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January 30, 2008

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

PROJECT NAME:	Hall Brook Dam Removal and Proactive Environmental Restoration
PROJECT MUNICIPALITY:	Adams
PROJECT WATERSHED:	Hoosic
EEA NUMBER:	14152
PROJECT PROPONENT:	Hall Brook Holding, LLC
DATE NOTICED IN MONITOR:	December 24, 2007

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62H) and Section 11.11 of the MEPA Regulations (301 CMR 11.00), I have reviewed this project and hereby determine that it **does not require** further MEPA review. In a separate Decision also issued today, I have proposed to grant a Waiver from the requirement to prepare a Mandatory Environmental Impact Report (EIR) for the project. This Certificate sets forth the issues that must be addressed by the Proponent during permitting and discusses recommendations that were submitted on the project during the MEPA comment period.

Project Description

As outlined in the Expanded Environmental Notification Form (EENF) and in supplemental materials provided by the Proponent, the project proposes the removal of the Hall Brook Dam on Hoxie Brook in Adams, MA. Hall Brook Dam is a 24-foot high, 135-foot long stone masonry and concrete structure that was constructed in the 1800s to supply water to former

downstream industries. The dam no longer serves any purpose to the dam's owner. The former impoundment has been completely filled in with sediment; Hoxie Brook flows directly on top of the impounded sediment and falls over the dam's spillway. The dam has been rated as possessing "Significant" hazard potential and is in "Unsafe" condition according to the Department of Conservation and Recreation (DCR) Office of Dam Safety (ODS). There is an outstanding Dam Safety Order (issued June 8, 2007) to conduct studies leading to the ultimate removal or reconstruction of the structure. The dam is located in a densely populated residential and commercial area near downtown Adams.

Jurisdiction

The project is subject to the preparation of a mandatory EIR pursuant to Section 11.03(3)(a)(4) and 11.03(3)(b)(1)(d) of the MEPA regulations because it will result in a decrease in the impoundment capacity of an existing dam and because it will impact more than 5,000 square feet (sf) of bordering vegetated wetlands (BVW). The project will require a Programmatic General Permit from the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the Clean Water Act; a Chapter 253 Dam Safety Permit from DCR; a 401 Water Quality Certificate from the Department of Environmental Protection (MassDEP); possible review from the Massachusetts Historical Commission (MHC); and an Order of Conditions from the Adams Conservation Commission.

The Proponent is not seeking financial assistance from the Commonwealth. Therefore, MEPA jurisdiction applies to those aspects of the project within the subject matter of required or potentially required permits with the potential to cause Damage to the Environment. In this case, MEPA jurisdiction on this project extends to wetlands, dam safety and historic resources.

Review of the EENF

The Proponent has stated the following goals for the project: 1) removal of the dam to improve public safety; 2) mitigation of sediment transport potential; 3) construction of a stable stream channel and side slopes; 4) mitigation of impacts to neighboring properties and adjacent infrastructure; and 5) proactive restoration of desirable in-stream habitat and improvement of wetland resource areas. The Proponent notes that some of the goals outlined above are competing interests, which had to be balanced to develop an appropriate design.

The Proponent has conducted an analysis of project alternatives, including leaving the dam in place, repairing the dam, a full removal of the dam, and a partial breach/removal of the dam. A summary of the alternatives analysis was included with the EENF. Due to the numerous problems with the current dam including displaced stones, tree growth, bulging downstream face, impoundment sediment and the age of the dam, the Proponent asserts that a dam repair would essentially involve reconstruction of a new dam. The Proponent's preferred alternative is a partial breach/removal of the dam and restoration of the Hoxie Brook. The project has been designed following design criteria in EEA's recently published *Dam Removal in Massachusetts* guidance document (EEA, December 2007). The project will consist of removing a portion of

the dam such that the remaining channel has the capacity to safely pass the 100 year test flood without overtopping its "banks", which will essentially be the remains of the dam. The portion of the dam below the proposed grades will remain in place.

Following the selection of the preferred breaching alternative, the Proponent conducted a second analysis of alternatives for the post-removal stream channel design. The Proponent considered allowing a natural stream to develop, excavation of the stream channel to bedrock, development of a "chute" channel, and installation of a "stepped" channel. Supplemental materials provided by the Proponent included a comprehensive discussion of the tradeoffs considered in the design of the stream channel. For example, in response to questions posed at the MEPA site visit for the project, the Proponent asserts that excavation to bedrock throughout the river reach would require side slopes in the narrow stream valley to become very steep and unstable.

The Proponent's selected alternative will consist of a 15 foot wide by 2 foot deep stream channel with a series of low stone weirs that will "step" the channel down through the former impoundment. This design will create a series of riffles to enhance in-stream habitat and dissipate energy through the steep stream reach. The bank of the channel will be sloped back and armored with recycled stone from the dam and/or other bio-engineered methods. Rounded river cobbles will be installed in the channel bottom. The Proponent notes that in the event that shallow bedrock is encountered, the stream channel design may be modified to allow for a bedrock channel in some places.

Prior to the start of construction, the impoundment area will be dewatered through the temporary division of Hoxie Brook using a temporary coffer dam at the upstream extent of the work. Two 36-inch temporary diversion pipes will be installed to divert Hoxie Brook around the dam site, discharging upstream of a stone check dam that will mitigate against downstream sediment transport. The project will also involve the dredging of less than 2,000 cubic yards of impounded sediment from the riverbed upstream of the dam. Excavation of the sediment will take place "in the dry" in conjunction with a temporary stream channel diversion around the work site. In order to mitigate against additional downstream sediment transport during construction, a temporary stone check dam will be installed at the downstream limit of work.

The Proponent asserts that the project will have an overall positive impact on the environment. The breach of the dam will connect the upstream and downstream fisheries in this area of Hoxie Brook. The proposed step-pool system in the restored stream channel will allow for improved fish passage as compared to existing 24 foot dam. Restoration of the river to a more natural state will provide a healthier and more diverse ecosystem. The creation of a riffle pool stream channel will help increase dissolved oxygen levels in the water, which will improve water quality and riverine biodiversity.

The Hoxie Brook channel is within the FEMA 100-year flood zone. The Proponent has performed a dam breach simulation and hydraulic and hydrologic analyses of the Hall Brook Dam spillway and contributory drainage channel. The current spillway does not safely pass the 100-year design flood. Water flowing freely through the restored stream channel will decrease the potential for flooding upstream of the existing dam. The proposed stone weirs and stream

bank protection have been sized for 100-year flood flow velocities.

The Massachusetts Riverways program has provided comments on the EENF that should be addressed by the Proponent and MassDEP during the permitting of the project. Specifically, the Proponent should extend the longitudinal profile of the project area upstream to the next hydraulic control to identify the potential extent of upstream head cutting. According to Mass Riverways, this will be important to ensure that potential head cutting does not adversely impact a roadway and culvert upstream of the current impoundment area. The Proponent should also ensure that the Division of Fish and Wildlife has an opportunity to review the proposed stream channel design.

Due to the steep natural topography of the site, bordering vegetated wetlands (BVW) that have established in the sediment filled impoundment will likely be impacted after removal of the dam and the reestablishment of the natural stream channel. While the EENF estimated a potential loss of 9,200 sf of BVW, supplemental materials provided by the Proponent state that original BVW impacts were over-estimated and that based on consultation with MassDEP wetlands staff, the project will likely result in impacts to approximately 5,680 sf of BVW and 3,520 sf of Bank. The project will file a Notice of Intent for the project under the Limited Project provisions of the Wetlands Protection Act (WPA) at 310 CMR 10.53(4), following MassDEP's guidance document *Dam Removal and the Wetland Regulations* (MassDEP, December 2007).

The Proponent will conduct wetland and upland seeding and planting in impacted areas but expects that much of the impacted BVW will be lost. The project does not include BVW replication as mitigation for resource area impacts. MassDEP's Dam Removal guidance allows for the waiving of certain traditional mitigation requirements for selected dam removal projects that will provide other environmental benefits. The Proponent cites the guidance to support the fact that 1:1 replication of the impacted BVW is not proposed as part of the project as would normally be required under 310 CMR 10.55(4). The Proponent asserts that the removal of Hall Brook Dam will result in an improvement to Hoxie Brook ecosystem. MassDEP has stated in its comments on the EENF that it supports the Proponent's request for an EIR waiver and that it will address waiving the requirement for wetlands replication during the permitting process.

The Proponent intends to create permanent vegetation on the newly created slopes on either side of the stream channel. The Proponent will install erosion control blankets along the restored side slopes along with seeding and live stakes. No exposed sediment or slopes will remain after the project is complete. Supplemental materials provided by the Proponent detailed the proposed planting mix. The Proponent should note comments from the Berkshire Regional Planning Commission (BRPC) regarding restoration efforts.

The Proponent has developed a Sediment and Erosion Control Plan and Construction Sequence for the project. Construction is planned to occur during the low-flow season during summer to early fall of 2008 to mitigate adverse impacts to fisheries. Best Management Practices (BMPs) including hay bales and silt fences, a stone check dam, and erosion control blankets will be used to prevent against the erosion and discharge of on-site sediment.

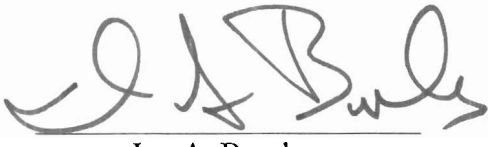
Several commenters have suggested that the project presents an excellent opportunity to

conduct benthic and biological studies to measure the impact of the proposed dam removal. I encourage the Proponent to incorporate pre- and post-removal monitoring into the project to the degree possible. The Proponent should coordinate with the Division of Fisheries and Wildlife and the Hoosic River Watershed Association (HooRWA) regarding possible opportunities to measure the impact of this river restoration effort. HooRWA notes in its comments on the EENF that it will be starting a volunteer Stream Team program on the South Branch of the Hoosic River with funding from the Massachusetts Riverways program, and could incorporate monitoring activities into the program.

Conclusion

Based on a review of the information provided by the Proponent and after consultation with the relevant public agencies, I find that the potential impacts of this project do not warrant further MEPA review. Outstanding issues may be addressed during the permitting process.

I have also issued today a Draft Record of Decision (DROD) proposing to grant a Waiver from the requirement to prepare an EIR for the project. The DROD will be will be published in the next edition of the Environmental Monitor on February 6, 2008 in accordance with 301 CMR 11.15(2), which begins the public comment period. The public comment period lasts for 14 days and will end on February 20, 2008. Based on written comments received concerning the DROD, I shall issue a Final Record of Decision or a Scope within seven days after the close of the public comment period, in accordance with 301 CMR 11.15(6). If the Full Waiver is not approved based on comments received on the DROD, then this Certificate on the EENF will be re-issued with a Scope for an EIR.



January 30, 2008
Date

Ian A. Bowles

Comments received:

12/09/2008	Berkshire Environmental Action Team
1/15/2008	Massachusetts Riverways Program
1/16/2008	GZA GeoEnvironmental, Inc., for the Proponent
1/17/2008	Berkshire Regional Planning Commission
1/23/2008	Department of Conservation and Recreation
1/23/2008	Department of Environmental Protection, Western Regional Office
1/23/2008	Elena Traister
1/23/2008	Hoosic River Watershed Association

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