



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Ian A. Bowles
SECRETARY

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Tel: (617) 626-1000
Fax: (617) 626-1181
<http://www.mass.gov/envir>

CERTIFICATE OF THE SECRETARY OF ENERGY & ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Ashmere Lake Dam Remedial Repairs
PROJECT MUNICIPALITY : Hinsdale/Peru
PROJECT WATERSHED : Housatonic
EEA NUMBER : 14198
PROJECT PROPONENT : Massachusetts Department of Conservation and
Recreation
DATE NOTICED IN THE MONITOR : January 21, 2009

As Secretary of Energy and Environmental Affairs, I hereby determine that the Final Environmental Impact Report (FEIR) submitted on the above project **adequately and properly** complies with the Massachusetts Environmental Policy Act (G.L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00).

Project Description

As described in the FEIR, the proposed project consists of repairs to a dam that has been classified as a "High Hazard" dam by the Office of Dam Safety (ODS). The project involves a series of remedial repairs to the Ashmere Lake Dam, including:

- *Dam Embankment Repair and Reconstruction Activities:* The downstream slope of the embankment will be extended to create a more stable slope (3H:1V) and to incorporate a filtered seepage collection system. The crest of the dam will be constructed to a constant width of 14 feet from end to end. The top of the crest will be approximately 1 to 1.5 feet higher than the existing crest. On the upstream side of the dam, the Proponent will remove existing riprap, regrade as necessary and install larger riprap with filtered bedding.
- *Low-Level Outlet:* The existing low-level outlet is a 24-inch iron pipe currently used to control the lake level. Modifications to the low-level outlet will accommodate the changes to

the geometry of the dam embankment. The crest manhole structure will be raised to remain flush with the new crest elevation. A new manhole and valve will be installed near the proposed downstream toe. The downstream end of the pipe will be extended approximately 60 feet to the new downstream toe of the dam and a new outfall structure will be installed. Riprap will be installed at the outfall to decrease flow velocities and to direct flows into the low-level outlet channel.

- *Spillway Reconstruction:* The existing spillway is used as an overflow structure and only flows when lake levels increase significantly due to inflow in excess of the capacity of the low level outlet. The existing 75-foot wide spillway will be replaced by a 90-foot wide concrete spillway with an ogee weir structure. The new spillway will include a concrete apron downstream of the spillway, concrete training walls, a deeper approach channel, a riprap transition downstream, a 5-foot wide stop log gate, and an access bridge and bridge piers.
- *Maintenance Activities:* The Proponent will create and maintain a 20-foot wide buffer between the downstream toe of the dam and any woody vegetation. Prior to work, this area will be cleared and used to provide access points for dam repair activities. In portions of the 20-foot buffer that are identified as wetlands, a wetland seed mixture will be used to allow the area to reestablish itself as a herbaceous wetland system, subject to routine mowing.
- *Access Roadway Improvements:* The existing unpaved access roadway to the lake's public boat ramp is located adjacent to the western dam abutment. To provide construction vehicle access to the dam and to improve the overall condition of the access roadway, the Proponent will regrade the existing roadway to improve surface drainage and minimize the potential for washouts, and will install dense graded crushed stone to provide a more durable wearing surface. Pull-outs will be created to allow vehicles to pass each other. The Hinsdale Conservation Commission has issued a Negative Determination of Applicability to authorize these access roadway activities.

The repairs and modifications to the dam are intended to increase the stability of the dam, to prevent the dam from being overtopped during the Spillway Design Flood (SDF) by providing a larger, more efficient spillway and raised embankment crest; to reduce erosion of the upstream slope due to wave action; and to bring the dam into compliance with the Office of Dam Safety Standards.

Another important component of the project involves the proposed changes to Bennett Brook. Bennett Brook originates at the existing spillway and historically received perennial flows from the spillway structure. Lake drawdown activities have diminished the frequency of flows from the spillway into Bennett Brook such that the channel from the spillway now exhibits the characteristics of an intermittent stream. Following the repairs to the dam, the spillway will once again serve as the primary outlet which will allow Bennett Brook to receive more consistent flow patterns through the spillway channel. A second stream channel referred to by the proponent as a low-level outlet channel currently originates from the downstream toe of the dam. Inflows to this channel come from the 24-inch low-level outlet pipe and dam seepage. DCR's maintenance of the lake levels using the low level outlet and the annual winter lake drawdown activities have caused this historically intermittent channel to exhibit characteristics of a perennial stream. The proposal to use the spillway as the primary outlet will result in limited

flow to this channel. As part of the project, the proponent will implement a monitoring program to ensure that potential adverse impacts to Bennett Brook are adequately mitigated.

The existing dam is a 1,525-foot long, 32-foot high earthen embankment structure with an uncontrolled spillway channel. It has a low-level outlet. Due to existing deficiencies with the existing dam, DCR has been operating the low level outlet of the dam to maintain lowered lake levels over the past several years. The winter drawdown of the lake (approximately three-feet) has been authorized under an Order of Conditions issued by the Hinsdale Conservation Commission. Since about 2000, the summer and winter pool levels have been maintained at approximately elevation (El.) 1581.8 and El. 1580.8 respectively. These levels are approximately 0.5 to 1.5 feet below normal summer and winter pool elevations, and approximately 0.5 to 1.5 feet below the existing spillway crest.

The 300-acre Ashmere Lake is located primarily in the Town of Hinsdale, with a portion of the lake in the Town of Peru. DCR also owns an approximately 32-acre parcel of undeveloped forested land located immediately south and adjacent to the dam. This parcel of land extends south to Smith Road and is bisected by a gravel roadway that serves as access to a public boat ramp and the dam. The project is located within the Hinsdale Flats Watershed Area of Critical Environmental Concern (ACEC).

Jurisdiction and Permitting

The project is subject to the preparation of a Mandatory EIR pursuant to Sections 11.03(3)(a)(1)(a) and 11.03(3)(a)(1)(b) of the MEPA regulations because it alters one or more acres of Bordering Vegetated Wetlands (BVW) and alters ten or more acres of other wetlands. It may require a Superseding Order of Conditions and a Section 401 Water Quality Certificate from the Department of Environmental Protection (MassDEP). Portions of the lake are located within the habitat of a species of "Special Concern" pursuant to the Massachusetts Endangered Species Act (MESA). However, it appears that the project can be conditioned to avoid a "take" by the Natural Heritage and Endangered Species Program (NHESP). The project requires a National Pollutant Discharge Elimination System (NPDES) General Permit from the U.S. Environmental Protection Agency (EPA); an Individual Permit from the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the Clean Water Act; and a Chapter 253 Dam Safety Permit from DCR's Office of Dam Safety (ODS). For the annual drawdown (three-feet), DCR has received an Order of Conditions from the Hinsdale Conservation Commission (HCC). The Peru Conservation Commission (PCC) has not issued an Order of Conditions for the annual drawdown. DCR has filed a Notice of Intent with the PCC for the annual lake drawdown. The drawdown for the dam repairs (six-feet) will require Orders of Condition from the HCC and PCC. Because the Proponent is a state agency, MEPA jurisdiction over the project is broad, and extends to all issues with the potential to cause Damage to the Environment, as defined in the MEPA regulations.

Review of the FEIR

The FEIR included a detailed description of the project and provided an existing and proposed site plan in Attachment D-3. The FEIR described each state agency action required for the project.

The FEIR provided an overview of how Bennett Brook flows will be managed after the project is completed. The proponent will follow the guidelines on lake drawdown in the Generic Environmental Impact Report (GEIR): Eutrophication and Aquatic Plant Management in Massachusetts (July 2002). It will keep outflow during drawdown below a discharge equivalent to four cubic feet per second (cfs) per square mile of the watershed. The proponent will keep outflow during refill above a discharge equivalent to 0.5 cfs per square mile of watershed. Once the lake elevations reach the outlet structure elevation, the discharge rates will be controlled by the inflow rates to the lake with variations consistent with the watershed hydrology. The FEIR estimated that less than one cubic feet per second (cfs) of seepage flow will go to the low flow outlet during different times of the year. The project will include an unconfined weir control structure, which will restore the natural flow variations to Bennett Brook.

The FEIR provided updated information on wetland resource area impacts and permitting since the DEIR. The drawdown of the lake by six-feet for dam repairs is estimated to impact about 18 acres of Land Under Water (LUW). The annual winter lake drawdown of three-feet is estimated to impact about 9 acres of LUW each year. The dam repairs will also affect the following wetland resource areas: 21,213 sf (temporary) and 33,123 sf (permanent) of Bordering Vegetated Wetlands (BVW); 35,284 sf of LUW; 1,900 linear feet and 31,800 sf of Bank; and 18,797 sf of Riverfront Area (RFA). The FEIR included information on the "limited" project provisions of the Wetlands Protection Act regulations outlined at 310 CMR 10.53(3)(i). It discussed the mitigation requirements for the resource areas that may be impacted. For all proposed wetland replication/restoration areas, the proponent prepared a detailed wetlands replication plan in the FEIR (Attachment D-4). The FEIR identified that the proponent would dredge about 90 cubic yards of material from the spillway approach channel.

The FEIR provided a dewatering plan for its dredged material as part of its National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SPPP). The SPPP identified that the construction area is about 4.75 acres. No areas were identified that required blasting.

On February 20, 2009, the proponent provided information on the historic aquatic base flows of Bennett Brook at Smith Street. On February 25, 2009, DCR identified the base flows for Bennett Brook during lake drawdown and refill. The above information addressed the concerns reflected in comment letters from the Massachusetts Riverways Program, the Berkshire Regional Planning Commission, and the Housatonic Valley Association that flows to Bennett Brook be sufficient to protect coldwater fishery resources. DCR has now provided sufficient information to demonstrate that it will provide natural flows to Bennett Brook during all conditions. These natural flows will be based on seasonal flows from the flow data provided in the supplemental information. Furthermore, DCR has demonstrated that it will provide a management plan for the dam to be developed with the concerned parties. DCR has also provided significant operational

improvements as part of the dam repairs that will allow it to respond quickly to changes in the environment, such as drought and very wet conditions.

FEIR Mitigation

The FEIR contained a separate chapter on mitigation measures. It included a Draft Section 61 Findings for MassDEP. In supplemental material (received on February 20, 2009), the proponent estimated the costs of the proposed mitigation measures. DCR is responsible for implementing the mitigation. The mitigation measures will be finalized by the completion of work.

In the FEIR, the proponent has committed to provide the following mitigation measures:

- Purchase 6.94 acres of property below the dam at the low level outlet in order to restore the Bennett Brook stream bed, approximately \$30,000.
- Pursue a Conservation Restriction for the 6.94 acre property.
- Restore 21,213 sf of herbaceous wetlands along the toe of the dam, which is included in the 71,000 sf of BVW replication, approximately \$111,000.
- Implement a temporary lake drawdown (by October 1st) during construction of the dam repairs to avoid impacts to the Wood Turtle habitat.
- Follow *GEIR: Eutrophication & Aquatic Plant Management in MA* (July 2002) guidelines to minimize fisheries and turtle habitat impacts during the drawdown.

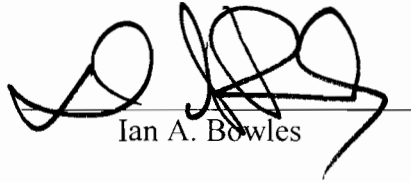
DCR has also agreed to perform field visits with the Massachusetts Riverways Program during different flow conditions, such as a drought or extremely wet seasons, and it will physically modify the weir structure to mimic natural flow conditions to Bennett Brook. The redesigned dam spillway has been planned to maintain flows to Bennett Brook by using an adaptive management approach. Wood stop logs will be used and set at elevations that allow flows through the dam spillway under all flow conditions. Any modifications to the wooden logs can be easily made by DCR. DCR will also replace the low level outlet controls with a new gate valve to provide easier control of the outlet. It will develop a low flow management plan, which is coordinated with the state and local agencies, to monitor and improve the flow characteristics of Bennett Brook as a coldwater fisheries resource. A minimum and maximum discharge rate from the Massachusetts Riverways Program has been used by DCR as the standard for work during the rehabilitation of the dam and operationally after work is complete.

Comments from MassDEP indicate that revised mitigation measures may be required for the project as further details are provided during the permitting process. DCR should provide such additional details and revised mitigation measures, along with revised Section 61 Findings where appropriate, to MassDEP as the project proceeds through permitting.

Based upon my review of the FEIR and after consultation with state agencies, I am satisfied that the FEIR and the supplemental materials provided by DCR contain sufficient information to allow state agencies to understand the environmental consequences of the project. Any remaining issues concerning proposed mitigation measures can be resolved during the

permitting process. Final Section 61 Findings by MassDEP should be forwarded to the MEPA Office in accordance with 301 CMR 11.12.

February 27, 2009
Date



Ian A. Bowles

Comments received:

- Housatonic Valley Association, 2/19/09
- MassDEP/WERO, 2/19/09
- BSC Group, 2/20/09
- Berkshire Regional Planning Commission, 2/20/09
- MA Riverways Program, 2/20/09
- MassWildlife/NHESP, 2/20/08
- BSC Group, 2/25/09

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