Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.: 13482
MEPA Analyst: Nick Zavolas
Phone: 617-626-1030

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: City of Leominster Goodfellow and Simonds Dam Modifications		
Street: Route 2		
Municipality: Leominster	Watershed: Nashua River	
Universal Tranverse Mercator Coordinates:	Latitude: 42 32' 47" N for Goodfellow Dam Longitude: 71 48' 37" W	
Estimated commencement date: 2005	Estimated completion date: 2006	
Approximate cost:	Status of project design: 90 % complete	
Proponent: Leominster Department of Public Works		
Street: 109 Graham Street		
Municipality: Leominster	State: MA	Zip Code: 01453
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Valerie Miller		
Firm/Agency: Maguire Group Inc.	Street: 33 Commercial Street, Suite 1	
Municipality: Foxborough	State: MA	Zip Code: 02035
Phone: 508-543-1700 Ext 389	Fax: 508-543-5157	E-mail: vmiller@maguiregroup.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐ Yes ☒ No

Has this project been filed with MEPA before?
☐ Yes (EOEA No._____) ☒ No

Has any project on this site been filed with MEPA before?
☐ Yes (EOEA No._____) ☒ No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting: **Yes. Additional information is included with the attached NOI, Wildlife Habitat Evaluation-Restoration and Replication Plan, as well as the Army Corp PGP permit application.**

a Single EIR? (see 301 CMR 11.06(8)) ☐ Yes ☒ No
a Special Review Procedure? (see 301CMR 11.09) ☐ Yes ☒ No
a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐ Yes ☒ No
a Phase I Waiver? (see 301 CMR 11.11) ☐ Yes ☒ No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): None

Are you requesting coordinated review with any other federal, state, regional, or local agency?
☒ Yes (Specify: Leominster Con. Com, MADEP, US ACOE, US EPA, Office of Dam Safety, NHESP) ☐ No

List Local or Federal Permits and Approvals:

Applications submitted to: Notice of Intent submitted to the Leominster Conservation Commission and MADEP. Chapter 253 Permit application submitted to the Office of Dam Safety. Programmatic General Permit submitted to US ACOE. 401 Water Quality Certification submitted to MADEP Division of Wetlands and Waterways.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- ☐ Land
- ☐ Water
- ☐ Energy
- ☐ ACEC
- ☒ Rare Species
- ☐ Wastewater
- ☐ Air
- ☐ Regulations
- ☒ Wetlands, Waterways, & Tidelands
- ☐ Transportation
- ☐ Solid & Hazardous Waste
- ☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	* Please see note below		
New acres of land altered		0 acres	
Acres of impervious area	Parcels 6, 11, & 12 30,160 sf	Parcel 6 132 sf	Parcel 6, 11, & 12 30,292 sf
Square feet of new bordering vegetated wetlands alteration		Parcel 6 2,182 sf. Parcel 11 & 12 757 sf.	
Square feet of new other wetland alteration		Land under water body: 6,831 sf.; Bank: 787 linear feet; Land subject to fld.: 1,894	
Acres of new non-water dependent use of tidelands or waterways		0 acres	
STRUCTURES			
Gross square footage	Not Applicable		
Number of housing units			

State Permits & Approvals

- ☒ Order of Conditions
- ☐ Superseding Order of Conditions
- ☐ Chapter 91 License
- ☒ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☐ DEP or MWRA Sewer Connection/ Extension Permit
- ☒ Other Permits (*including Legislative Approvals*) – Specify:

Maximum height (in feet)				Office of Dam Safety, Chapter 253; US Army Corp PGP
TRANSPORTATION				
Vehicle trips per day	Not Applicable			
Parking spaces				
WASTEWATER				
Gallons/day (GPD) of water use	Not Applicable			
GPD water withdrawal				
GPD wastewater generation/ treatment				
Length of water/sewer mains (in miles)				

NOTE

Goodfellow Pond Dam, Simonds Pond Dam, the connecting stream between these two dams and the Monoosnoc Brook located down stream of Simonds Pond Dam are all located on the south side of Route 2. These features are all located on adjoining parcels. Goodfellow Pond Dam is located on Parcel 11, Map 362 and Parcel 12, Map 429. Parcel 11 is 9 acres in size. A total acre value for Parcel 12 was not available at the Leominster Assessors' Office. The stream from Goodfellow Pond Dam to Simonds Pond Dam flows east across Parcel 10, Map 429 and Parcel 6, Map 429. Parcel 10 is approximately 10 acres in size. The size of Parcel 6 was not available at the Leominster Assessors' Office. Simonds Pond Dam, the Notown Filtration Plant and Monoosnoc Brook are also all located on Parcel 6, Map 429. Because the size of each parcel was not available, accurately stating the total size of all parcels involved is not possible. Figure 1 illustrates the location of the dams, and Figure 2 illustrates the assessors' plan. All figures associated with this ENF are included with the attached Notice of Intent, filed with the Leominster Conservation Commission and MADEP.

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☒Yes (Specify: A portion of the project is in an area of estimated habitat of a rare species) ☐No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐Yes (Specify_____) ☒No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) ☒No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

ALL PLANS ARE INCLUDED WITH THE ATTACHED NOTICE OF INTENT.

Project Site

The Notown Reservoir, Goodfellow Pond, Simonds Pond and their associated dams make up the north area reservoir system (Maguire, 2002). These three surface water bodies supply water to the Notown Water Treatment Facility which services 70% of Leominster's potable water. Maguire Group Inc. (Maguire) is currently working with the Leominster Department of Public Works (DPW) to make minor repairs to existing features at Goodfellow Pond Dam and to improve the structural integrity of Simonds Pond Dam. Both of these dams are located downstream of Notown Reservoir, which is classified in accordance with the Department of Conservation and Recreation (DCR), formerly the Department of Environmental Management (DEM), classification system as a high hazard (Class I), large size dam. Based on the classification of the Notown Reservoir Dam as a high hazard dam, its size requires it to pass ½ of a specific Probable Maximum Flood (PMF) event for this area of Massachusetts. The applicable PMF storm event was determined to be 16 inches of rainfall in a 24-hour period.

Goodfellow Pond Dam is a run of river dam that is a 15-foot high, 220-foot long earth embankment with a stepped masonry spillway located in the center of the embankment. The dam has a crest width of 10 feet and a hydraulic height of approximately 12 feet. The 56-foot wide spillway consists of stepped cut stone masonry training walls with a cut stone/cobble paved floor. Spillway training walls extend from the dam crest to the toe and then transition to masonry channel walls. This dam is in poor condition. Deficiencies include dislodged stones and toppled portions of the spillway training walls. The intake structure associated with this dam has also collapsed and requires replacement.

Simonds Pond Dam was constructed between 1850 and 1876 and is historically known as "Apherson's Folly." The concrete face of the dam and the gatehouse were designed by the Worcester County Engineering Department in 1936 in order to provide water to the City of Leominster. This dam is a 26-foot high, 365-foot long stone masonry gravity dam with a 48-foot wide stone masonry spillway located in the center. The spillway empties into a boulder filled plunge pool that flows into a channel with stone masonry training walls. A 16-inch diameter low-level outlet pipe runs form the gatehouse and empties at the bottom of the spillway. A 20-inch diameter main runs from the gatehouse to the Notown Water Treatment Facility (Maguire, 2002). Simonds Pond dam is in poor condition. Deficiencies include deteriorated concrete surfaces, significant loose and missing mortar, and evidence of seepage at the toe of dam.

The repairs and improvements to Goodfellow Pond Dam and the Simonds Pond Dam, respectively, are the subject of this ENF. Both of these dams are located on the south side of Route 2 on property owned by the City of Leominster DPW. Figures 3 through 11, in the attached NOI illustrate the proposed work and work areas.

Proposed Repairs and Improvements

The proposed repairs to Goodfellow Pond Dam are minor and will include the construction of a new intake structure at the northwest side of the dam (400 square feet of land under water); the repair of the training walls immediately east of the spillway (55 linear feet of bank and 620 square feet of bordering vegetated wetlands [BVW]); and the installation of an electrical conduit (137 square feet of BVW). The work associated with the spillway and the electrical conduit will also be within area identified as riverfront area (757 square feet) to Monoosnoc Brook as well as buffer zone to the bank and BVW.

Improvements proposed for Simonds Pond Dam include increasing the height of the dam by 3 feet to hold flood waters associated with a ½ PMF storm event. This will not change the normal pool elevation of the pond. A berm will also be required so that in the event of a ½ PMF storm event, the flood water that passes through Notown Reservoir will pass Simonds Pond Dam safely without jeopardizing the dam. The berm will be constructed at the north side of Simonds Pond so that the storm event does not erode the north end of Simonds Pond Dam and bypass the current spillway and emergency spillway. The berm will be constructed to meet the same elevation as the newly proposed height of the dam. The berm will be constructed with rip-rap rock and will extend from the north end of the dam west along the access road between Simonds Pond and Goodfellow Pond Dams. The berm will extend approximately 510 feet west of the dam and meet the existing ground elevation of 696 feet.

To further stabilize Simonds Pond Dam, an embankment of soil will be added to the front side of the dam. The embankment will start at the top of the raised dam and taper down at a 3H:1V slope until it meets the existing grade. The embankment will be seeded to stabilize the slope and will be engineered with a draining blanket of crushed stone to collect and channel water from the toe of the dam to the downstream channel. An emergency spillway will also be constructed at the southeast side of the dam using Articulated Concrete Block (ACB) to protect it from erosion and to direct floodwaters into the downstream channel. The emergency spillway is designed to flow during a 100-year flood event and contribute up to the ½ PMF event.

The current plunge pool and spillway associated with Simonds Dam has also been evaluated and found to be in disrepair due to the years of water flow and the growth of vegetation. Following the removal of the vegetation, a concrete ogee spillway will be constructed to replace the current plunge pool. At the bottom of the spillway, a stilling basin will be constructed to dissipate the water's energy. ACB will also be placed within the downstream channel of the current spillway and the new portion of the spillway to protect it from erosion. The impacts due to the proposed improvements to Simonds Dam include 2,182 square feet (sf) of BVW, 732 linear feet of bank, 6,431 sf of land under water, 1,894 sf of land subject to flooding, and 45,037 sf of riverfront area.

Resource Area Impacts

The proposed repairs and improvements to both dams will include impacts to resource areas at both dams, as identified in the Massachusetts Wetland Regulations 310 CMR 10.00. These impacts will total 2,939 sf of BVW, 787 linear feet of bank, 6,831 sf of land under water, 1,894 sf of land subject to flooding, and 45,794 sf of riverfront area.

Potential On-Site and Off-Site Alternatives

Maguire has evaluated on-site and off-site alternatives for this project. However, because the surface waters associated with this project supply approximately 70% of the potable water for the City of Leominster, off-site alternatives were not possible. Both dams are in disrepair, and the proposed approach takes into consideration the avoidance and minimization of impacts at each dam, to the extent possible. A wildlife habitat evaluation of those areas that will be altered, as well as a replication and restoration plan have also been prepared and included. At Goodfellow Pond Dam, only those repairs that are necessary to support operations at Simonds Pond Dam are being implemented. This is being done to avoid impacts to BVW, bank area and land under water, riverfront area and work in the buffer zone.

At Simonds Pond Dam, there is a greater need for improvements rather than repairs. If this dam fails, the downstream damage that could occur would include property damage, damage to Route 2, and possibly loss of life. Therefore, an alternative to completing the improvements to this dam are not possible. However, the plan does minimize impacts to BVW by proposing an emergency spillway that avoids BVW immediately downstream. An intermittent stream in the immediate vicinity of this emergency spillway will also be "moved." The moving of the stream will be part of the mitigation plan associated with this project, and ultimately the goal will be to re-direct this stream as an open flowing stream to Monoosnoc Brook.

It has been suggested that removing the dams all together and directly pumping water from Notown Reservoir to the Notown Treatment Plant might be a likely alternative. However, this is not acceptable alternative. Notown Reservoir is a shallow reservoir and when the water level drops in the summertime, more turbid water enters the system. Goodfellow and Simonds Ponds are necessary settling basins to address the additional sediment, when this situation occurs. Without these ponds, significant improvements would be required at the treatment plant.

To avoid some of the impacts to BVW and the intermittent stream, identified as UT and located south of Monoosnoc Brook, Maguire has re-evaluated this portion of the project on behalf of the Leominster DPW. The original plan called for the installation of a new emergency spillway that would have been approximately 210 feet in length, along the south side of the brook. The installation of an emergency spillway of this size would have impacted approximately 3,580 square feet of additional wetland. Originally it was also proposed that intermittent stream UT be directed into a conduit that ultimately discharged to the spillway of the Brook. This would have eliminated the intermittent stream all together. The current plan includes relocating a portion of this intermittent stream and re-establishing its flow east of the new emergency spillway. As part of the mitigation plan developed for this project, the stream will be relocated and re-established to flow naturally toward the Brook instead of being directed through a conduit.

Maguire has worked to avoid wetland impacts and minimize the impacts that will occur at both dams. The work associated with this project is necessary, and alternatives have been reviewed in the preparation and submittal of the current plan. Maguire is proposing to mitigate the referenced impacts associated with this project and has prepared a mitigation report based on the *Massachusetts Inland Wetland Replication Guidelines*, dated March 2002. These mitigation measures are presented under separate cover with the wildlife habitat evaluation but will include an area of replication (approximately 3,000 square feet) at the south side of Monoosnoc Brook, east of the wetland currently fed by the intermittent stream UT.

In addition, the area northeast of Goodfellow Pond Dam, impacted during original dam modifications (Phase I) conducted during the winter of 2004 will be restored with wetland vegetation. There are also areas along the overflow stream from Goodfellow Pond Dam that will be addressed as part of the mitigation plan. These areas currently have large boulders and vegetation piles that were inadvertently placed within the wetland area along this stream during the Phase I activities. Maguire will include the removal of this material from these wetland areas as part of the mitigation plan.

Additional information regarding the proposed work at both dams is also included in the attached document, "Supporting Documentation for Notice of Intent Filed for Simonds Pond Dam & Goodfellow Pond Dam, Wildlife Habitat Evaluation & Restoration and Replication Plan, March 2005."