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CERTIFICATE OF THE SECRETARY OF ENERGY & ENVIRONMENTAL AFFAIRS  
ON THE  
DRAFT 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 : September 10, 2008

As Secretary of Energy and Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) 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 DEIR, the proposed project consists of repairs to a dam that has been classified as a High Hazard 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 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 the ogee weir, 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 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 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 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 lake levels using the low level outlet and 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 measures and 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 drawdown 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. 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 approximately a 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), 11.03(3)(a)(1)(b), and 11.03(3)(a)(4) of the MEPA regulations because it alters one or more acres of Bordering Vegetated Wetlands (BVW), alters ten or more acres of other wetlands, and the structural alteration of an existing dam that causes the expansion of twenty percent or any decrease in impoundment capacity. It may also 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). Orders of Condition may be required from the Hinsdale and Peru Conservation Commissions. 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 DEIR

The DEIR included a description of the project. It contained a description of each state permit or agency action required or potentially required, and demonstrated that the project will meet applicable performance standards. The DEIR provided an update on the local permitting process for the project. It responded to comments from the Berkshire Regional Planning Commission regarding how the project could help to fulfill the goals of the Hinsdale Open Space

& Recreation Plan and the 2001 *Regional Plan for the Berkshires*. The DEIR stated that the proponent did not support a potential public beach area at the end of the access road as part of the project because of its lack of adequate staffing in this region for existing facilities.

The DEIR evaluated a No Repair Alternative and an Extreme Permanent Lake Drawdown Alternative. The No Repair Alternative was rejected as it would increase the potential of dam failure and related adverse impacts. The Extreme Permanent Lake Drawdown Alternative (greater than 6 feet) was rejected as it would result in a permanent loss of 18 acres of Land Under Water, indirect impacts to upstream wetlands, and a significant loss of recreational and economic value to the lake. The DEIR has evaluated a number of design alternatives related to improving the stability of the dam to determine which alternative resulted in the least environmental impacts. The Preferred Alternative remains the proponent's choice alternative with the improvements proposed in the DEIR. The DEIR has explained the trade-offs inherent in the alternatives analysis, such as increased impacts on some resources to avoid impacts to other resources.

The DEIR confirmed the jurisdictional status of the Bennett Brook stream channels currently originating at the spillway and low flow outlet, and identified the applicable Riverfront Areas. The DEIR included plans that clearly delineated the applicable resource area boundaries on the project site and the potential wetland replication sites. It provided a functional assessment of the wetland resource areas. In the DEIR, the proponent identified that the project would result in the following resource area impacts:

- Bank: 185 linear feet (permanent), 1,900 linear feet (temporary) (31,800 sf total);
- Bordering Vegetated Wetlands (BVW): 33,123 sf (permanent) and 21,213 sf (temporary);
- Land Under Water (LUW): 7,784 sf (permanent) and 27,500 sf (temporary); and
- Riverfront Area (RA): 9,548 sf (permanent fill).

The DEIR also states that 18 acres of temporary impact to LUW will occur due to construction period drawdown. It identified that 9,249 sf of RA would be converted to wetlands. Permanent wetland impacts are associated with dam widening and structural improvements to the embankment, spillway and low-level outlet. Temporary impacts are associated with the construction period drawdown and the reestablishment of perennial flow to Bennett Brook. The DEIR indicated and quantified the wetland impacts associated with each component of the project, including improvements to the dam and the access road, and construction period impacts. Impacts to the adjacent wetlands from direct filling and indirect impacts as a result of dewatering and dredging were also identified and described in the DEIR. The proponent has designed the project to comply with the Performance Standards for each impacted resource area to the maximum extent feasible.

The BVW at the site is comprised of a conifer-dominated wetland which is a relatively uncommon natural community in Massachusetts that will be difficult to replace as part of a mitigation plan. The DEIR included a discussion of potential wetland replication alternatives; according to the proponent opportunities for on-site replication are limited. The proponent has proposed to replicate wetlands at a ratio of slightly greater than 1:1. The Proponent has also evaluated several offsite areas as potential mitigation sites. The challenges associated with the

proposed offsite replication include out-of-kind mitigation, the purchase of private property, and additional permitting. Following repairs to the dam, approximately 16,569 sf of forested BVW will be permanently cleared at the downstream toe of the dam to prevent tree growth at the base of the dam. As a mitigation measure, this area will be planted with a wetland seed mix and allowed to function as an herbaceous wetland system. Approximately 60,000 sf of BVW replication is proposed by the proponent. The proponent is proposing to expand and provide permanent protection to areas along the access road identified as non-jurisdictional isolated wetlands via a Conservation Restriction.

In light of the difficulties involved in directly replicating impacted BVW at the site, NHESP has proposed that the proponent conduct and/or fund a detailed inventory of conifer dominated wetland systems within the Hinsdale Flats ACEC and the proponent has committed to undertake an inventory of conifer dominated wetland systems.

The Proponent has been working with the Massachusetts Riverways Program and the Housatonic Valley Association to investigate base flow issues to Bennett Brook and the potential impacts of the proposed project. The DEIR stated that the Riverway's River Instream Flow Stewards Program established a stream flow gage station on Bennett Brook about 0.7 km downstream of the dam. The proponent has used the Riverways Q50 flow data to make determinations for lake drawdown, lake refill and low-flow stream conditions over the spillway. DCR will incorporate measures to provide a determinable base flow to downstream resource areas through dam design and operation. The proponent is proposing to add a 5-foot wide stop gate at the midpoint of the crest structure. The gate will allow for the partial lowering (20-24-inches) of the lake for the winter drawdown pool level and a four-foot lowering of the lake for maintenance, or for an emergency.

The DEIR included a discussion of potential environmental impacts associated with the construction period. The project has been designed to allow the lake level to be at or near normal pool elevations for the summer recreation season, defined as the period between Memorial Day and Labor Day. In order to complete construction activities that are dependent on lake level, the proponent will initiate a temporary drawdown of approximately 6 feet below normal pool elevation at El. 1576.0. This drawdown will allow sufficient space for the contractor to repair the upstream slope of the dam. The proponent may also use a series of temporary cofferdams along the upstream slope to provide adequate dry land to complete the upstream slope modifications. The DEIR discussed how the drawdown and refill will be conducted. Dredging will occur at the spillway approach channel in order to provide a stable flow path for discharges over the spillway.

The proposed construction-period drawdown will result in impacts to mapped state-listed species habitat. NHESP's primary concern related to an unnamed stream located in the southeastern corner of Ashmere Lake's south basin that is mapped as habitat for the Wood Turtle. The proponent has committed to follow guidance in the *GEIR: Eutrophication & Aquatic Plant Management in MA* (July 2002) (the "GEIR") to initiate the drawdown in the fall and achieve refill by April. It will commence the drawdown early enough to achieve the drawdown by the end of September, and otherwise to follow the guidance in the GEIR.

NHESP's identified ten species of fish present in Ashmere Lake and twelve species in Bennett Brook. Bennett Brook is a significant coldwater fishery resource. The proponent has committed to follow the guidelines related to drawdown in the GEIR to keep outflow during the drawdown below a discharge equivalent to 4 cubic feet per second (cfs) per square mile of watershed. Once the target water level is achieved, DCR will match outflow to inflow to the greatest extent possible, maintaining a stable water level, and keep outflow during refill above a discharge equivalent to 0.5 cfs per square mile of watershed.

The DEIR addressed concerns regarding potential impacts to the thermal regime of Bennett Brook that could result from the proposed reconfiguration of downstream flows from the lake. It included a discussion of potential thermal impacts, and it outlined measures that could be implemented to avoid, minimize and mitigate this impact.

### SCOPE

The FEIR should resolve the remaining issues outlined below, as required by this Certificate. It should follow the MEPA Regulations at 301 CMR 11.07 for outline and content, as modified by this Certificate.

#### Project Description & Regulatory Environment

The FEIR should include a detailed description of the project with a summary/history of the project. It should provide an existing and proposed site plan. The FEIR should describe each state agency action required for the project. It should contain sufficient information to allow permitting agencies to understand the environmental consequences related to the project. The FEIR should provide an overview of how Bennett Brook flows will be managed after the project is completed, including volumetric estimates of any expected or targeted flows. It should explain how the spillway and low flow outlet will be managed to achieve outflows comparable to the inflows into Ashmere Lake throughout the year. The FEIR should estimate the amount of seepage flowing via the low flow outlet during different times of the year.

#### Wetland Resource Area Impacts

The FEIR should provide any updated information on wetland resource area impacts and permitting since the DEIR. It should discuss the nature and extent of impacts to LUW from the drawdown of the lake. The proponent has requested that the project be reviewed under the "limited" project provisions outlined at 310 CMR 10.53(3)(i), and the FEIR should include any updates concerning this determination. The FEIR should discuss the mitigation requirements for all the resource areas to be impacted. For all proposed wetland replication/restoration areas, the proponent should prepare a detailed wetlands replication plan for submittal in the FEIR which, at a minimum, should include: replication location(s); elevations; typical cross sections; test pits or soil boring logs; groundwater elevations; the hydrology of areas to be altered and replicated; list of wetlands plant species of areas to be altered and the proposed wetland replication species; planned construction sequence; and a discussion of required long-term monitoring.

The FEIR should specify the amount of fill to be dredged. The proponent should outline how the project will comply with 314 CMR 9.07 regarding its dredging operations. The FEIR should provide supporting documentation regarding the historic flows of Bennett Brook and the unnamed stream. It should identify what constitutes a determinable base flow to downstream resource areas.

### Construction Impacts

The FEIR should provide a detailed dewatering plan for its dredged material as part of its National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan. It should identify the areas for potential filling, the amount of filling (cubic yards), and any areas requiring blasting.

### Mitigation

The FEIR should contain a separate chapter on mitigation measures. It should include Draft Section 61 Findings for MassDEP, DCR, and NHESP that includes a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation, and the identification of the parties responsible for implementing the mitigation. A schedule for the implementation of the mitigation, based on the construction phases of the project, should also be included. As outlined above, the proponent should identify the required wetland replication mitigation for the state and federal wetlands permitting processes and should demonstrate that required mitigation will be able to be constructed, or that permitting agencies are amenable to alternative approaches.

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

- Provide a permanent Conservation Restriction on four acres of land within the DCR property boundaries on the project site.
- Restore 21,213 sf of herbaceous wetlands along the toe of the dam, which is included in the 60,000 sf of BVW replication, approximately \$111,000.
- Implement a temporary lake drawdown (by October 1<sup>st</sup>) 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 drawdown.

### Response to Comments

In order to ensure that the issues raised by commenters are addressed, the FEIR should include a response to comments. This directive is not intended to, and shall not be construed to enlarge the scope of the FEIR beyond what has been expressly identified in the initial scoping certificates or this Certificate.

### Circulation

The FEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should also be sent to the list of "comments received" below and to

Hinsdale and Peru officials. Copies of the FEIR should be made available for public review at the Hinsdale and Peru Public Libraries.

October 17, 2008

Date



Ian A. Bowles

Comments received:

- BSC Group, 9/16/08
- Berkshire Regional Planning Commission, 10/2/08
- BSC Group, 10/2/08
- Housatonic Valley Association, 10/9/08
- MA Riverways Program, 10/10/08
- MassDEP/WERO, 10/14/08
- BSC Group, 10/15/08

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