally reinforced with plastic sheeting and rocks. A Declaration of Dam Safety Emergency was issued and the rock and plastic sheet dam was removed by hand in September 2006. The Brookfield Conservation Commission and the Natural Heritage and Endangered Species Program (NHESP) were consulted during this process. According to the ENF, after removal of the beaver dam, the reservoir drained completely such that only the channel of Mason's Brook remained flowing. Since that time, beavers have moved back into the area and maximum water depths in the Reservoir have been measured to be approximately three feet.

In the ENF, the Proponent proposed to dredge 9.47 acres of Rice Reservoir using a hydraulic dredge to remove sediment and pump it to an on-site dewatering basin on an adjacent hillside approximately 300 feet from the western shoreline. The project also involved construction of an 80-foot-long by 4-foot-wide timber pile-supported pier, with a boathouse and a gazebo.

The stated goals of the project were to reestablish an area adjacent to the Proponent's residence that can be used for swimming and boating and to sell the dredged sediment as high-quality topsoil. The Proponent owns approximately 166 acres adjacent to the project, including the 60-acre reservoir. According to the ENF, if the Proponent was unable to establish a long-term topsoil business at the site, he would be faced with the prospect of converting some of the presently undeveloped land into a residential subdivision.

Description of Project Change

The NPC included a discussion of the most recently reviewed project, a description of the material changes to the project, a discussion of the significance of the proposed changes in accordance with 301 CMR 11.10(6), and a discussion of the measures the project will take to avoid, minimize, and mitigate damage to the environment. The project change entails the

expansion of the project from 9.47 acres of dredge area and 50,000 cy of material removal to a 44-acre dredge area and the removal of potentially 450,000 to 500,000 cy of material. The project site is no longer within either Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife according to the NHESP, and thereby no longer subject to review in accordance with the Massachusetts Endangered Species Act (MESA, MGL c. 131A) and its implementing regulations (321 CMR 10.00). In response to the Certificate on the ENF, the NPC has responded to the directive noting that the MEPA regulations at 301 CMR 11.01(2)(c) prohibit the segmentation of projects and require the Secretary to consider the entirety of the project, including any likely future expansion, not separate phases or segments thereof. Overall impacts to Land Under Water have expanded from 412,310 square feet (sf) to 1,917,920 sf to reflect the potential impact associated with the entire project. Project components, other wetland resource area impacts, goals and sequencing remain the same as those presented in the ENF.

Jurisdiction and Permitting

The project as described in the NPC is undergoing environmental review pursuant to the following sections of the MEPA regulations: Section 11.03(3)(a)(1)(b) because it will result in the alteration of greater than 10 acres of "any other wetlands" (44 acres of Land Under Water) and Section 11.03(3)(b)(3) because the Proponent proposes to dredge more than 10,000 cubic yards of material. The alteration of greater than 10 acres of other wetlands requires the preparation of a Mandatory EIR in accordance with the MEPA regulations.

The project requires a National Pollutant Discharge Elimination System (NPDES) General Permit from the Environmental Protection Agency (EPA); a 401 Water Quality Dredge Permit from the Department of Environmental Protection (MassDEP); an Order of Conditions (OOC) from the Brookfield Conservation Commission (and hence a Superceding OOC from MassDEP if the local Order is appealed); and a Special Permit from the Brookfield Planning Board.

Because the Proponent is not seeking financial assistance from the Commonwealth, MEPA jurisdiction is limited to the subject matter of required or potentially required state permits and/or review. In this case, MEPA jurisdiction extends to wetlands.

As noted in the Certificate on the ENF, the open-ended nature of the project makes it difficult to determine whether all measures are being taken to avoid, minimize and mitigate adverse impacts to the environment. The Proponent referred in the ENF to the several publications issued by the Commonwealth on lake management as justification for the project, including the *Policy on Lake and Pond Management for the Commonwealth of Massachusetts* (Massachusetts Water Resources Commission, 1994), the *Final Generic Environmental Impact Report on Eutrophication and Aquatic Plant Management in Massachusetts* ("Lakes and Ponds GEIR", EEA, 2003), and the *Practical Guide to Lake Management in Massachusetts* (EEA, 2003). These documents are excellent resources that speak to protection of lakes from water quality degradation and reduction in ecological and recreational values; however, the Proponent must take into consideration current conditions at the site. While Rice Reservoir was historically

created to provide open water, the history of the dam breaches at the site have allowed the reservoir to become part of a relatively pristine and ecologically diverse wetland system.

The Scope for the DEIR is laid out in detail below. In general, the Proponent should provide more information regarding the project's impacts to wetlands and fisheries, including an analysis of how the proposed long-term and continual nature of the proposed dredging will affect environmental resources. The DEIR should respond to the items outlined in this Certificate and should respond to all comments submitted on the ENF and the NPC. Should the DEIR fully resolve the substantive issues outlined in the Scope, I will consider the procedural options available to me at 301 CMR 11.08(8)(b)(2).

SCOPE

General

The DEIR should follow the general guidance for outline and content contained in Section 11.07 of the MEPA regulations, as modified by this Scope. The DEIR should include a copy of this Certificate and a copy of each comment received on the ENF and NPC. The Proponent should circulate the DEIR to those parties that commented on the ENF and/or the NPC, to the Town of Brookfield, to any state agencies from which the Proponent will seek permits or approvals, and to any parties specified in Section 11.16 of the MEPA regulations. A copy of the DEIR should be made available for public review at the Brookfield Public Library.

Project Description and Permitting

The DEIR should include a thorough description of the project, including a detailed description of construction methods and phasing. The DEIR should include a brief description of each state permit or agency action required or potentially required, and should demonstrate that the project will meet applicable performance standards. The Proponent should also provide an update on the local permitting process for the project.

Alternatives Analysis

In accordance with 301 CMR 11.07(6)(f), the DEIR should include an alternatives analysis. The DEIR should analyze the following alternatives:

- A No-Action Alternative;
- An Alternative that assumes the absence of the beaver dam; and,
- A Preferred Alternative (which according to previous MEPA filings, assumes the ongoing presence of a beaver dam).

This alternatives analysis should be performed in a manner consistent with the

alternatives analysis anticipated in accordance with the 401 WQC application and review process. Discussion of the Preferred Alternative should strive to clearly state the assumptions associated with the presence of an ongoing beaver dam (i.e. impoundment capability, height, etc.) and contemplate how removal of the beaver dam in the future may affect dredging operations and wetlands and fisheries resources within the project area.

It is possible that, subsequent to the completion of the alternatives analysis, the Preferred Alternative could be modified in comparison to that presented in the NPC. The alternatives analysis may go beyond the three alternatives requested above and include previously considered project plans to support the proponent's conclusion that the Preferred Alternative avoids, minimizes, and mitigates damage to the environment. The DEIR should identify the impacts for each of the alternatives on various wetland resource areas in a tabular format. This table, along with a supporting narrative and conceptual site plans, should provide a comparative analysis that clearly shows the differences between the environmental impacts associated with each of the alternatives.

Wetlands

The project site contains the following wetland resource areas: Land Under Water (LUW), Bordering Vegetated Wetlands (BVW), Bank, and Bordering Land Subject to Flooding (BLSF). The Proponent stated that each of the identified wetland resource areas will be temporarily impacted by the proposed sediment dredging and the construction of the pier, boathouse and gazebo. Despite this statement, the Proponent has only quantified impacts to LUW in the NPC. The dredging project will result in impacts to 1,917,920 square feet (sf) of Land Under Water (LUW).

The DEIR should include plans that clearly delineate all applicable resource area boundaries on the project site including buffer zones and 100-year flood elevations. The DEIR should quantify anticipated impacts to each resource area that will result from the proposed dredging and construction of the pier, boathouse and gazebo. The Proponent should evaluate the significance of the identified wetland resource areas with regard to statutory values and interests identified by applicable laws, notably the fisheries and wildlife habitat interests of the Massachusetts Wetlands Protection Act (WPA). MassDEP has indicated that an extensive Wildlife Habitat analysis will be required as part of the Notice of Intent filing under the WPA. The DEIR should provide a discussion of how the project would comply with the performance standards in the wetlands regulations and the 401 WQC regulations at 314 CMR 9.00. The Proponent should explain which impacts will be temporary or permanent, and should clarify how it defines temporary impacts in light of the plan to dredge on a continuous basis.

The reservoir will be dredged using a small barge-mounted hydraulic dredge that will be lowered into the pond by a truck-mounted crane parked on an existing gravel road outside of wetlands. The hydraulic dredge will use a cutter head to break up the sediment, which will then be suctioned through a hose by a pump and discharged through a hose to the dewatering area. The dewatering area will be constructed by clearing approximately three to seven acres of land and using soil excavated from the hillside to create an earthen containment berm. The discharge

hose from the dredge and the hose returning water from the dewatering basin to the pond will be supported on the pier above the wetlands. The Proponent should clarify the construction sequence for the project. The statement above implies that the pier will be constructed prior to dredging; no additional information regarding the pier has been provided in the NPC and should be provided in the DEIR.

The Proponent anticipates that 450,000 to 500,000 cy of material will be removed from the 44 acre dredge area. The Proponent will dredge approximately 14 feet below the existing pond bottom elevation. One of the stated goals of the project is the reclamation of sediments that have accumulated in the Reservoir; however no data is provided to determine if the proposed dredge will exceed the depth of any historic condition associated with this area. To understand the potential project impacts to fisheries and wetland resource areas, the Proponent should analyze sediment profile data to determine the historic condition of the bottom sediments and if the proposed 14 foot dredge is representative of any historic depth. This analysis should be conducted using guidance provided in the Division of Fisheries and Wildlife (DFW) comment letter on the ENF.

The Proponent's planned construction methodology is based on the assumption that the beaver dam on the north end of the pond will be allowed to remain and will be the control of the pond water surface elevation. The Proponent has indicated that the dam is necessary for the reservoir to maintain a sufficient water depth to float the barge holding the dredge, approximately two to three feet. As the beaver dam is on DCR property, the Proponent should consult with DCR regarding any future plans to remove the beaver dam or plans to conduct work related to the original dam. DCR has already removed the dam once, and could do so again. The Proponent should also outline an alternative construction methodology in the event that water levels in the reservoir are not sufficient to float the barge.

The Proponent should provide an expanded discussion of measures to ensure that construction period impacts are adequately minimized and mitigated. Turbidity curtains are proposed around the discharge pipe from the dewatering area and downstream of the proposed dredging area. The DEIR should demonstrate that dewatering basin design has factored inputs from stormwater and are sufficiently sized to accommodate added flows. The Proponent should clarify whether erosion and sedimentation controls are proposed to be left in place over the course of several years while the dredging occurs. The DEIR should evaluate the use of additional erosion control measures as directed in the MassDEP comment letter on the NPC.

The DEIR should consider the impacts of clearing the dewatering area on increased sedimentation to the reservoir. MassDEP has stated that silt fencing may not be sufficient to prevent impacts to resource areas downgradient of the dewatering area, which is proposed to be located on a relatively steep slope. The Proponent should describe how it will assess the quality the clarified water before it is reintroduced to the reservoir. MassDEP has indicated that water quality monitoring, both in the pond and in downstream areas, will be necessary over the years of proposed dredging. A turbidimeter should be employed to regularly monitor turbidity levels, levels which should be set based on consultation with the DFW. The DEIR should include a draft monitoring plan and protocol for consideration by State agencies. The Proponent should

also outline measures that will be taken to minimize the spread of invasive species during dredging, dewatering and storage of the dredge spoils.

Fisheries

In the ENF, the Proponent provided a quote from the Lakes and Ponds Final GEIR stating that "maintenance of open water as part of a functioning aquatic system is encouraged, but should not outweigh reasonable impacts to any one of the eight interests of the Wetlands Protection Act". One of the stated Interests of the WPA is the "protection of fisheries;" as outlined in comments from DFW and MassDEP. The Proponent must provide additional information in the DEIR to demonstrate that the potential impacts to fisheries are adequately addressed in accordance with the WPA.

The Proponent stated in the ENF that it is presumed that short-term adverse effects to fisheries will be offset by the long-term benefits to fisheries resulting from the creation of deep, coldwater habitat. However, this assumption has been made without analyzing the current species and habitat conditions in the reservoir. In response to comments from DFW, the Proponent should conduct fisheries surveys within the Reservoir to better predict and model impacts. I note that DFW has indicated a willingness to assist the Proponent with this effort. Results of the surveys should be submitted with the DEIR. As indicated in the DFW comment letter on the NPC, DFW continues have ongoing concerns relative to fisheries populations. The Proponent should continue to consult with DFW to develop a project that balances the needs of native fluvial species with the goals of the dredging project, and should report on this consultation in the DEIR.

Mitigation

The DEIR should contain a separate chapter on mitigation measures. It should include Draft Section 61 Findings for use by MassDEP that include a clear commitment to implement mitigation measures, an estimate of the individual costs of the proposed mitigation measures, and a schedule for the implementation, based on the phases of the project.

Comments

In order to ensure that the issues raised by commenters are addressed, the DEIR should include responses to comments. This directive is not intended to, and shall not be construed to, enlarge the scope of the DEIR beyond what has been expressly identified in this Certificate. The DEIR should present additional narrative and/or technical analysis as necessary to respond to the concerns raised.

July 10, 2009
Date

Ian A. Bowles

Comments received:

06/22/2009 Massachusetts Department of Environmental Protection – CERO
07/06/2009 Massachusetts Division of Fisheries and Wildlife

IAB/HSJ/hsj