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June 30, 2010

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

PROJECT NAME: Thunder Brook Dam Removal  
PROJECT MUNICIPALITY: Chesire  
PROJECT WATERSHED: Hoosic River  
EEA NUMBER: 14599  
PROJECT PROPONENT: Town of Chesire  
DATE NOTICED IN MONITOR: May 24, 2010

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 **does not require** the preparation of an Environmental Impact Report (EIR).

Project Description

The proposed project as described in the Environmental Notification Form (ENF) involves the removal of the Thunder Brook Dam located off West Mountain Road in Chesire. The Thunder Brook watershed includes the eastern slope-portion of Mount Greylock and serves as a high gradient tributary to Kitchen Brook and the South Branch of the Hoosic River that provides a coldwater fisheries and riparian wildlife habitat. The Thunder Brook Dam was built in the early 1900s to provide a source of drinking water supply for the Town of Chesire. As described in the ENF, the Town has not used this surface drinking water supply source since the 1970's.

The project is being undertaken by the Town of Chesire (the Proponent) to restore aquatic habitat and coldwater fisheries migration throughout the 1.7-mile main stem of Thunder Brook tributary and connection to approximately 11 miles of additional tributary on Kitchen Brook, the South Branch of the Hoosic River, and associated tributaries. The Dam forms a shallow impoundment that originally extended approximately 200 feet upstream from the dam and provides habitat for warm-water fishery habitat. Currently, the dam forms a shallow

impoundment that extends 60 feet upstream from the dam. The removal of the dam will restore this reach of Thunder Brook to a more natural condition, improve upstream water quality, improve aquatic connectivity for anadromous fisheries including native eastern brook trout (*Salvelinus fontinalis*) and provide other ecological benefits including restoration of habitat and natural stream flow.

The Proponent is proposing to remove nearly all of the existing 55 feet-wide by 18 feet-tall stone and concrete Thunder Brook Dam spillway and sluiceway that currently impounds the Thunder Brook on the south side of West Mountain Road. The Proponent is proposing to leave a small portion of the existing concrete retaining wall abutment located on the left bank upstream of the dam. Stream banks and existing retaining walls located in the immediate vicinity of the existing dam will be stabilized post-grading. The Proponent has committed to implement a proposed planting plan for the dam removal and culvert replacement areas.

The Proponent is also proposing to replace an existing seven foot diameter corrugated metal pipe (CMP) culvert that serves a town-maintained dirt road located approximately 1,000 feet downstream of the dam with a 13.5-foot wide open-bottom CMP box arch culvert that will provide hydraulic conveyance capacity and in-stream passage of aquatic organisms. The Proponent has committed to work closely with the Chesire Conservation Commission and others to identify additional opportunities to improve stormwater management in this section of the 0.72-acre project site. The proposed project includes filling and reforming portions of the stream channel located in the impoundment area, under the footprint of the dam and the culvert replacement area to restore upland topography. I encourage the proponent to explore additional opportunities for riverfront and other habitat improvement and preservation in further developing its project design and mitigation plans.

The project will result in alterations to Land Under Water, Bank, Riverfront Area, Bordering Vegetated Wetlands (BVW) and Buffer Zone and Bordering Land Subject to Flooding as a result of dam removal, sediment excavation, and stream and upland habitat restoration activities. Approximately 1,000 cubic yards of sediment will be excavated from an area immediately behind the dam.

#### MEPA Jurisdiction and Permitting Requirements

The project is undergoing review pursuant to Section 11.03(3)(b)(1)(c) of the MEPA regulations because it will result in alteration of more than 1,000 sf of outstanding resource waters (ORW). The project requires a 401 Water Quality Certification from the Massachusetts Department of Environmental Protection (MassDEP) and an Order of Conditions from the Chesire Conservation Commission (and, on appeal only, a Superseding Order from MassDEP). The project also requires review by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). The project must comply with the National Pollution Discharge Elimination System (NPDES) General Permit for stormwater discharges from a construction site of over one acre from the U.S. Environmental Protection Agency.

According to the Department of Conservation and Recreation (DCR), the Thunder Brook Dam lacks sufficient design height and impoundment capacity to be regulated as a dam pursuant

to the Dam Safety Regulations 302 CMR 10.00-10.16 and therefore, does not require a Dam Safety Permit from the Office of Dam Safety. Accordingly, I have determined that the proposed project will not result in the structural alteration of an existing dam and therefore does not meet the MEPA requirements for the preparation of a mandatory EIR under Section 11.03(3)(a)(4) of the MEPA regulations.

The Proponent is receiving direct financial assistance from the Massachusetts Environmental Trust and the Department of Fish and Game's Division of Ecological Restoration (DER) for the project. Therefore, MEPA jurisdiction is broad and extends to all aspects of the project that may cause Damage to the Environment as defined in the MEPA regulations.

### REVIEW OF THE ENF

The ENF includes a description of the proposed dam removal and culvert replacement. The ENF also discusses four alternatives; the no action alternative, Installation of a Fish Ladder, Installation of Roughened Ramp Structures, and Installation of a Bypass Channel. A description of existing environmental conditions is provided in the ENF along with an analysis of project-related impacts, and mitigation plans that address erosion and sedimentation and control of invasive species. During the MEPA site visit and public consultation held for this project on June 14, 2010, there was considerable discussion about potential erosion and sedimentation issues, potential impacts to rare species and project construction sequencing and post-construction monitoring plans.

#### Wetlands

Based on the information provided in the ENF, the proposed dam removal and culvert replacement project work will result in the permanent alteration of 1,400 sf of Land Under Water (LUW) and 648 linear feet (lf) of Bank, 9,173 sf of the 200-foot Riverfront Area (RA) and approximately 5,700 sf of the 100-foot wetlands buffer zone. The Proponent anticipates that the removal of the dam will result in the conversion of open water areas to bordering vegetated wetlands (BVW), bank and RA, and the conversion of emergent marsh and scrub shrub wetlands to forested wetlands and upland forest.

Overall, the project is expected to result in significant environmental benefits associated with habitat connectivity improvements, restoration of the stream channel and related biological resource and water quality enhancements. Specifically, removal of the dam presents an important opportunity to restore connectivity and important coldwater fishery resources to this reach of Thunder Brook. The project requires a Section 401 Water Quality Certification (WQC), which is administered by the MassDEP's Boston Office. MassDEP advises that the Proponent should submit the application for the dredge and fill portions of the project as a single filing. The project is subject to the Wetlands Protection Act and must comply with the associated regulations as noted in the MassDEP comment letter.

The project may be eligible for review as a Limited Project under 310 CMR 10.53(4) as an improvement to the natural capacity of a resource area(s). If it is reviewed as a Limited Project, the Proponent and the Chesire Conservation Commission should use the MassDEP Dam Removal Guidance found at <http://www.mass.gov/dep/water/resources/dampol.pdf>

#### Water Management Plan

According to the information provided in the ENF, the Proponent proposes to construct a temporary coffer dam upstream from the impoundment area to divert stream flow to the streambed downstream of the dam via a temporary 18-inch water diversion pipe that will be placed on the north side of the stream channel to accommodate dam and sediment removal activities. The Proponent will need to incorporate temporary energy dissipation Best Management Practices (BMPs) at the proposed water diversion pipe's discharge point.

#### Sediment Management

As noted elsewhere in this Certificate, the project will result in the excavation and on-site reuse of a total of approximately 1,000 cy of sediment material. The Proponent completed a sampling and analysis of the impounded sediments and has designed a proposed sediment management plan for sediment material to be excavated from an area immediately behind the Thunder Brook Dam. The ENF includes a discussion of the Proponent's proposed sediment removal activities designed to avoid and minimize potential release of excess sediment downstream during dam removal activities. According to the Proponent, work will be undertaken during normal low flow periods between July and January. The Proponent must prepare a dewatering methodology to address any residual water remaining in the sediment to be removed. The Proponent's dewatering methodology should include details of pumping, piping and discharge point protection.

As described in the ENF, the excavated sediment material will be used on-site in a location adjacent to the proposed culvert replacement area to shape and grade the entrance portion of an existing town-owned unimproved logging road located along the south side of Thunder Brook to discourage automobile passage while allowing continued use of the logging road for pedestrians and horseback riding. BMPs should be adhered to during all phases of the project to minimize potential impacts to fisheries resources.

#### Post Dam Removal Monitoring

The Proponent should commit to develop and implement a targeted Post Dam Removal Monitoring Plan for the Thunder Brook Dam Removal project using existing guidance such as Gulf of Maine Council's "Stream Barrier Removal Monitoring Guide (2007)" and NOAA's "Stream Barrier Removal Performance Measures And Project Monitoring Worksheet". The Post Dam Removal Monitoring Plan should include observations of restored stream bed conditions, stream profile surveys, invasive species surveys, and visual surveys to document presence of fish or other wildlife using the restored habitat. The Proponent's monitoring and assessment plans should be submitted to the USACOE as part of the Section 404 permitting for the project.

#### Rare Species

As described in the information provided in the ENF, Thunder Brook supports populations of coldwater fisheries including native Brook Trout (*Salvelinus fontinalis*), Longnose Sucker (*Catostomus cataostomus*) and Slimy Sculpin (*Cottus cognatus*). According to the comments received from the Natural Heritage and Endangered Species Program (NHESP), the project site is located within Priority and Estimated Habitat for the Longnose Sucker (*Catostomus catostomus*), a state-listed species of Special Concern. This fish species and its habitat is therefore regulated pursuant to the implementing regulations of MA Endangered Species Act (MESA) (321 CMR 10.00). The Proponent has proposed that all project work will be undertaken during the period from June 15 through October 15 of any year to protect coldwater fish passage, migration and spawning of these species. I strongly encourage the proponent to work closely with NHESP during final project design to identify any additional measures to avoid and minimize impacts to the Longnose Sucker during project construction.

### Water Supply

As described above, the Thunder Brook Dam was originally constructed to provide a source of drinking water for the Town of Cheshire. MassDEP originally designated Thunder Brook as an Outstanding Resource Water (ORW) to support its use as a public water supply (PWS). The Town has not used this surface drinking water supply source since the 1970's. According to MassDEP's comments, the Thunder Brook Reservoir (1058000-02S) has been abandoned as a PWS by MassDEP in accordance with MassDEP's Drinking Water Regulations (310 CMR 22.25). Thunder Brook Reservoir's designation as an ORW will be removed to reflect its abandonment as a PWS and revisions to MassDEP's Surface Water Quality Standards (310 CMR 4.00).

### Greenhouse Gases

Although the Proponent is not required to prepare an analysis of GHG emissions, I encourage the Proponent to commit to adopting GHG mitigating measures that would require or create incentives for implementing diesel engine retrofits, the use bio-diesel fuel for off-road construction equipment and sediment hauling trucks, and the elimination of vehicle idling.

### Construction and Demolition

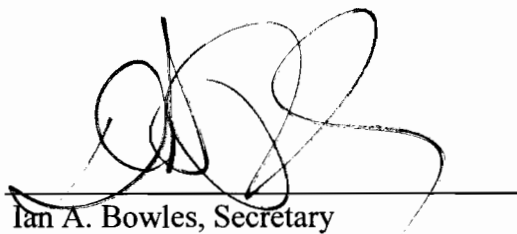
Given the availability of Ultra Low Sulfur Diesel (ULSD) fuel and the requirements for off-road engines in 2010, the construction equipment for the project should operate on ULSD fuel to reduce emissions of fine particulate matter. The Proponent should consult with MassDEP to discuss additional construction period diesel mitigation measures and I strongly encourage the Proponent to participate in MassDEP's Diesel Retrofit Program. The Proponent should develop and enforce a spills contingency plan to address potential releases of oil and/or hazardous materials from pre and post construction activities as recommended by MassDEP.

Conclusion

The ENF has sufficiently defined the nature and general elements of the project, and provided additional information and analysis of potential impacts, measures to avoid and minimize impacts, and a mitigation plan. Based on the information provided by the Proponent, and consultation with relevant public agencies, I conclude that no further MEPA review is required. The Proponent can resolve any remaining issues in the permitting process.

June 30, 2010

DATE

  
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Ian A. Bowles, Secretary

## Comments Received:

06/04/2010 Berkshire Regional Planning Commission  
06/07/2010 Board of Underwater Archeological Resources  
06/14/2010 Natural Heritage and Endangered Species Program (NHESP)  
06/21/2010 Hoosic River Watershed Association  
06/21/2010 Department of Fish and Game - Division of Ecological Restoration (DER)  
06/23/2010 Department of Conservation and Recreation (DCR)  
06/23/2010 MassAudubon  
06/28/2010 Department of Environmental Protection (MassDEP) - SERO

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