

**Ice House Hydroelectric Project**  
*Re-Certification Application*  
*Low Impact Hydropower Institute*

FERC Project No. 12769



April 2019

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**INTRODUCTION**

This is an application to the Low Impact Hydropower Institute (LIHI) for re-certification of Ice House Partners Hydroelectric Project. The Site is located at 323 West Main Street, Ayer, Massachusetts. The property consists of an 11-acre parcel, which is primarily located in the southwest part of Ayer along West Main Street. A small portion of the property extends north into the town of Shirley and west into the town of Harvard.

The Ice House Hydroelectric Project was originally certified by LIHI in October 2009 and was re-certified in August 2014 for a five-year period. As noted in LIHI’s February 6, 2019 letter regarding the re-certification process, we are respectfully submitting the enclosed for Stage 1 review, based on the fact that the review process and standards criterion option have changed since re-certification efforts in 2014.

Ice House Partners, Inc. owns and operates a hydroelectric plant at 323 West Main Street, Ayer, Massachusetts. Architectural resources on the property include the modern Grady Research Office Building, constructed in 2000-2002 and the Power House constructed of brick in 1909 and significantly rebuilt in 2000-2002. Structural resources include the Canal for diverting the flow of the Nashua River on the south bank, built c. 1790 and the Dam for impounding the Nashua River and feeding the Canal, built in 1909 and repaired in 2000-2002. Operations consist of electrical power generation from water flow as it is diverted from the Nashua River into the modern head gate of the Canal and through the Power House, now equipped with modern generators.



The Grady Research Office Building and associated structures are located in the town of Ayer on the Nashua River in the former mill village of Mitchellville which, by the 1890s, contained a half dozen residences and the current buildings’ industrial predecessors. The central existing building on the subject property is the modern

Grady Research Office Building at 323 West Main Street.



This is joined on the north by the 1909 Victorian Eclectic and Panel Brick style Power House as well as the canal and dam for the power house.





The former Fort Devens military base is across West Main Street to the south and the Nashua River and CSX Railroad (north of the Nashua River) are adjacent to the north. The river is approximately 220' wide at this point and attracted industrialists involved in grist milling, paper making, dye manufacture, power generation and ice making from 1790 to 1967. The one-story brick building formerly used as the dye house, dynamo room and later the ice house fell into extreme disrepair by the 1980s, was burned in 2000 and replaced with the current three story modern brick Grady Research Office Building.

The power house, canal and dam have been repaired using historically accurate materials and designs and placed back into service.

A portion of the property in Ayer lies between the Nashua River and West Main Street. All but the west end of the Ayer portion of the property is occupied by wooded wetlands.

The developed portion of the Site is relatively flat and lies approximately five feet lower than West Main Street and approximately three feet above the Nashua River upstream of the dam. The wetlands on the east portion of the Site are approximately 10 feet lower than the developed area and discharge to the Nashua River east of the Site.<sup>1</sup>

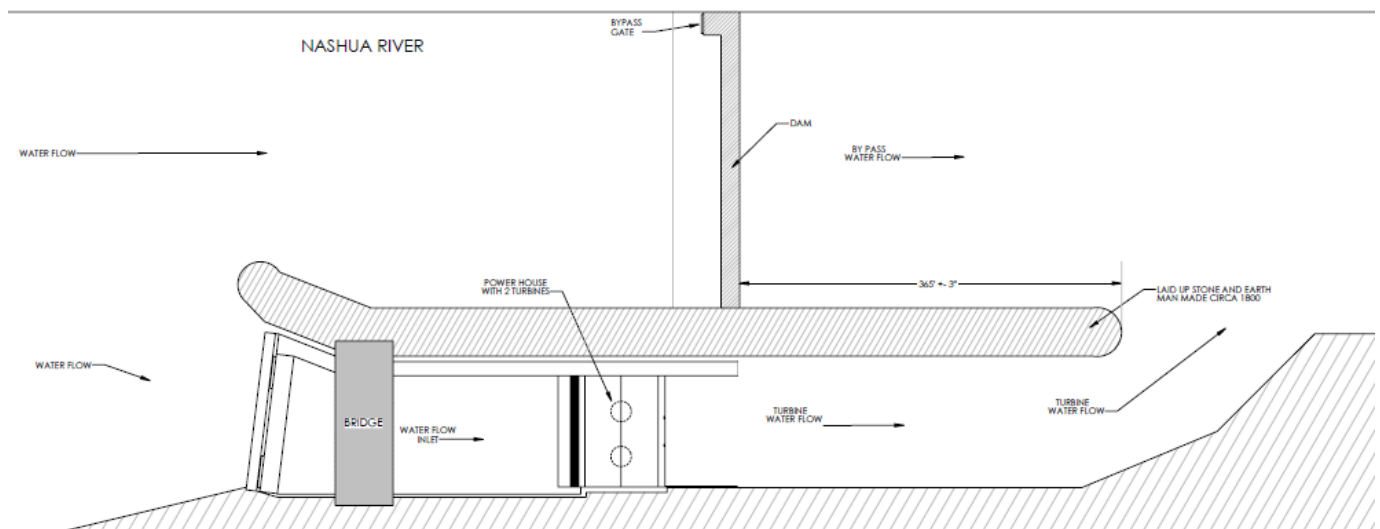
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<sup>1</sup> Ice House Partners, Inc., *Historic Properties Management Plan (Revision 2)*, (2009). See Appendix H.

## PART I. FACILITY DESCRIPTION

The Ice House Hydroelectric Project (the “Project”) was issued an *Order Granting Exemption from Licensing (5 MW or less)* by the Federal Energy Regulatory Commission (“FERC”) in March 2008 and is tracked as Project No. P-12769. The Project is owned by Ice House Partners, Inc. It is located on the Main Branch of the Nashua River in the Towns of Ayer, Shirley and Harvard, the Counties of Middlesex and Worcester in the Commonwealth of Massachusetts. The Project is approximately ten miles downstream from the confluence of the North and South branches of the Nashua River. The Nashua River flows north through Massachusetts until it joins the Merrimack River in New Hampshire.

The major Project works consist of a dam, impoundment, an intake structure, canal, power house and tail race. Specifically, the Project consists of eight elements:



1. A 180' composite masonry, rock-filled timber-crib frame spillway (10' hydraulic height) with a low level let-down gate and crest weir boards;
2. Left stone masonry abutment;
3. Right stone masonry abutment;
4. An earth island;
5. A power canal lined with stone walls;
6. A power canal gate inlet structure;
7. A powerhouse with a siphon turbine pit;
8. A tailrace power canal partially lined with stone walls.

The Ice House Hydroelectric Project is located about eleven miles upstream from the Pepperell Hydro Company's hydroelectric project in Pepperell, MA. Above the project and above the confluence of the North and South Nashua branches are a number of dams located in the City of Fitchburg along the North Nashua branch and the Wachusett Dam, owned and operated by the Massachusetts Water Resources Authority, located in Clinton, MA.

<i>Item</i>	<i>Information Requested</i>	<i>Response (include references to further details)</i>
<b>Name of the Facility</b>	Facility name (use FERC project name or other legal name)	Ice House Hydroelectric Project. Ice House Partners, Inc. FERC Project No. 12769
<b>Location</b>	River name (USGS proper name)	Nashua River
	Watershed name (select region, click on the area of interest until the 8-digit HUC number appears. Then identify watershed name and HUC-8 number from the map at: <a href="https://water.usgs.gov/wsc/map_index.html">https://water.usgs.gov/wsc/map_index.html</a> )	HUC 01070004 Nashua River Watershed
	Nearest town(s), county(ies), and state(s) to dam	Ayer, Shirley & Harvard Middlesex & Worcester County Commonwealth of Massachusetts
	River mile of dam	~ river mile 10.6 from the confluence of the North Nashua and the South Nashua <sup>2</sup>
	Geographic latitude of dam	42.5528
	Geographic longitude of dam	-71.6189
<b>Facility Owner</b>	Application contact names (Complete the Contact Form in <a href="#">Section B-4</a> also):	Liisa Marino
	Facility owner company and authorized owner representative name. <b>For recertifications: If ownership has changed since last certification, provide the date of the change.</b>	Facility Owner Company: Ice House Partners, Inc.  Authorized Owner Rep: Liisa Marino
	FERC licensee company name (if different from owner)	See above.
<b>Regulatory Status</b>	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates, or date of exemption	P-12769 March 31, 2008
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	FERC Jurisdictional <i>Order Granting exemption from Licensing (5MW or Less)</i> See Appendix A-1

<sup>2</sup> [https://www.nashuariverwatershed.org/5yr\\_plan/subbasins/nashua\\_main.htm](https://www.nashuariverwatershed.org/5yr_plan/subbasins/nashua_main.htm) , April 10, 2019.



<i>Item</i>	<i>Information Requested</i>	<i>Response (include references to further details)</i>
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments.	401 Water Quality Certification Waiver March 26, 2007 Issued by: The Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Department of Environmental Protection  See Appendix A-2
	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories <sup>3</sup>	See Appendix A-3.
<b>Power house</b>	Date of initial operation (past or future for pre-operational applications)	March 2012
	Total installed capacity (MW) <b>For recertifications: Indicate if installed capacity has changed since last certification</b>	Nominal capacity of 0.280MW  No change since original application or re-certification
	Average annual generation (MWh) and period of record used <b>For recertifications: Indicate if average annual generation has changed since last certification</b>	Previous 12 months: 1133 MWh  ~11% increase in previous 12 months from 2014 re-certification application.  See Appendix A-4
	<u>Mode of operation</u> (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.) <b>For recertifications: Indicate if mode of operation has changed since last certification</b>	Run-of-River  Mode of operation has not changed since re-certification.
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	2 vertical turbines 2 synchronous generators
	Trashrack clear spacing (inches), for each trashrack	(4) racks with 2" clear spacing

<sup>3</sup> For example, the FERC license or exemption, recent FERC Orders, Water Quality Certificates, Endangered Species Act documents, Special Use Permits from the U.S. Forest Service, 3<sup>rd</sup>-party agreements about water or land management, grants of right-of-way, U.S. Army Corps of Engineers permits, and other regulatory documents. If extensive, the list of hyperlinks can be provided separately in the application.

<b>Item</b>	<b>Information Requested</b>	<b>Response (include references to further details)</b>
	Dates and types of major equipment upgrades	May 2011 Modernization of hydro controls
	Dates, purpose, and type of any recent operational changes	None.
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	None.
<b>Dam or Diversion</b>	Date of original construction and description and dates of subsequent dam or diversion structure modifications	Original dam dates back to 1790's Renovated by F&L Railroad in 1906 Repaired by Ice House Partners in 2002.
	Dam or diversion structure height including separately, the height of any flashboards, inflatable dams, etc.	Hydraulic height 10 feet <sup>4</sup>  Top of Crest 216.6 feet <sup>5</sup>
	Spillway elevation and hydraulic capacity	Spillway elevation 216.6 feet  Hydraulic capacity 7,900 cfs <sup>6</sup>
	Tailwater elevation (provide normal range if available)	Unavailable
	Length and type of all penstocks and water conveyance structures between the impoundment and power house	No approach channel or penstocks.  A 50'W x 109'L power canal lined with stone walls and a power canal gate structure, with (2) 8' x 10' operational inlet gates
	Dates and types of major infrastructure changes	1999-2002 repairs to retaining walls, abutments, inlet canal structure and inlet gates.

<sup>4</sup> *Dam Safety Inspection Report*, Federal Energy Regulatory Commission, Office of Energy Projects, Division of Dam Safety and Inspections, New York Regional Office, June 12, 2008. See Appendix A-5.

<sup>5</sup> *FERC Exhibit G2 – Existing Conditions Plan*, August 6, 2008. See Appendix A-6.

<sup>6</sup> *Dam Safety Inspection Report*, Federal Energy Regulatory Commission, Office of Energy Projects, Division of Dam Safety and Inspections, New York Regional Office, June 12, 2008.

<i>Item</i>	<i>Information Requested</i>	<i>Response (include references to further details)</i>
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Hydropower generation
	Source water	Nashua River
	Receiving water and location of discharge	Nashua River
<b>Conduit</b>	Date of conduit construction and primary purpose of conduit	Not applicable.
<b>Impoundment and Watershed</b>	Authorized maximum and minimum water surface elevations <b>For recertifications: Indicate if these values have changed since last certification</b>	Not applicable and unchanged.  Vacuum flume operational mode (negative gage pressure required for submergence/siphoning)
	Normal operating elevations and normal fluctuation range <b>For recertifications: Indicate if these values have changed since last certification</b>	Normal operating elevation for 2018: 8.36" above dam crest (including weir boards).
	Gross storage volume and surface area at full pool <b>For recertifications: Indicate if these values have changed since last certification</b>	Gross storage volume 965 acre-feet @ spillway crest.  Gross surface area 137 acres @ spillway crest.  Unchanged since re-certification.
	Usable storage volume and surface area <b>For recertifications: Indicate if these values have changed since last certification</b>	See above.

<b>Item</b>	<b>Information Requested</b>	<b>Response (include references to further details)</b>
	Describe requirements related to impoundment inflow, outflow, up/down ramping and refill rate restrictions.	Run-of-river mode: inflow of project equals outflow on an instantaneous basis and water levels above the dam are not drawn down for the purpose of generating power. Modifications to this operating mode for emergencies and/or for short periods only upon mutual agreement between Ice House Partners, MA DFW and USFWS.  The refill procedure after an emergency drawdown or maintenance/inspection drawdown: 90% of inflow to be passed downstream and the head pond is refilled on the remaining 10%. This may be modified on a case-by-case basis with prior approval from MA DFW and USFWS. <sup>7</sup>
	Upstream dams by name, ownership and river mile. If FERC licensed or exempt, please provide FERC Project number of these dams. Indicate which upstream dams have downstream fish passage.	North Nashua Stem (9) dams in the City of Fitchburg  South Nashua Stem Wachusett Dam MWRA
	Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage	Pepperell Dam Pepperell Hydro Co. Inc. Current filing for final FERC license No eel or fish passage
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	None.
	Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control.	Exhibit G1 – Identification Map See Appendix A-7
<b>Hydrologic Setting</b>	Average annual flow at the dam, and period of record used	2015 – 2019 Average Annual Flow:  148.69 cfs

<sup>7</sup> Order Granting Exemption from Licensing (5MW or Less), Project No. P-12769, Federal Energy Regulatory Commission, March 31, 2008.

<i>Item</i>	<i>Information Requested</i>	<i>Response (include references to further details)</i>
	Average monthly flows and period of record used	<p>Period 2015-2019 Average Monthly CFS calculated from average monthly height of water over the dam crest.</p> <p>JAN 131.89 cfs  FEB 156.95 cfs  MAR 132.00 cfs  APR 327.75 cfs  MAY 92.82 cfs  JUN 56.09 cfs  JUL 37.84 cfs  AUG 74.49 cfs  SEPT 109.94 cfs  OCT 202.57 cfs  NOV 327.25 cfs  DEC 219.75 cfs</p>
	Location and name of closest stream gauging stations above and below the facility	<p>ABOVE DAM  South Nashua – Water St Bridge/ Clinton (USGS 01095503)</p> <p>North Nashua – near Leominster, MA (USGS 01094500)</p> <p>BELOW DAM  Nashua River – E. Pepperell (USGS 01096500)</p>
	Watershed area at the dam (in square miles). Identify if this value is prorated and provide the basis for proration.	<p>304 square miles gross</p> <p>185.1 sq. mi. met (w/o Quabbin Reservoir)<sup>8</sup></p>
<b>Designated Zones of Effect</b>	Number of zones of effect	3
	Upstream and downstream locations by river miles	<p>Zone 1: Upstream ~ 6.5 river miles</p> <p>Zone 2: Bypass ~ 0.15 river miles</p> <p>Zone 3: Tail Race ~0.15 river miles</p>
	Type of waterbody (river, impoundment, bypassed reach, etc.)	River

<sup>8</sup> New England Division, Corps of Engineers, US Army, *Dam Failure Estimation*, January 1998. See Appendix A-8.

<b>Item</b>	<b>Information Requested</b>	<b>Response (include references to further details)</b>
	Delimiting structures or features	Zone 1: Above the dam to Bolton Flats Zone 2: Below the dam to the convergence of tail race Zone 3: After Power house to convergence of bypass
	Designated uses by state water quality agency	None
<b>Pre-Operational Facilities</b>		
<b>Expected operational date</b>	Date generation is expected to begin	Not applicable
<b>Dam, diversion structure or conduit modification</b>	Description of modifications made to a pre-existing conduit, dam or diversion structure needed to accommodate facility generation. This includes installation of flashboards or raising the flashboard height. Date the modification is expected to be completed	Not applicable
<b>Change in water flow regime</b>	Description of any change in impoundment levels, water flows or operations required for new generation	Not applicable

**PART II. STANDARDS SELECTION**

The Ice House Hydroelectric project site has identified three designated zones of effect for this application. Zone 1 is defined as extending from the dam upstream to the limits of the project reach. Zone 2 is the bypass reach immediately below the toe of the dam to the convergence with the tail race. Zone 3 is defined as the power house tail race to where the tail race and bypass reach re-join.



**Table II-1. LIHI standards selected for Zone of Effect No. 1**

Criterion		Alternative Standards				
		1	2	3	4	Plus
<b>A</b>	<b>Ecological Flow Regimes</b>		<b>X</b>			
<b>B</b>	<b>Water Quality</b>		<b>X</b>			
<b>C</b>	<b>Upstream Fish Passage</b>	<b>X</b>				
<b>D</b>	<b>Downstream Fish Passage</b>		<b>X</b>			
<b>E</b>	<b>Watershed and Shoreline Protection</b>		<b>X</b>			<b>X</b>
<b>F</b>	<b>Threatened and Endangered Species Protection</b>		<b>X</b>			
<b>G</b>	<b>Cultural and Historic Resources Protection</b>		<b>X</b>			
<b>H</b>	<b>Recreational Resources</b>		<b>X</b>			

**Table II-2. LIHI standards selected for Zone of Effect No. 2**

Criterion		Alternative Standards				
		1	2	3	4	Plus
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage		X			
E	Watershed and Shoreline Protection		X			
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection		X			X
H	Recreational Resources		X			

**Table II-3. LIHI standards selected for Zone of Effect No. 3**

Criterion		Alternative Standards				
		1	2	3	4	Plus
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage	X				
E	Watershed and Shoreline Protection		X			
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection		X			X
H	Recreational Resources		X			



**PART III. SUPPORTING INFORMATION**

This section contains the information that explains and justifies the standards selected to pass the LIHI certification criteria (see Part II for selections).

**III.A Ecological Flow Standard**

*The flow regimes in riverine reaches that are affected by the facility support habitat and other conditions suitable for healthy fish and wildlife resources.*

**Zones 1, 2 & 3**

<b>Criterion</b>	<b>Standard</b>	<b>Instructions</b>
A	2	<b>Agency Recommendation:</b> The flow regime at the facility was developed in accordance with a, science-based agency recommendation

Source and Date:

See Appendix A-1

FERC Exemption March 31, 2008

See Appendix B:

2009 LIHI Review and Certification (Certificate No. 000044), 2014 LIHI Review and Re-Certification, IHP Bypass Flow Requirements: A Retrospective Study, March 26, 2014, 3-27-2014 E-Mail from John P. Warner, NE Field Office/USFWS Re: Bypass Study, E-mail from Caleb Slater, Anadromous Fish Project Leader MA DFW Re: Bypass Study, MA DEP, Town of Ayer Order of Conditions 100-0321

Comments/Recommendations:

- ⇒ Operate the facility in Run-of-River mode with a minimum bypass release of 1 mgd. (Zones 1 & 2)
- ⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification
- ⇒ Special condition #70 of Town of Ayer Order of Conditions 100-0321 specifically discusses the required bypass flow level of 1 mgd (1.8 cfs) to provide adequate oxygen levels for the Triangle Floater. (Zone 2)
- ⇒ The impoundment level is maintained by the inherent vacuum flume design of the power house. The Power house will not run when the impoundment level falls below the top of the dam. When river levels fall below the crest of the dam, the vacuum is broken and the power house turbines automatically shut down, allowing the impoundment levels to rise and water to spill. Impoundment height is measured by both an automatic, remotely accessible gauge as well as a hard gauge, visible at the dam. (Zone 1)
- ⇒ Additionally, special condition #69 of the Town of Ayer Order of Conditions specifically restricts our non-emergency drawdown activity to the months of July, August, September and October, to protect rare turtle activity during the months of April, May and June. (Zone 1)

**III.B Water Quality Standard**

*Water quality is protected in waterbodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions*

**Zones 1, 2 &3**

<b>Criterion</b>	<b>Standard</b>	<b>Instructions</b>
B	2	<b>Agency Recommendation:</b> The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation

Source and Date:

See Appendix A-1 and A-2:  
 FERC Exemption March 31, 2008, March 20, 2007 Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Department of Environmental Protection Letter, March 26, 2007 Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Department of Environmental Protection 401 Water Quality Certification Waiver,

See Appendix C and hyperlink:  
 WRP File No. JD00-0059 Determination of Applicability: Waterways Regulation Program (12/27/2000), <https://www.mass.gov/files/documents/2016/08/pr/314cmr09.pdf>

Comments/Recommendations:

- ⇒ MA DEP in consultation with MA DFW determined that the State 401 Water Quality Certification could be waived, based on project location and the “inclusion of needed water quality based conditions in the FERC exemption”. These conditions are documented in the March 20, 2007 which defers all water quality concerns to state and federal fisheries agencies for determining minimum bypass reach flows .
- ⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification

**III.C Upstream Fish Passage Standard**

*The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy, sustainable fish and wildlife resources in areas affected by the facility.*

**Zone 1 - Impoundment**

<b>Criterion</b>	<b>Standard</b>	<b>Instructions</b>
C	1	<b>Not Applicable/De Minimis Effect:</b> The facility does not create a barrier to upstream passage, or there are no migratory fish in the vicinity of the facility and the facility is not the cause of extirpation of species that were present historically;

⇒ There is no upstream barrier above the dam.

**Zone 2 & 3 – Bypass and Tail Race**

<b>Criterion</b>	<b>Standard</b>	<b>Instructions</b>
C	2	<b>Agency Recommendation:</b> The facility is in compliance with science-based fish passage recommendations issued by appropriate resource agency(ies) for the facility and which may include provisions for appropriate monitoring and effectiveness determinations

Source and Date:

See Appendix A-1:

FERC Exemption March 31, 2008

See Appendix D:

E-mail from MA DFW, April 12, 2010 re: Fish Passage, Email from FERC Fishery Biologist, May 10, 2011 re: Fish Passage, September 30, 2010 FERC *Order Modifying and Approving Final Eel Passage Plans*, April 3, 2012 FERC *Order Approving As-Built Exhibit F Drawings*, Email from MADFW, September 21, 2010 re: Eelway Plan Approval, E-mail from USFWS, September 22, 2010 re: Eelway Plan Approval.

Comments/Recommendations:

- ⇒ Upstream fish passage was not required at the time of the FERC issued exemption. Anadromous fish in Merrimack River Basin (American shad, River herring and Atlantic salmon) have been observed using fish passage facilities at the Essex Dam, the Pawtucket Dam and the Amoskeag Dam. Anadromous fish access to the Ice House Dam is blocked by the Pepperell Dam, 10+ miles downstream from the Ice House Dam. (Zones 2 & 3)
- ⇒ MA DFW has determined that upstream fish passage is not required until upstream fish passage has been installed at the (downstream) Pepperell Dam and MA DFW and USFWS conclude that it is necessary. Ice House Partners will work with MA DFW and USFWS to provide fish passage when such passage is deemed necessary. (Zones 2 & 3)
- ⇒ An upstream eelway was designed and installed in consultation with MA DFW and USFWS and approved by FERC. Eels have been found in fish surveys in the Nashua River, both

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upstream (Catacoonmug Brook) and downstream (Squannacook River) of the Ice House Dam.  
(Zones 1, 2 & 3)



⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification.

**III.D Downstream Fish Passage Standard**

*The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by facility operations. All migratory species can successfully complete their life cycles and to maintain healthy, sustainable fish and wildlife resources in the areas affected by the facility.*

**Nashua Fish Survey Information:**

<u>Common Name</u>	<u>Scientific Name</u>
Bluegill	<u><i>Lepomis macrochirus</i></u>
Blacknose Dace	<u><i>Rhinichthys atratulus</i></u>
Banded Sunfish	<u><i>Enneacanthus obesus</i></u>
Chain Pickerel	<u><i>Esox niger</i></u>
Common Shiner	<u><i>Luxilus cornutus</i></u>
Fallfish	<u><i>Semotilus corporalis</i></u>
Golden Shiner	<u><i>Notemigonus crysoleucas</i></u>
Largemouth Bass	<u><i>Micropterus salmoides</i></u>
Longnose Dace	<u><i>Rhinichthys cataractae</i></u>
Pumpkinseed	<u><i>Lepomis gibbosus</i></u>
Spottail Shiner	<u><i>Notropis hudsonius</i></u>
Tessellated Darter	<u><i>Etheostoma olmstedi</i></u>
White Sucker	<u><i>Catostomus commersonii</i></u>
Yellow Bullhead	<u><i>Ameiurus natalis</i></u>
Yellow Perch	<u><i>Perca flavescens</i></u>

**Zones 1, 2 & 3**

<b><i>Criterion</i></b>	<b><i>Standard</i></b>	<b><i>Instructions</i></b>
<i>D</i>	2	<b><i>Agency Recommendation:</i></b> The facility is in compliance with a science-based resource agency recommendation for downstream fish passage or fish protection, which may include provisions for appropriate monitoring and effectiveness determinations

**Source and Date:**

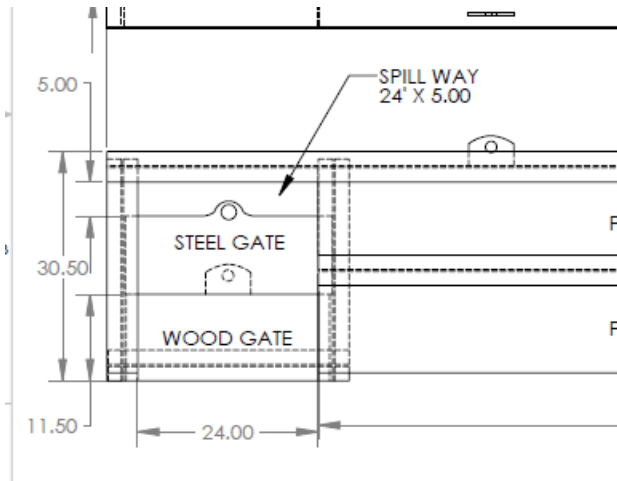
See Appendix A-1: FERC Exemption March 31, 2008.

**Comments/Recommendation:**

- ⇒ As noted above, MA DFW and USFWS have not yet determined that downstream fish passage is a requirement for the Ice House Dam. (Zones 1, 2 & 3)
- ⇒ It is, however, a requirement of Ice House Partners' FERC Exemption that appropriate fish passage be designed in consultation with resource agencies, installed and maintained, by Ice House Partners, Inc. when triggered to do so. (Zones 1, 2 & 3)

***Ice House Partners Re-Certification Application***

⇒ Minimum flows (1 mgd) are always maintained. This is accomplished with a cut out in one of the main dam weir boards. Specifications were developed in consultation with resource agencies. (Zones 2 & 3)



**Calculation of GPD at Notched Weir**

402 GPM	at	one foot width	by 5" deep
402	x 60	minutes	24,120
24,120	x 2	feet (width of notch)	48,240
48,240	x 24	hours	<b>1,157,760</b>

⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification.

**III.E Watershed and Shoreline Protection Standards**

*The facility has demonstrated that sufficient action has been taken to protect, mitigate or enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility.*

<b>Criterion</b>	<b>Standard</b>	<b>Instructions</b>
<i>E</i>	<i>PLUS</i>	To the extent the facility owner has direct or indirect ownership or control over lands surrounding the facility and its riverine zones, the facility has an approved and legally enforceable shoreline buffer or equivalent watershed land protection plan for ecological land protection of water quality, aesthetics, and low-impact recreation values. The buffer zone must be dedicated for conservation purposes and must also be vegetated similarly to adjacent natural lands. In addition, the buffer zone must include at least 50% of the undeveloped shoreline around the reservoir, or a reservoir shoreline equivalent along its riverine zones. Alternatively, the facility has established a watershed enhancement fund for land management within the facility’s watershed that is designed to achieve the ecological and recreational equivalent of land protection that would have been achieved by dedicating an ecologically effective buffer zone around more than 50% the reservoir.

Source and Date:

See Appendix A-1:  
FERC Exemption March 31, 2008,

See Appendix B:  
MA DEP, Town of Ayer Order of Conditions 100-0321,

See Appendix F:  
MA DEP, Town of Shirley Order of Conditions 284-0408 (expired February 2019), MA DEP, Town of Shirley, Abbreviated Notice of Intent Filed, April 2019, February 11, 2011 USFWS Letter Re: Access to Federal Lands/Article 19.

Comments/Recommendation:

- ⇒ The downstream portion of the property borders the Town of Shirley’s property (Walker Rd.) and USFWS property on the Ayer side of the river. All activity within the riverfront area, as defined by the MA Department of Environmental Protection is protected, by law through the Wetlands Protection Act. This Act requires that any activity within the protected areas must seek a Determination of Applicability and file with their local Conservation Commission for a set of conditions that will govern the activities within the protected areas. In this way, the local Commissions work with ownership to protect the riverine shorelines while working with Ice House Partner to ensure that the hydroelectric generation “works” are properly maintained for safe and proper operation. (Zones 1, 2 & 3)
- ⇒ On the Shirley side of the river, there is a low-water let down gate in the abutment, as well as a retaining wall that supports the edge of Walker Rd. Erosion has not been a significant issue, since the retaining wall repair was completed. In a flood situation, the water will



overtop the dam and its abutments. The dam plays no role in flood control at this location. (Zones 1 & 2)

⇒ All shoreline management activities and approvals are described in the conditions issued by the local Conservation Commissions. (Zones 1, 2 & 3)

***View towards the Shirley, MA Side of the Rive (Zone 2)***



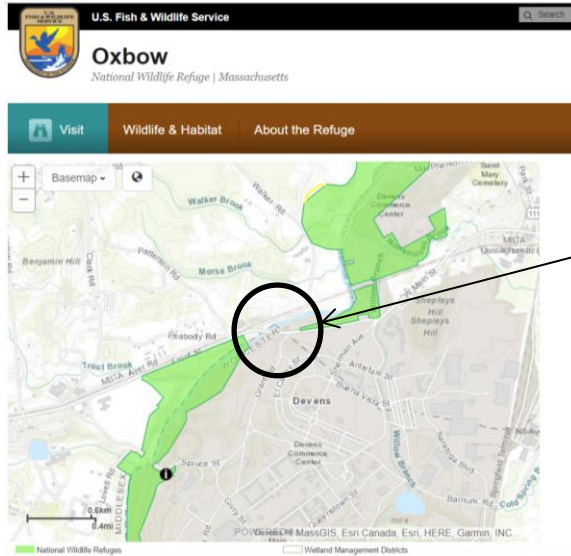
Railroad – property owned and maintained by others.

Walker Road – property owned and maintained by others (Town of Shirley).

Retaining Wall – owned and maintained by Ice House Partners.

⇒ The impoundment is part of The Oxbow Wildlife Preserve. This river is quite sinuous through its reach in the Preserve with a very flat gradient. The river and the abutting property are under the control and management of the USFWS. Upstream shoreline management and protection are the responsibility of the Oxbow Refuge Manager and USFWS (Zone 2).

⇒ Where shoreline activities occur within the Ice House property boundaries, they are restricted by the standing Orders of Conditions. Additionally, notice requirements exist for any activity that might lower the impoundment and such non-emergency lowering is further restricted to specific times of the year, as to not disturb nesting and other wildlife activity within the Refuge. (Zones 1, 2 & 3)



This gap in the Oxbow Wildlife Refuge map shows the location of the Ice House Dam. Ownership in this “gap” includes Ice House Partners and the Town of Shirley.

⇒ Participated in cooperative efforts to designate Nashua River segments upstream and downstream of Ice House Hydroelectric Project as Wild and Scenic. (Zone 1 - PLUS)

Excerpted from the Executive Summary<sup>9</sup>:

*The segments being recommended for designation include:*

- *The Nashua River at the confluence of the North and South Nashua Rivers in Lancaster, Massachusetts up to the New Hampshire state line.*
- *The Squannacook River at its confluence with the Nashua River in Groton, Massachusetts up to its headwaters in Townsend, Massachusetts.*
- *The Nissitissit River at its confluence with the Nashua River in Pepperell, Massachusetts up to its headwaters in Brookline, New Hampshire.*

*Three working dams in the Massachusetts portions of the Nashua and Squannacook Rivers—the Ice House Dam in Harvard, the Hollingsworth & Vose Dam in Groton, and the Pepperell Dam in Pepperell, —will be “grandfathered” as existing facilities compatible with the designation. Designation will not impact their existing operations.*

⇒ The Wild and Scenic designation effort denotes a change in the affected environment. The Study Report (link in footnotes) reiterates Ice House Partners’ continued commitment to their role as important stewards of our collective precious resource. It is also important to note that we have been operating for 15+ years within the intersection of two ACEC designations, which now are to be included in the larger Wild and Scenic area.

⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification

<sup>9</sup> [https://www.wildandscenicnashuarivers.org/uploads/8/9/9/1/89911665/nsn\\_stewardship\\_plan\\_7-23-18\\_final\\_web.pdf](https://www.wildandscenicnashuarivers.org/uploads/8/9/9/1/89911665/nsn_stewardship_plan_7-23-18_final_web.pdf)

**III.F Threatened and Endangered Species Standards**

*The facility does not negatively impact federal or state listed species.*

NHESP Tracking No. 06-19106, Ayer, Ice House, 1/8/2009, Page

As stated previously, the Nashua River and wetlands in the vicinity of the Ice House Hydro-facility is habitat the following state-listed species:

	Scientific Name	Common Name	Taxonomic Group	MESA Status
INVERTEBRATE ANIMALS	<i>Alasmidonta undulata</i>	Triangle Floater	Mussel	Special Concern
	<i>Neurocordulia obsoleta</i>	Umber Shadowdragon	Dragonfly	Special Concern
	<i>Ophiogomphus aspersus</i>	Brook Snaketail	Dragonfly	Special Concern
	<i>Somatochlora forcipata</i>	Forcinate Emerald	Dragonfly	Special Concern
	<i>Stylurus scudderi</i>	Zebra Clubtail	Dragonfly	Endangered
	<i>Stylurus spiniceps</i>	A Clubtail Dragonfly	Dragonfly	Threatened
	*data sensitive*	*data sensitive*	Invertebrate Animal	Endangered
	<i>Zanclonatha martha</i>	Pine Barrens Zanclonatha	Moth	Threatened
PLANTS	<i>Carex typhina</i>	Cat-tail Sedge	Vascular Plant	Threatened
	<i>Eleocharis ovata</i>	Ovate Spike-sedge	Vascular Plant	Endangered
	<i>Senna hebecarpa</i>	Wild Senna	Vascular Plant	Endangered
	<i>Sparganium natans</i>	Small Bur-reed	Vascular Plant	Endangered
VERTEBRATE ANIMALS	<i>Ambystoma laterale</i>	Blue-spotted Salamander	Salamander	Special Concern
	<i>Emydoidea blandingii</i>	Blanding's Turtle	Turtle	Threatened
	<i>Glyptemys insculpta</i>	Wood Turtle	Turtle	Special Concern
	<i>Hemidactylium scutatum</i>	Four-toed Salamander	Salamander	Special Concern
	<i>Podilymbus podiceps</i>	Pied-billed Grebe	Bird	Endangered
	<i>Sorex palustris</i>	Water Shrew	Mammal	Special Concern

These species are protected pursuant to the Massachusetts Endangered Species Act (MESA, MGL c131A) and its implementing regulations (321 CMR 10.00). \*An additional species has been documented in the vicinity of the proposed project. The NHESP does not release the names of these species due to the high risk of collection

Criterion	Standard	Instructions
F	2	<b>Finding of No Negative Effect:</b> There are listed species in the area, but the facility has been found by an appropriate resource management agency to have no negative effect on them, or habitat for the species does not exist within the project's affected area or is not impacted by facility operations;

Source and Date:

See Appendix A-1:  
FERC Exemption March 31, 2008, MA DEP

See Appendix B  
Town of Ayer Order of Conditions 100-0321,

See Appendix F:  
MA DEP, Town of Shirley Order of Conditions 284-0408 (expired February 2019), MA DEP, Town of Shirley, Abbreviated Notice of Intent Filed, April 2019, 2009

See Appendix G:

MA DFW, National Heritage & Endangered Species Program (NHESP Tracking No. 06-19106)<sup>10</sup>, USFWS Letter, E-Mail from USFWS, USFWS List of Towns and Protected Species.

- ⇒ Ice House is currently in a review cycle for renewing its MA DFW, NHESP Determination. (Zones 1, 2 & 3)
- ⇒ “Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s)”<sup>11</sup> (Zones 1, 2 & 3)
- ⇒ Previous reviews have concluded that the project “will not result in ‘adverse effects’ to the actual Resource Area habitat or a ‘take’ of rare species”<sup>12</sup> There have been no changes in activity in the intervening years. (Zones 1, 2 & 3)
- ⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification

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<sup>10</sup> Updated MESA Determination Application in process.

<sup>11</sup> January 2019, USFWS Letter. See Appendix G.

<sup>12</sup> 1/8/2009 MADFW NHESP Letter, NHESP Tracking No. 06-10106

**III.G Cultural and Historic Resources Standards**

*The facility does not unnecessarily impact cultural or historic resources that are associated with the facility's lands and waters, including resources important to local indigenous populations, such as Native Americans*

<b><i>Criterion</i></b>	<b><i>Standard</i></b>	<b><i>Instructions</i></b>
<i>G</i>	<i>PLUS</i>	The applicant has made a substantial commitment to restoring one or more significant cultural or historical resource in the vicinity beyond what is required in existing plans, such as a <b>Historic Properties Management Plan</b> ; or the applicant has created a significant new educational opportunity about cultural or historical resources in the area, and formally commits as a condition of its LIHI Certification that this opportunity will exist for the duration of the LIHI Certification.

Source and Date:

See Appendix A-1:  
FERC Exemption March 31, 2008

See Appendix H:  
Historic Properties Management Plan, Rev 2 (2009), *Final Memorandum of Agreement for the Ice House Power Project* (February 19, 2008), *Order Approving Historic Properties Management Plan* (May 5, 2010)

Comments/Recommendation:

- ⇒ All historic properties located within the Ice House Hydroelectric Project were surveyed, documented and cataloged, according to the Massachusetts Historical Commission's requirements (Zones 1, 2 & 3).
- ⇒ There is an active Historic Properties Management Plan, as required by the facility's FERC exemption. (Zones 1, 2 & 3)
- ⇒ The following structures were identified:
  - West Main Street Canal (1790)
  - West Main Street Power House (1906)
  - Dam across Nashua River (c. 1790; rebuilt, 1906)
- ⇒ The following areas were identified:
  - Mitchellville (1790, 1906, 2002)
- ⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification

**III.H Recreational Resources Standards**

*The facility accommodates recreation activities on lands and waters controlled by the facility and provides recreational access to its associated lands and waters without fee or charge.*

<b>Criterion</b>	<b>Standard</b>	<b>Instructions</b>
H	2	<b>Agency Recommendations:</b> The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility

Source and Date:

See Appendix A-1:  
FERC Exemption March 31, 2008

See Appendix I:  
April 27, 2016 Letter Re: Updated Public Safety Plan, Public Safety Plan, Rev. 2, November 2015.

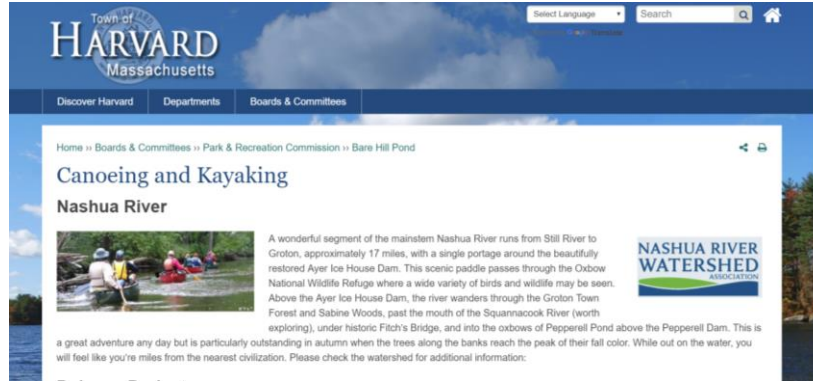
Recommendation:

- ⇒ Article 15 of the FERC Exemption for the Ice House Hydroelectric Project states the following: *“The exemptee shall allow public access to the project area for outdoor recreational purposes”*. Additionally, it states that *“The exemptee may reserve from public access such portions of the project as may be necessary for the protection of life, health, and property”*.(Zones 1, 2 & 3)
- ⇒ While insurance/safety protocol requires that the physical structures of Ice House Hydroelectric Project are well marked with typical “danger” and “no trespassing” signs where appropriate, fishermen and canoeists are free to access the river and portage around the dam, on the Shirley/Walker Rd. There is no safe access to the river from the Ayer side, between the power generating facilities and steep banks. (Zones 1, 2 & 3)

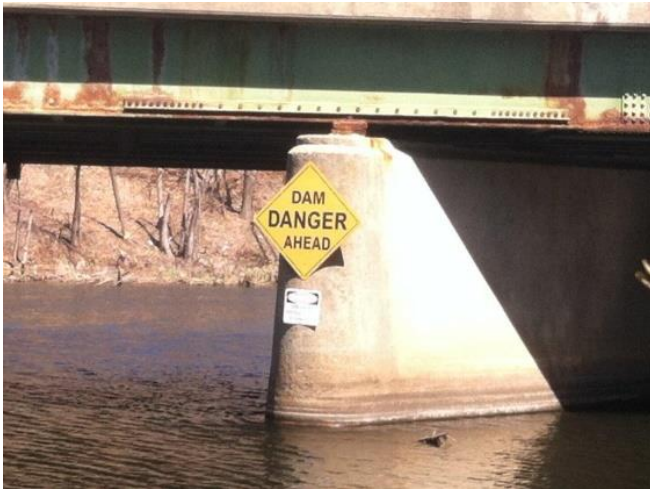


## Ice House Partners Re-Certification Application

- ⇒ The Nashua River Watershed Association publishes a canoe and kayak guide<sup>13</sup> that alerts the canoeing/fishing public about the presence of the Ice House Dam as well as guidance on portage around the dam. Various local towns also make mention of the dam, river access and portage guidance. (Zones 1 & 2)



Warning signs and barriers on the river include signage on the bridge abutment, upstream of the dam, a warning buoy in the middle of the river upstream of the dam, orange trash booms block access to the inlet gates and canal and large orange warning barrels strung across the river. (Zone 1)



- ⇒ There have been no changes in project design or operation since the last certification. There have been no issues with compliance with LIHI conditions since the last certification

<sup>13</sup> <https://www.nashuariverwatershed.org/recreation/paddling/canoe-kayak-guide.html>

**PART IV. SWORN STATEMENT AND WAIVER**

As an Authorized Representative office House Partners, Inc. the Undersigned attests that the material presented in the application is true and complete.

The Undersigned acknowledges that the primary goal of the Low Impact Hydropower Institute's Certification Program is public benefit, and that the LIHI Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions.

The undersigned further acknowledges that if certification of the applying facility is issued, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified.

The undersigned Applicant further agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications, from any consequences of disclosing or publishing any submitted certification application materials to the public, or on any other action pursuant to the Low Impact Hydropower Institute's Certification Program.

Company Name: Ice House Partners, Inc.

Authorized Representative Name: Elizabeth (Liisa) Marino

Title: Vice-President/Owner

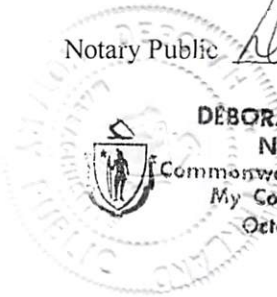
*Elizabeth Marino* 4/30/2019

Commonwealth of Massachusetts

Middlesex County

On this, the 30<sup>th</sup> day of April, 2019, before me a notary public, the undersigned officer, personally appeared Elizabeth Marino, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained. In witness hereof, I hereunto set my hand and official seal.

Notary Public Deborah A. Kirkland



**DEBORAH A. KIRKLAND**  
Notary Public  
Commonwealth of Massachusetts  
My Commission Expires  
October 29, 2021



**PART V. CONTACTS**

**1. Facility Contacts**

<b>Project Owner:</b>	
Name and Title	John K. Grady, PE President/Owner
Company	Ice House Partners, Inc.
Phone	978-772-3303
Email Address	<a href="mailto:jkg@gradyresearch.com">jkg@gradyresearch.com</a>
Mailing Address	323 W Main Street Ayer, MA 01432
<b>Authorized Representative/Regulatory Contact:</b>	
Name and Title	Liisa Marino, VP/GM
Company	Ice House Partners, Inc.
Phone	978-772-3303
Email Address	<a href="mailto:liisa@gradyresearch.com">liisa@gradyresearch.com</a>
Mailing Address	323 W Main Street Ayer, MA 01432
<b>Consulting Firm / Agent for LIHI Program (if different from above):</b>	
Name and Title	
Company	
Phone	
Email Address	
Mailing Address	
<b>Compliance Contact (responsible for LIHI Program requirements):</b>	
Name and Title	Same as Above
Company	
Phone	
Email Address	
Mailing Address	
<b>Party responsible for accounts payable:</b>	
Name and Title	Deborah Kirkland
Company	Ice House Partners, Inc.
Phone	978-772-3303
Email Address	<a href="mailto:dkirkland@gradyresearch.com">dkirkland@gradyresearch.com</a>
Mailing Address	323 W Main Street, Ayer, MA 01432

**2. Current state, federal, provincial, and tribal resource agency contacts.**

<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>  </u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources <u>  </u> , Recreation <u>  </u> ):	
Agency Name	MA Division of Fisheries and Wildlife
Name and Title	Caleb Slater, PhD Anadromous Fish Project Leader
Phone	508-389-6331
Email address	<a href="mailto:Caleb.Slater@state.ma.us">Caleb.Slater@state.ma.us</a>
Mailing Address	100 Hartwell Street, Suite 230 W. Boylston, MA 01583

<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources <u>  </u> , Recreation <u>X</u> ):	
Agency Name	United States Fish & Wildlife Service
Name and Title	John Warner, Asst. Supervisor Federal Activities
Phone	603-227-6420
Email address	<a href="mailto:John_Warner@fws.gov">John_Warner@fws.gov</a>
Mailing Address	New England Field Office 70 Commercial Street Concord, NH 03301

<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources <u>X</u> , Recreation <u>X</u> ):	
Agency Name	Federal Energy Regulatory Commission Division of Dam Safety & Inspections
Name and Title	John Spain, Regional Engineer
Phone	212-273-5900
Email address	<a href="mailto:john_spain@ferc.gov">john_spain@ferc.gov</a>
Mailing Address	New York Regional Office 19 W. 34 <sup>th</sup> Street, Suite 400 New York, NY 10001

**Ice House Partners Re-Certification Application**

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<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources <u>X</u> , Recreation <u>X</u> ):	
Agency Name	Federal Energy Regulatory Commission Division of Dam Safety & Inspections
Name and Title	Noel J. Aglubat, Civil Engineer
Phone	212-273-5900
Email address	<a href="mailto:Noel_Aglubat@ferc.gov">Noel_Aglubat@ferc.gov</a>
Mailing Address	New York Regional Office 19 West 34 <sup>th</sup> St., Suite 404 New York, NY 10001

<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources <u>X</u> , Recreation <u>X</u> ):	
Agency Name	Nashua River Watershed Association
Name and Title	Martha Morgan, Water Programs Director
Phone	978-448-0299
Email address	<a href="mailto:martham@nashuariverwatershed.org">martham@nashuariverwatershed.org</a>
Mailing Address	592 Main Street Groton, MA 01450

<b>Agency Contact</b> (Check area of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources <u>X</u> , Recreation __):	
Agency Name	Massachusetts Historical Commission
Name and Title	Edward L. Bell, Sr. Sr Archeologist, Technical Services Division
Phone	617-727-8470
Email address	ed.bell@sec.state.ma.us
Mailing Address	220 Morrissey Boulevard Boston, MA 02125

***Ice House Partners Re-Certification Application***

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<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources __, Recreation __):	
Agency Name	Ayer Conservation Commission
Name and Title	Jo-Anne Crystoff, Conservation Administrator
Phone	978-772-8249
Email address	<a href="mailto:concom@ayer.ma.us">concom@ayer.ma.us</a>
Mailing Address	One Main Street Ayer, MA 01432

<b>Agency Contact</b> (Check area of responsibility: Flows <u>X</u> , Water Quality <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources __, Recreation __):	
Agency Name	Shirley Conservation Commission
Name and Title	Michael Fleming, Conservation Agent
Phone	978-425-2600
Email address	<a href="mailto:mflaming@shirley-ma.gov">mflaming@shirley-ma.gov</a>
Mailing Address	7 Keady Way Shirley, MA 01464

<b>Agency Contact</b> (Check area of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. <u>X</u> , Cultural/Historic Resources __, Recreation __):	
Agency Name	USFWS
Name and Title	Julianne Rosset, Fish & Wildlife Biologist
Phone	603-227-6436
Email address	<a href="mailto:juianne_rosset@fws.gov">juianne_rosset@fws.gov</a>
Mailing Address	70 Commercial Street, Suite 300 Concord, NH 03301

**PART VI. SUPPORT DOCUMENTATION**

***Appendix A Facility Description Supporting Documentation***

- A-1 FERC Exemption*
- A-2 Water Quality Waiver*
- A-3 List of Relevant FERC Documents*
- A-4 Previous 12-Months' Generation Report*
- A-5 Dam Safety Inspection Report (2008)*
- A-6 Exhibit G-2*
- A-7 Exhibit G-1*
- A-8 Army Corps of Engineers Dam Failure Estimate*

***Appendix B III.A Ecological Flow Standard Support Documentation***

***Appendix C III.B Water Quality Standard Support Documentation***

***Appendix D III.C Upstream Fish Passage Standard Support Documentation***

***Appendix E III.E Watershed and Shoreline Protection Standards Support Documentation***

***Appendix F III.F Threatened and Endangered Species Standards for Zones 1 & 2 Support Documentation***

***Appendix G III.G Cultural and Historic Resources Standards Support Documentation***

***Appendix H III.H Recreational Resources Standards Support Documentation***

***Appendix I PHOTOS***

***Appendix J Map***

# Appendix A

UNITED STATES OF AMERICA 122 FERC ¶ 62,262  
FEDERAL ENERGY REGULATORY COMMISSION

Ice House Partners, Inc.

Project No. 12769-000

ORDER GRANTING EXEMPTION FROM LICENSING  
(5 MW OR LESS)

( March 31, 2008 )

**INTRODUCTION**

1. On January 22, 2007, Ice House Partners, Inc. (Ice House Partners) filed an application to exempt its proposed 280-kilowatt (kW) Ice House Power Project (Ice House Project) from the requirements of Part I of the Federal Power Act (FPA).<sup>1</sup> The project would be located on the Nashua River, in the Town of Ayer, Middlesex County, Massachusetts.<sup>2</sup> The project would occupy 133 acres of federal lands administered by the U.S. Fish and Wildlife Service as part of the Oxbow National Wildlife Refuge.<sup>3</sup> As discussed below, I am issuing an exemption from licensing for the project.

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<sup>1</sup> The Commission is authorized to exempt from the licensing requirements of Part I of the FPA small hydroelectric projects with an installed capacity of 5 megawatts or less that use for the generation of electricity either an existing dam (*i.e.*, one in existence on or before July 22, 2005) or a "natural water feature" without the need for any dam or impoundment. *See* sections 405 and 408 of the Public Utility Regulatory Policies Act of 1978, 16 U.S.C. §§ 2705 and 2708 (2000) as amended by section 246 of the Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 679.

<sup>2</sup> The Nashua River is a tributary to the Merrimack River, a navigable waterway. The Ice House dam was built in the 1790s. In 1907, an electrical powerhouse was installed at the dam that operated trolley cars until the 1920s, and subsequently, ice-making machinery. In the 1970s, the powerhouse was destroyed by fire. Ice House Partners proposes to operate two turbine generating units located in the rebuilt powerhouse at the project. Because the project would be located on a commerce clause waterway, would affect interstate commerce through its connection to an interstate power grid, and would involve post-1935 construction, it is required to be licensed or exempted from licensing by the Commission pursuant to FPA section 23(b)(1). *Ice House Partners, Inc.*, 114 FERC ¶ 62,238 (2006).

<sup>3</sup> Pursuant to 18 C.F.R. § 4.31(c)(2) (2007), an applicant for an exemption is required to have sufficient rights in any non-federal land required for the project prior to filing its application. On March 13, 2007, in response to an additional information

(Continued)

## BACKGROUND

2. On April 27, 2007, the Commission issued a notice accepting the exemption application for filing and soliciting motions to intervene and protests. The notice established June 26, 2007, as the deadline for filing motions to intervene.<sup>4</sup> On February 28, 2007, the Massachusetts Division of Fish and Wildlife (Massachusetts DFW) filed a motion to intervene. Massachusetts DFW does not oppose issuance of the exemption from licensing. Comments were filed by Massachusetts DFW, the Massachusetts Department of Environmental Protection, and the Massachusetts Historical Commission.

3. The Commission issued a notice on August 14, 2007, indicating the application was ready for environmental analysis, and soliciting comments, recommendations, terms and conditions, and prescriptions.<sup>5</sup> In response, timely recommendations and terms and conditions were filed by the U.S. Department of the Interior (Interior) and the Massachusetts DFW.

4. An Environmental Assessment (EA) was prepared by Commission staff and issued on December 13, 2007. The EA contains background information, analysis of impacts, and support for related exemption articles. I conclude, based on the record of the proceeding, including the EA, that granting an exemption for the Ice House Project would not constitute a major federal action significantly affecting the quality of the human environment.

5. The Massachusetts DFW and the U.S. Fish and Wildlife Service (FWS) filed comments on the EA. The motion to intervene, comments, recommendations, and terms and conditions have been fully considered in determining whether, and under what conditions, to issue this exemption.

## PROJECT DESCRIPTION

6. The Ice House Project would use the existing 190-foot-long, 12-foot-high Ice House dam and spillway topped with existing 24-inch-high flashboards that impound a

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request, Ice House Partners provided documentation that it had the property rights for the non-federal lands necessary to develop the project. Under standard Article 5 of this exemption, Ice House Partners has one year from issuance of this exemption to obtain the right to occupy the federal lands included in this exemption. Article 19 requires Ice House Partners to document that it has obtained these rights.

<sup>4</sup> 72 *Fed. Reg.* 25,299 (May 4, 2007).

<sup>5</sup> 72 *Fed. Reg.* 46,625 (August 21, 2007).



137-acre reservoir. The project would include an existing headgate structure, equipped with four 8-foot-high, 10-foot-wide gates, leading to an existing 50-foot-wide, 109-foot-long power canal. The restored powerhouse, which contains two existing turbine generating units with a total installed capacity of 280 kilowatts, is located in the canal about 75 feet downstream of the headgate. Water used for generation would be discharged from the powerhouse into an existing 50-foot-wide, 400-foot-long tailrace (measured from the headgate to the tailrace outlet). Project power would be transmitted through an existing 480-volt, 100-foot-long underground transmission cable. The Nashua River reach that would be bypassed by operating the project (measured from the dam to the tailrace outlet) is about 300 feet long. The existing dam, headgate structure, and powerhouse have already been restored.

7. The proposed exhibit G drawing does not show or enclose within the project boundary, the dam, reservoir (up to the height of the existing flashboards), headgate structure, power canal, powerhouse, tailrace, or transmission line. Therefore, Article 13 requires Ice House Partners to file revised exhibit G drawings enclosing the above project facilities to conform to sections 4.39 and 4.41 of the Commission's regulations.

8. Ice House Partners would operate the project in a run-of-river mode, and maintain a 1 million gallon per day flow<sup>6</sup> (mgd) in the bypassed reach year-round via a notch that would be cut in the flashboards.

9. The project would be equipped with a real-time water level recording device to match turbine discharge with river inflow. When flow in the Nashua River is equal to or less than the hydraulic capacity of one turbine unit (160 cfs), no units would operate, and all inflow would spill over the flashboards. When flow exceeds 160 cfs, one turbine unit would begin generating and the excess would be spilled over the flashboards until such inflow exceeds an additional 160 cfs or 320 cfs (the hydraulic capacity of two units), at which time the second turbine unit would begin generating, with all flows over 320 cfs spilled over the flashboards.

### **SECTION 30(c) CONDITIONS**

10. Pursuant to section 405 of Public Utility Regulatory Policies Act (PURPA),<sup>7</sup> exemptions for projects of less than 5 megawatts (MW) must include the mandatory fish

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<sup>6</sup> One mgd is equal to about 1.55 cfs.

<sup>7</sup> 16 U.S.C. § 2705(b) (2000).

and wildlife conditions as set out in section 30(c) of the FPA.<sup>8</sup> Article 2 of all exemptions requires compliance with the terms and conditions filed by federal and state fish and wildlife agencies to protect fish and wildlife resources.<sup>9</sup>

11. Interior, by letter filed October 10, 2007, and Massachusetts DFW by letter filed October 11, 2007, provided nearly identical section 30(c) conditions that require: operating the project in a run-of-river mode; installing, operating, and maintaining upstream and downstream fish passage facilities when notified by the agencies in the future; notifying agencies when project operation commences; allowing agencies to inspect the project; reserving the right to modify the section 30(c) terms and conditions; including the terms and conditions in any conveyance of the project by lease or sale; and developing plans for maintaining and monitoring run-of-river operation and spillway flows.

12. Additional Massachusetts DFW conditions require: providing the proposed 1 mgd flow in the bypassed reach year-round on an interim basis; passing 90 percent of inflow downstream during impoundment refilling after maintenance drawdowns; installing, operating, and maintaining upstream and downstream American eel passage facilities by the time the project is operational; developing plans for sediment removal and vegetation management; and conducting a bypassed-reach flow evaluation to determine a permanent minimum flow. The section 30(c) conditions are set forth in Appendices A and B of this order and are incorporated into the exemption by ordering paragraph A. Article 18 clarifies that the required interim minimum flow for the bypassed reach is to be provided on a continuous basis.

### **THREATENED AND ENDANGERED SPECIES**

13. Section 7 of the Endangered Species Act<sup>10</sup> requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species. In a letter dated November 3, 2006, included with the exemption application, the FWS indicated that no federally listed threatened or endangered species

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<sup>8</sup> 16 U.S.C. § 823a(c) (2000). Section 30(c) applies to conduit exemptions, but PURPA section 405 made that section a requirement for 5 MW exemptions as well.

<sup>9</sup> These conditions are submitted by the agencies in response to the notice that the application is ready for environmental analysis or included in the exhibit E of the exemption application.

<sup>10</sup> 16 U.S.C. § 1536(a) (2000).

or critical habitat are known to occur in the project area. Because no listed species are present on the project area, issuing an exemption from licensing for the project would not affect federally listed threatened or endangered species or critical habitat. No further consultation under section 7 is required.

## NATIONAL HISTORIC PRESERVATION ACT

14. Under section 106 of the National Historic Preservation Act (NHPA)<sup>11</sup> and its implementing regulations,<sup>12</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

15. The West Main Street Ice House Industrial Area, including the project's power canal, dam, and powerhouse, and an adjacent office building are potentially eligible for listing in the National Register of Historic Places for their association with the events and activities surrounding the development of the town's economy. The EA found that proposed project operation is not likely to have an effect on the identified historic resources because the proposed project would not involve new construction or modifications to the existing facilities. However, future actions involving any necessary project maintenance or construction may impact the eligibility of the industrial complex. The EA noted that a memorandum of agreement (MOA) with the SHPO would ensure that any future modifications or new construction do not adversely affect known and potential historic properties, as well as any as-yet unidentified archaeological resources.

16. On March 11, 2008, the Commission executed a MOA with the Massachusetts State Historic Preservation Officer.<sup>13</sup> Ice House Partners concurred on February 20, 2008. The MOA requires the exemptee to prepare and implement a Historic Properties Management Plan (HPMP) for the term of any exemption from licensing issued for this project. Execution of the MOA demonstrates the Commission's compliance with section 106 of NHPA. Article 16 requires the exemptee to implement the MOA and to file its HPMP with the Commission within one year of the exemption issuance.

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<sup>11</sup> 16 U.S.C. § 470 (2000) *et seq.*

<sup>12</sup> 36 C.F.R. Part 800 (2007).

<sup>13</sup> See letter executing MOA issued March 21, 2008.

## COMMENTS ON THE EA

17. On January 11 and 16, 2008, respectively, the Massachusetts DFW and the FWS filed comments on the EA.

### **A. Vegetation Management**

18. Massachusetts DFW's original section 30(c) condition 11 required Ice House Partners to obtain the agency's approval before commencing any routine vegetation management. The condition required such approval no later than three months prior to the commencement of project operation. The EA did not recommend this measure, concluding that because of the small size of the project and its location in a developed area, the need for vegetation management appears to be negligible.

19. In its comments on the EA, Massachusetts DFW agrees that the relevant timing for review and approval of vegetation management is prior to implementation of vegetation management, rather than prior to commencement of project operation. I am modifying condition 11 in appendix B to require the agency's approval no later than three months prior to implementing any vegetation management measures.

### **B. Fish Passage Plans and Schedules**

20. Ice House Partners proposes to provide fish passage facilities when requested by the FWS and Massachusetts DFW. The Massachusetts DFW 30(c) condition 8 and Interior 30(c) condition 4 would require that Ice House Partners be responsible for constructing, operating, maintaining, and evaluating upstream and downstream anadromous fish passage facilities at the project when requested by the Massachusetts DFW or the FWS.

21. While the Massachusetts DFW does not note the need for the construction of anadromous fish passage facilities at this time, its condition 10 would require that Ice House Partners file, for approval by the Massachusetts DFW and the FWS, plans and schedules for the operation, maintenance, monitoring, and evaluation of the fishways required in condition 8 no later than three months prior to the commencement of project operation.

22. The EA notes that no anadromous fish are currently found in the project area and upstream and downstream passage facilities are not yet in place at the next downstream dam. The EA therefore found that, while a provision for fish passage facilities, if needed in the future, seems reasonable, the filing of plans and schedules for such facilities prior to commencement of project operation was unnecessary until such anadromous fish can reach the project and a fishway has been prescribed.

23. In its comments on the EA, FWS concurred with staff's conclusion that plans and schedules for fishways for anadromous fish are not needed at this time, since the need for passage has not yet been triggered. Massachusetts DFW, however, did not comment on staff's fish passage recommendation, so the Massachusetts DFW condition remains unchanged, and Ice House Partners must submit a fishway plan and schedule prior to commencement of project operation. Article 14 requires the exemptee to file the required fish passage plans and schedules for Commission approval.

### C. Eel Passage

24. Ice House Partners proposes to provide eel passage when requested by the FWS and Massachusetts DFW. Massachusetts DFW's condition 9 requires that Ice House Partners provide upstream and downstream passage for American eels at the project, with the eelways to be operational concurrent with the commencement of project operation.

25. The EA found that, while providing passage facilities would enhance and protect American eel populations by providing access to upstream tributary habitat and safe downstream passage, construction of such facilities does not appear to be needed until eel passage facilities have been constructed at the downstream Pepperell Paper Mill Project, the next downstream dam on the Nashua River (located 11.5 miles downstream of the Ice House Project). The EA noted that evaluating the effectiveness of such facilities now, as recommended by the Massachusetts DFW, would be problematic without the presence of American eels whose movement upstream to the project dam appears to currently be blocked.

26. In its comments on the EA, Massachusetts DFW reiterated the immediate need for eel passage facilities at the project, noting that sampling it conducted in 2003 documented the occurrence of American eel in tributaries of the Nashua River, both in the Squannacook River upstream of the Pepperell Paper Mill Project, as well as in the Catacoonmug Brook upstream of the Ice House Project. Massachusetts DFW also noted that the Pepperell Paper Mill Project has been found by the Commission to be required to be licensed or exempted,<sup>14</sup> and an application for an exemption from licensing is being prepared. Massachusetts DFW further states that it will be requiring eel passage at the Pepperell Paper Mill Project as a condition of its exemption.

27. The FWS, in comments on the EA, stated that the existence of American eels both immediately upstream and downstream of the project clearly demonstrates the need for these facilities at this time.

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<sup>14</sup> *Swift River Hydro Operations Company*, 116 FERC ¶ 62,140 (2006).

28. Based on the information provided by Massachusetts DFW, American eel are currently found in the Nashua River Basin, both upstream and downstream of the Ice House Project and passage facilities at the next downstream dam are likely to be provided in the near future. Therefore, providing passage for eel at the Ice House Project concurrent with project operation seems reasonable. Article 14 requires the exemptee to file the required eel passage designs with the Commission for approval.

## **OTHER ISSUES**

### **A. Administrative Conditions**

29. The Commission collects annual charges from exemptees for the administration of its hydropower program.<sup>15</sup> Under the regulations currently in effect, projects, with authorized installed capacity of 1,500 kW or less, like this project, are not assessed an annual charge.

30. Article 11 requires the exemptee to start rehabilitation of the facilities within two years of the date of this exemption issuance and complete rehabilitation within four years of issuance of this exemption.

### **B. Exhibit F and G Drawings**

31. The Commission requires exemptees to file sets of approved project drawings (exhibits F) on microfilm and in electronic file format.

32. The four exhibit F drawings filed on July 27, 2007, are approved and made part of this exemption. Article 12 requires the filing of the approved exhibit F drawings in aperture card and electronic file format.

33. The revised exhibit G drawing filed on July 27, 2007, does not show or enclose within the project boundary, the dam, reservoir (up to the height of the existing flashboards), headgate structure, power canal, powerhouse, tailrace, or transmission line. Further, the exhibit G drawing does not show three known reference points, as required by section 4.107(d) OR 4.41(h) of our regulations. Therefore, the exhibit G drawing is not approved and is not made part of the exemption order. Article 13 requires the refiling of an exhibit G drawing that encloses all project facilities, and conforms to sections 4.39 and 4.41 of the Commission's regulations, 18 C.F.R. §§ 4.39 and 4.41 (2007).

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<sup>15</sup> See 18 C.F.R. § 11.1 (2007).

### **C. Consultation on Resource Plans**

34. The section 30(c) conditions (Appendices A and B of this order) require that plans be prepared for: monitoring run-of-river operation and spillway flows; constructing, operating, maintaining and evaluating fishway and eel passage facilities; sediment removal (if necessary); and conducting a bypassed reach flow evaluation. However, the conditions do not require the plans to be filed with the Commission for approval. Therefore, Article 14 requires the filing of each plan with the Commission for approval.

### **D. Public Access**

35. In addition to the section 30(c) conditions, Interior and Massachusetts DFW recommended providing access to project waters and lands to allow for public use of fish and wildlife resources where consistent with maintaining public safety and protecting project civil works. Article 15 requires the exemptee to allow year-round recreational access, and inform the public of the availability of recreational opportunities at the project, such as posting signs at major points of access.

### **E. Project Safety**

36. Ensuring the safety of all jurisdictional dams is an important public interest function of the Commission. A dam failure could result in loss of life or property damage, and could also result in significant negative environmental effects. In the interest of ensuring the safety of this project, I am including Article 17, which requires the exemptee to comply with Part 12 of the Commission's regulations, which govern the safety of water power projects and project works.<sup>16</sup>

#### *The Director orders:*

(A) The Ice House Power Project is exempted from Part I of the FPA, subject to conditions submitted by the U.S. Department of the Interior and Massachusetts Division of Fisheries and Wildlife, under section 30(c) of the FPA, as those conditions are set forth in Appendices A and B to this order, and the articles specified below.

(B) The project consists of:

(1) All lands, to the extent of the exemptee's interests in those lands, described in the project description and the project boundary discussion of this order.

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<sup>16</sup> 18 C.F.R. Part 12 (2007). To the extent that special Article 17 conflicts with standard Article 8 (contained in the attached E-2), the provisions of the special article govern.

<u>Exhibit G Drawing</u>	<u>FERC No. 12769-</u>	<u>Description</u>
G-1	1	Identification Map

(2) The following project works: (1) the existing 190-foot-long, 12-foot-high Ice House dam and spillway topped with existing 24-inch-high flashboards impounding; (2) an existing 137-acre, 965-acre-foot reservoir with a normal full pond elevation of 216.45 feet National Geodetic Vertical Datum; (3) an existing headgate structure equipped with four 8-foot-high, 10-foot-wide gates of which two are operational and two are stationary leading to; (4) an existing 50-foot-wide, 109-foot-long power canal connected to; (5) a restored powerhouse containing two Kaplan turbine generating units with a total installed capacity of 280 kilowatts discharging flow to; (6) an existing 50-foot-wide, 400-foot-long tailrace; (7) an existing 480-volt, 100-foot-long underground transmission cable; and (8) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of exhibits A and F below:

Exhibit A: Sections 1 and 2 on pages 1 through 7, filed on July 27, 2007.

Exhibit F: The following exhibit F drawings filed on July 27, 2007:

<u>Exhibit F Drawing</u>	<u>FERC No. 12769-</u>	<u>Description</u>
F-1	2	Flow Schematic
F-2	3	Head Gate Views
F-3	4	Powerhouse Top View
F-4	5	Powerhouse Layout Side View

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The exhibits A and F described above are approved and made part of the exemption. The exhibit G filed on July 27, 2007, is not approved.

(D) This exemption is also subject to the articles set forth in Form E-2 entitled Standard Terms and Conditions of Exemption from Licensing (attached), and the following additional articles:

Article 10. *Administrative Annual Charges*. The exemptee shall pay the United States annual charges, effective the first day of the month in which the



exemption is issued, as determined in accordance with the provisions of the Commission's regulations in effect from time to time, for the purpose of reimbursing the United States for the cost of administration of the Commission's hydropower program. The authorized installed capacity for that purpose is 280 kilowatts. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kilowatts will not be assessed annual charges.

Article 11. Start of Construction. The exemptee shall commence rehabilitation of the project works within two years from the issuance date of the exemption and shall complete rehabilitation of the project within four years from the issuance date of the exemption.

Article 12. Exhibit Drawings. Within 45 days of the issuance date of this exemption, the exemptee shall file the approved exhibit drawings in aperture card and electronic file format.

(a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this exemption shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office.

(b) The exemptee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office. Exhibit F drawings must be identified as critical energy infrastructure information (CEII) material under 18 C.F.R. § 388.113(c). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this exemption, and file extension in the following format [P-12769-1, F-1, Project Description, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file  
 FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4  
 RESOLUTION – 300 dpi desired, (200 dpi min)  
 DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)  
 FILE SIZE – less than 1 MB desired

Article 13. Exhibit G Drawing. Within 90 days of the issuance date of this exemption, the exemptee shall file, for Commission approval, revised exhibit G drawings enclosing within the project boundary all principal project works necessary for operation and maintenance of the project, including the dam, reservoir (up to the height of the existing flashboards), headgate structure, power canal, powerhouse, tailrace, and transmission line. The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission’s regulations.

Article 14. Commission Approval and Reporting.

(a) Requirement to File Plans for Commission Approval

Various measures in the U.S. Department of the Interior (Interior) and Massachusetts Division of Fisheries and Wildlife (Massachusetts DFW) conditions issued pursuant to section 30(c) of the Federal Power Act (Appendices A and B) require the exemptee to prepare plans in consultation with state and federal agencies to implement specific measures without prior Commission review and approval. Each such plan shall also be submitted to the Commission for approval. The exemptee shall not implement these plans unless notified by the Commission that the plans are approved. The plans are listed below.

<u>30(c) Condition No.</u>		Plan Name	Date Due to Commission
Interior	Mass DFW		
3	2	Run-of-river maintenance and monitoring plan	Within 6 months of exemption issuance
	4	Bypassed reach flow study plan/results	Within 1 year of exemption issuance
	6	Bypassed reach flow maintenance and monitoring plan	Within 1 year and 6 months of exemption issuance
	7	Sediment removal plan	Within 6 months of exemption issuance
	9	Eel passage design	Within 6 months of exemption issuance
4	8 and 10	Fishway operation, maintenance, monitoring and evaluation plan	Within 6 months of exemption issuance

## (b) Requirement to File Notification with the Commission

The exemptee shall also file with the Commission notification of the following activities.

<u>30(c) Condition No.</u>		Exemption Requirement	Date Due to Commission
Interior	Mass DFW		
1	1	Notification of temporary run-of-river operation modification	Within 10 days of each occurrence
	3	Notification of temporary refill procedure modification	Within 10 days of each occurrence
5	12	Notification when the project commences operation	Within 30 days of commencement of project operation
7	4,5,14	Notification if additional terms and conditions are imposed	Within 30 days of receipt of conditions

The exemptee shall include documentation of agency approval with its filing to the Commission. The Commission reserves the right to make changes to any plan submitted. Upon Commission approval the plan becomes a requirement of the exemption from licensing, and the exemptee shall implement the plan or changes in project operations or facilities, including any changes required by the Commission. In addition, Interior condition 7, and Massachusetts DFW conditions 4, 5, and 14 contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. These changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the exemption.

Article 15. Recreation Access. The exemptee shall allow public access to the project for outdoor recreational purposes. The exemptee shall make reasonable efforts to inform the public of the availability of recreational opportunities at the project. Such efforts shall include the posting of signs at major points of access to the project. The Commission reserves the right to require the exemptee to allow public recreational uses of any project property. The exemptee may reserve from public access such portions of the project as may be necessary for the protection of life, health, and property.

Article 16. Memorandum of Agreement and Historic Properties Management Plan. The exemptee shall implement the "Memorandum of Agreement Among the

Federal Energy Regulatory Commission and the Massachusetts State Historic Preservation Officer for Managing Historic Properties that May be Affected by Issuing an Exemption from Licensing for the Ice House Power Project in Middlesex County, Massachusetts (FERC No. 12769),” executed on March 11, 2008, and including but not limited to the historic properties management plan (HPMP) for the project. Pursuant to the requirements of this Memorandum of Agreement (MOA), the exemptee shall file, for Commission approval, an HPMP within one year of the issuance date of this exemption. The Commission reserves the authority to require changes to the HPMP at any time during the term of this order. If the MOA is terminated prior to Commission approval of the HPMP, the exemptee shall obtain approval from the Commission and the Massachusetts State Historic Preservation Officer, before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the project’s area of potential effects.

Article 17. This project is subject to Part 12 of the Commission’s regulations, 18 C.F.R. Part 12 (2007) (as they may be amended from time to time). For the purposes of applying these provisions of Part 12, the exempted project is deemed to be a licensed project development and the owner of the exempted project is deemed to be a licensee.

Article 18. *Minimum Bypassed Reach Flow.* Until such time as a permanent flow is established, the exemptee shall release a continuous 1 million gallon per day (1 mgd) flow, or its equivalent in cubic feet per second, into the project bypassed reach, in accordance with Massachusetts Division of Fish and Wildlife (Massachusetts DFW) section 30(c) condition No. 5, for the protection of aquatic habitat and water quality in the Nashua River. The minimum bypassed reach flow release may be temporarily modified if required by operating emergencies beyond the control of the exemptee, and for short periods upon mutual agreement between the exemptee, Massachusetts DFW, and the U.S. Department of the Interior. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

(E) The exemptee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this exemption or of any other date specified in this order, except as specifically ordered by the Commission. The exemptee's failure to file a request for rehearing shall constitute acceptance of this order.

Article 19. Right to Occupy Federal Lands. Within one year of the issuance date of this exemption, the exemptee shall file documentation with the Commission showing it has obtained the right to occupy any federal lands necessary for the construction, operation, and maintenance of the project.

J. Mark Robinson  
Director  
Office of Energy Projects

## Form E-2

## FEDERAL ENERGY REGULATORY COMMISSION

## Section 4.106 - Standard Terms and Conditions of Exemption from Licensing

Any exemption from licensing granted under this subpart for a small hydroelectric power project is subject to the following standard terms and conditions:

Article 1. The Commission reserves the right to conduct investigations under sections 4(g), 306, 307, and 311 of the Federal Power Act with respect to any acts, complaints, facts, conditions, practices, or other matters related to the construction, operation, or maintenance of the exempt project. If any term or condition of the exemption is violated, the Commission may revoke the exemption, issue a suitable order under section 4(g) of the Federal Power Act, or take appropriate action for enforcement, forfeiture, or penalties under Part III of the Federal Power Act.

Article 2. The construction, operation, and maintenance of the exempt project must comply with any terms and conditions that the United States Fish and Wildlife Service and any state fish and wildlife agencies have determined are appropriate to prevent loss of, or damage to, fish or wildlife resources or to otherwise carry out the purposes of the Fish and Wildlife Coordination Act, as specified in exhibit E of the application for exemption from licensing or in the comments submitted in response to the notice of the exemption application.

Article 3. The Commission may revoke this exemption if actual construction of any proposed generating facilities has not begun within two years or has not been completed within four years from the date on which this exemption was granted. If an exemption is revoked under this article, the Commission will not accept from the prior exemption holder a subsequent application for exemption from licensing or a notice of exemption from licensing for the same project within two years of the revocation.

Article 4. This exemption is subject to the navigation servitude of the United States if the project is located on navigable waters of the United States.

Article 5. This exemption does not confer any right to use or occupy any Federal lands that may be necessary for the development or operation of the project. Any right to use or occupy any Federal lands for those purposes must be obtained from the administering Federal agencies. The Commission may accept a license application by any qualified license applicant and revoke this exemption, if any necessary right to use or occupy Federal lands for those purposes has not been obtained within one year from the date on which this exemption was granted.

Article 6. In order to best develop, conserve, and utilize in the public interest the water resources of the region, the Commission may require that the exempt facilities be modified in structure or operation or may revoke this exemption.

Article 7. The Commission may revoke this exemption if, in the application process, material discrepancies, inaccuracies, or falsehoods were made by or on behalf of the applicant.

Article 8. Any exempted small hydroelectric power project that utilizes a dam that is more than 33 feet in height above streambed, as defined in 18 C.F.R. § 12.31(c) of this chapter, impounds more than 2,000 acre-feet of water, or has a significant or high hazard potential, as defined in 33 C.F.R. Part 222, is subject to the following provisions of 18 C.F.R. Part 12, as it may be amended:

- (1) Section 12.4(b)(1)(i) and (ii), (b)(2)(i) and (iii), (b)(iv), and (b)(v);
- (2) Section 12.4(c);
- (3) Section 12.5;
- (4) Subpart C; and
- (5) Subpart D.

For the purposes of applying these provisions of 18 C.F.R. Part 12, the exempted project is deemed to be a licensed project development and the owner of the exempted project is deemed to be a licensee.

Article 9. Before transferring any property interests in the exempt project, the exemption holder must inform the transferee of the terms and conditions of the exemption. Within 30 days of transferring the property interests, the exemption holder must inform the Commission of the identity and address of the transferee.

## APPENDIX A

Mandatory section 30(c) conditions filed by the U.S. Department of the Interior on October 10, 2007.

1. The Exemptee shall operate the project in a run-of-river mode, whereby inflow to the project will equal outflow from the project and water levels above the dam are not drawn down for the purpose of generating power. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Exemptee, or for short periods upon mutual agreement between the Exemptee, the U.S. Fish and Wildlife Service, and the Massachusetts Division of Fisheries and Wildlife.
2. The Exemptee shall discharge a minimum flow over the project spillway. The flow shall be determined after additional consultation with the Massachusetts Division of Fisheries and Wildlife and the U.S. Fish and Wildlife Service. A series of demonstration flows may be needed for the agencies to establish the required flow.
3. The Exemptee shall, within three (3) months of the date of issuance of an exemption from licensing, prepare and file for approval by the U.S. Fish and Wildlife Service, a plan for maintaining and monitoring run-of-river operation and spillway flows at the project. The plan shall include a description of the mechanisms and structures that will be used, the level of manual and automatic operation, the methods to be used for recording data on run-of-river operation and spillway flows, an implementation schedule, and a plan for maintaining the data for inspection by the U.S. Fish and Wildlife Service, the Federal Energy Regulatory Commission, and the Massachusetts Division of Fisheries and Wildlife.
4. The Exemptee shall be responsible for constructing, operating, maintaining, and evaluating upstream and downstream fish passage facilities at this project when notified by the U.S. Fish and Wildlife Service and/or the Massachusetts Division of Fisheries and Wildlife that such fishways are needed. The fishways shall be constructed and operational in accordance with the schedule identified by the agencies. Any fishways prescribed by the aforementioned agencies shall be designed in consultation with, and the designs shall require approval by, the U.S. Fish and Wildlife Service.
5. The Exemptee shall notify the U.S. Fish and Wildlife Service in writing when the project commences operation. A set of as-built drawings shall be furnished with the notification. Such notice shall be sent within thirty (30) days of start-up to Supervisor, New England Field Office, 70 Commercial Street, Suite 300, Concord, New Hampshire 03301.



6. The Exemptee shall allow the U.S. Fish and Wildlife Service to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions.
7. The U.S. Fish and Wildlife Service is reserving the right to add to and alter terms and conditions for this exemption as appropriate to carry out its responsibilities with respect to fish and wildlife resources. The Exemptee shall, within thirty (30) days of receipt, file with the Federal Energy Regulatory Commission any additional terms and conditions imposed by the U.S. Fish and Wildlife Service.
8. The Exemptee shall incorporate the aforementioned terms and conditions in any conveyance - by lease, sale or otherwise - of its interests so as to legally assure compliance with said conditions for as long as the project operates under an exemption from licensing.

## APPENDIX B

Mandatory section 30(c) conditions filed by the Massachusetts Division of Fisheries and Wildlife on October 11, 2007, as amended by Commission staff (changes in bold).

1. The Exemptee shall operate the project in a run-of-river mode, whereby inflow to the project will equal outflow from the project on an instantaneous basis and water levels above the dam are not drawn down for the purpose of generating power. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Exemptee, or for short periods upon mutual agreement between the Exemptee, the Massachusetts Division of Fisheries and Wildlife (Division), and the U.S. Fish and Wildlife Service.
2. The Exemptee shall, within three (3) months of the date of issuance of an exemption from licensing, prepare and file for approval by the Division, and the U.S. Fish and Wildlife Service, a plan for maintaining and monitoring run-of-river operation at the project. The plan shall include a description of the mechanisms and structures that will be used, the level of automatic operation, the methods to be used for recording data on run-of-river operation, an implementation schedule, and a plan for maintaining the data for inspection by the Division, the Federal Energy Regulatory Commission, and the U.S. Fish and Wildlife Service.
3. The Exemptee shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance (including flashboard repair/replacement) or emergency purposes, 90 percent of inflow is passed downstream and the headpond is refilled on the remaining 10 percent of inflow to the project. This refill procedure may be modified on a case-by-case basis with the prior approval of both the Division and the U.S. Fish and Wildlife Service.
4. The first field season following commencement of project operation, the Exemptee shall conduct a flow study to determine a suitable bypass discharge sufficient to maintain water quality and habitat in the bypass reach. The study plan shall be developed in consultation with the Division and the U.S. Fish and Wildlife Service, and shall require approval by the Division and the U.S. Fish and Wildlife Service prior to implementation. Based on study results, the Division and the U.S. Fish and Wildlife Service, may mandate a continuous minimum bypass flow for the project.
5. Until a permanent bypass flow has been mandated by the U.S. Fish and Wildlife Service, the Exemptee shall provide an interim conservation flow of 1 mgd (as suggested by the exemptee) at the dam to protect habitat in the bypass reach. This flow shall be released upon commencement of project operation, and shall continue until the agencies notify the Exemptee of a permanent bypass flow requirement (to be determined via

condition 4 above). The specific location and mechanism of flow release shall be determined in consultation with the Division and the U.S. Fish and Wildlife Service, and shall require the approval by the Division and the U.S. Fish and Wildlife Service prior to the project commencing operation.

6. The Exemptee shall, within three (3) months of receiving notification of a permanent bypass flow requirement by the agencies, prepare and file for review and approval by the Division, and the U.S. Fish and Wildlife Service a plan for maintaining and monitoring the bypass discharge. The plan shall include a description of the mechanisms and structures that will be used to provide the flow, the level of automatic operation, the methods to be used for recording data on bypass flow, an implementation schedule, and a plan for maintaining the data for inspection by the U.S. Fish and Wildlife Service, the Federal Energy Regulatory Commission, and the Division.

7. The Exemptee shall, if necessary, within ninety (90) days of exemption issuance, develop a Sediment Removal Plan in consultation with the U.S. Fish and Wildlife Service, the Division, and the Massachusetts Department of Environmental Protection. The purpose of the plan is to develop a protocol for the periodic removal of accumulated sediment from the project that minimizes impacts to aquatic resources. The project shall not commence operation until the Division and the U.S. Fish and Wildlife Service has approved the Plan.

8. The Exemptee shall be responsible for constructing, operating, maintaining, and evaluating upstream and downstream anadromous fish passage facilities at this project when notified by the U.S. Fish and Wildlife Service and/or the Division. The fishway(s) shall be designed in consultation with, and the designs shall require approval by, the U.S. Fish and Wildlife Service and the Division.

9. The Exemptee shall be responsible for constructing, operating, maintaining, and evaluating upstream and downstream passage for American eels. The fishways shall be designed in consultation with, and require approval by, the U.S. Fish and Wildlife Service and the Division prior to the start of fishway construction. The eelways shall be operational concurrent with the commencement of project operation.

10. No later than three (3) months prior to commencement of project operation, the Exemptee shall file for approval by the U.S. Fish and Wildlife Service and the Division, plans and schedules for the operation, maintenance and monitoring, and evaluation of the fishways specified in conditions 8 and 9. All plans related to fish passage require approval from the U.S. Fish and Wildlife Service and the Division prior to implementation by the Exemptee.

11. No later than three (3) months prior to **[implementing vegetation management]**, the Exemptee shall file for approval by the Division for the routine vegetation management associated with the project.
12. The Exemptee shall notify the Division and the U.S. Fish and Wildlife Service in writing when the project commences operation. A set of as-built drawings shall be furnished with the notification. Such notice shall be sent within 30 days of start-up to Anadromous Fish Project Leader, MADFW Field HQ, 1 Rabbit Hill Road, Westborough MA, 01581.
13. The Exemptee shall allow the Division to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions.
14. The Division is reserving the right to add to and alter terms and conditions for this exemption as appropriate to carry out its responsibilities with respect to fish and wildlife resources. The Exemptee shall, within thirty (30) days of receipt, file with the Federal Energy Regulatory Commission any additional terms and conditions imposed by the Division.
15. The Exemptee shall incorporate the aforementioned terms and conditions in any conveyance -- by lease, sale or otherwise -- of its interests so as to legally assure compliance with said conditions for as long as the project operates under an exemption from licensing.



COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Watershed Management, 627 Main Street 2nd Floor, Worcester, MA 01608

DEVAL PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

IAN BOWLES  
Secretary

ARLEEN O'DONNELL  
Commissioner

Liisa Dowd  
Ice House Partners, Inc.  
323 West Main Street  
Ayer MA 01432

March 26, 2007

Re: Ice House Partners Inc. FERC Exemption Application, #12769  
Request for 401 Water Quality Certification Waiver

Dear Ms. Dowd,

The Massachusetts Department of Environmental Protection (the Department) is in receipt of your March 21, 2007 letter requesting a waiver of the requirement for State 401 Water Quality Certification for this project.

After consultation with the Massachusetts Division of Fisheries and Wildlife, it is the opinion of the Department that the requirement for State 401 Water Quality Certification for this project be waived. This decision is based primarily upon the location of the project and the inclusion of needed water quality based conditions in the FERC exemption.

Please note the Department is waiving the requirement to obtain a 401 for this project only and retains the option to require a 401 for any other exemption application.

If you have any questions, please call me at 508/767-2854.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Kubit".

Robert Kubit, P.E.  
Environmental Engineer

Cc: Caleb Slater, MADFW  
Maryann Dipinto/CERO/DEP  
Ann Miles, FERC

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

<http://www.state.ma.us/dep> • Phone (508) 792-7470 • Fax (508) 791-4131



## Search Results

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Category/ Accession	Doc Date/ Filed Date	Docket Number	Description	Class/ Type	Files	Size	
Issuance 20070209-3009	02/09/2007 02/09/2007	P-12769-000	Notice of application tendered for filing with the Commission, soliciting additional study requests, and establishing procedural schedule for licensing & deadline for submission of final amendments re Ice House Partners, Inc, P-12769. Availability: Public	Notice / Formal Notice	<input type="checkbox"/> <a href="#">Word</a>	42K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">Text</a>	7K	<a href="#">FILE</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	43K	
Issuance 20070216-3004	02/16/2007 02/16/2007	P-12769-000	Letter requesting Ice House Partners, Inc to file within 30 days documentation showing sufficient property interests of all non-federal lands inundated by the dam etc re Ice House Power Project under P-12769. Availability: Public	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/> <a href="#">Word</a>	72K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">Text</a>	6K	<a href="#">FILE</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	37K	
Issuance 20070411-3010	04/11/2007 04/11/2007	P-12769-000	Letter to Wampanoag Tribe of Gay Head (Aquinnah) et al determining the extent of their interest in the resources that the Ice House Project has the potential to affect & whether the tribe desires to participate in the exemption process under P-12769. Availability: Public	Informational Correspondence / Informational Correspondence (Miscellaneous Issuances)	<input type="checkbox"/> <a href="#">Word</a>	45K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">Text</a>	6K	<a href="#">FILE</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	32K	
Issuance 20070427-3018	04/27/2007 04/27/2007	P-12769-000	Letter informing, Ice House Partners, Inc that their license application has been accepted for filing as of 1/22/07 but is not ready for environmental analysis & requesting additional information w/in 5 days re the Ice House Power Proj-12769. Availability: Public	FERC Correspondence With Applicant / Request for Additional Information	<input type="checkbox"/> <a href="#">Word</a>	105K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">Text</a>	22K	<a href="#">FILE</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	126K	
Issuance 20070427-3053	04/27/2007 04/27/2007	P-12769-000	Notice of application accepted for filing and soliciting comments, motions to intervene, and protests within 60 days re Ice House Partners, Inc's Ice House Power Project under P-12769. Availability: Public	Notice / Formal Notice	<input type="checkbox"/> <a href="#">Word</a>	37K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">Text</a>	6K	<a href="#">FILE</a>

					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	32K	
Issuance 20070501-3007	05/01/2007 05/01/2007	P-12769-000	Letter to US Coast Guard et al notifying them that FERC will be conducting National Environmental Policy Act scoping of Ice House Partners, Inc's proposed Ice House Power Project under P-12769. Scoping Document attached. Availability: Public	FERC Report/Study / Environmental Assessment (EA) and Environmental Impact Statement (EIS)	<input type="checkbox"/>	<a href="#">Word</a>	185K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	365K	<a href="#">FILE</a>
Issuance 20070502-3021	05/02/2007 05/02/2007	P-12769-000	Notice soliciting Scoping Comments re Ice House Partners, Inc's Ice House Power Project under P-12769. Availability: Public	Notice / Formal Notice	<input type="checkbox"/>	<a href="#">Word</a>	37K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">Text</a>	6K	<a href="#">FILE</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	33K	
Issuance Submittal 20070808-0079	08/02/2007 08/06/2007	P-12769-000	Summary of the 8/2/07 telephone conversation between Tom Dean, FERC and John Grady, Ice of House Partners, Inc seeking clarification of the project transmission line for the Ice House Project under P-12769. Availability: Public	FERC Memo / Telephone Conversation or Electronic Mail Memo	<input type="checkbox"/>	<a href="#">Image</a>	12K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	21K	<a href="#">FILE</a>
Issuance 20070814-3023	08/14/2007 08/14/2007	P-12769-000	Notice of application ready for environmental analysis and soliciting scoping comments, recommendations, terms and conditions and prescriptions within 60 days re Ice House Partners, Inc's Ice House Power Project under P-12769. Availability: Public	Notice / Formal Notice	<input type="checkbox"/>	<a href="#">Word</a>	40K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">Text</a>	7K	<a href="#">FILE</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	43K	
Issuance 20071106-0164	10/30/2007 10/30/2007	P-12769-000	Letter informing Ice House Partners, Inc that the Ice House Dam is being classified as a significant hazard potential structure and requesting that within 90 days prepare and file an EAP re the Ice House Power Project under P-12769. Availability: CEII	FERC Correspondence With Applicant / General Correspondence FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/>	<a href="#">Image</a>	44K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	59K	<a href="#">FILE</a>
Issuance 20071213-3006	12/13/2007 12/13/2007	P-12769-000	Notice of availability of Environmental Assessment re Ice House Partners, Inc under P-12769. Environmental Assessment attached. Availability: Public	Notice / Formal Notice	<input type="checkbox"/>	<a href="#">Word</a>	676K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">Text</a>	115K	<a href="#">FILE</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	1K	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	644K	
Issuance 20071226-3010	12/26/2007 12/26/2007	P-12769-000	Letter providing the Massachusetts Historical Commission et al with a Memorandum of Agreement for the Ice House Hydro Power Project under P-12769. Availability: Public	Agreement/Understanding/Contract / Memoranda of Understanding(MOU)/Memoranda of Agreement (MOA) FERC Correspondence With Government Agencies / FERC Correspondence With Government Agencies	<input type="checkbox"/>	<a href="#">Word</a>	91K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">Text</a>	32K	<a href="#">FILE</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	180K	

Issuance 20080219-3013	02/19/2008 02/19/2008	P-12769-000	Final Memorandum of Agreement for the Icehouse Power Project re Ice House Partners, Inc under P-12769. Availability: Public	Agreement/Understanding/Contract / Memoranda of Understanding(MOU)/Memoranda of Agreement (MOA)	<input type="checkbox"/> <a href="#">Word</a> <input type="checkbox"/> <a href="#">Text</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	93K 32K 184K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080305-0287	02/26/2008 02/26/2008	P-12769-000	Letter requesting Ice Hosue Partners Inc to submit within 30 days provide copies of the revised Emergency Action Plan to all plan holders re the Ice House Dam under P-12769. Availability: CEII	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/> <a href="#">Image</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	32K 45K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080321-3024	03/21/2008 03/21/2008	P-12769-000	Letter to Advisory Council on Historic Preservation et al enclosing the executed Memorandum of Agreement for the Ice House Power Project under P-12769. Availability: Public	Agreement/Understanding/Contract / Memoranda of Understanding(MOU)/Memoranda of Agreement (MOA) FERC Correspondence With Government Agencies / FERC Correspondence With Government Agencies	<input type="checkbox"/> <a href="#">Word</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	76K 120K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080331-3012	03/31/2008 03/31/2008	P-12769-000	Order granting exemption from licensing re Ice House Partners, Inc under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/> <a href="#">Word</a> <input type="checkbox"/> <a href="#">Text</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	152K 73K 223K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080501-3024	05/01/2008 05/01/2008	P-12769-000	Letter to Ice House Partners Inc discussing the request for clarification of Article 19 - Right to Occupy Federal Land re the Ice House Power Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">Word</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	66K 24K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080609-0080	06/09/2008 06/09/2008	P-12769-000	Letter informing Ice House Partners, Inc that FERC will arrive at their Ice House Power Project on 6/13/08 for the dam safety inspection under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">Image</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	85K 108K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080723-0198	07/11/2008 07/11/2008	P-12769-000	Letter requesting Ice House Partners, Inc to make changes to the Emergency Action Plan notification chart and submit the revised chart within 30 days re the Ice House Dam under P-12769. Availability: Public	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/> <a href="#">Image</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	21K 29K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20080826-0128	08/21/2008 08/21/2008	P-12769-000	Letter requesting Ice House Partners, Inc to refile within 15 days the electronic TIFF files for the Ice House Power Proj-12769. Availability: Public	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/> <a href="#">Image</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	18K 27K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20081119-0321	11/18/2008 11/18/2008	P-12769-000	Introductory letter to Ice House Partners, Inc providing the guidelines to help maintain compliance with the terms and conditions of the exemption requirements for the Ice	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">Image</a>	87K	<a href="#">INFO</a> <a href="#">FILE</a>



Issuance 20090824-0153	07/31/2009 07/31/2009	P-12769-000	Dam Safety Inspection Report by New York Regional Office for Ice House Partners, Inc's Ice House Project for the period of 3/29/06 to 6/12/08 under P-12769. Availability: CEII	FERC Report/Study / Dam Safety Inspection Report/Operation Report	<input type="checkbox"/> <a href="#">PDF</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	11123K 11016K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20090810-0012	08/06/2009 08/06/2009	P-12769-001	Letter requesting Ice House Partners, Inc to re-file within 30 days the revised exhibits with the correct data in electronic format re the Ice House Hydroelectric Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/> <a href="#">Image</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	64K 83K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20091127-0154	11/03/2009 11/03/2009	P-12769-000	Letter acknowledging Ice House Partners, Inc's 6/9/09 letter requesting review of the hazard potential classification for the Ice House Power Project under P-12769. Availability: CEII	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">Image</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	21K 31K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20100112-3028	01/12/2010 01/12/2010	P-12769-001	Order approving revised Exhibit G Drawings re Ice House Partners, Inc's Ice House Hydroelectric Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/> <a href="#">Word</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	109K 67K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20100218-3010	02/18/2010 02/18/2010	P-12769-002	Order on extension of time re Ice House Partners under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/> <a href="#">Word</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	86K 67K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance 20100511-0404	04/30/2010 04/30/2010	P-12769-000	Dam Safety Inspection Report by New York Regional Office for Ice House Partners, Inc's Ice House Project for the period of 6/12/08 to 8/31/09 under P-12769. Availability: CEII	FERC Report/Study / Dam Safety Inspection Report/Operation Report	<input type="checkbox"/> <a href="#">PDF</a> <input type="checkbox"/> <a href="#">FERC Generated PDF</a>	7204K 2K	<a href="#">INFO</a> <a href="#">FILE</a>
Issuance	05/05/2010	P-12769-003	Order approving historic properties management plan re	Order/Opinion /	<a href="#">Word</a>	38K	<a href="#">INFO</a>

20100505-3007	05/05/2010		Ice House Partners, Inc under P-12769. kg Availability: Public	Delegated Order	<input type="checkbox"/>			<a href="#">FILE</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	23K	
Issuance 20100512-3020	05/12/2010 05/12/2010	P-12769-000	Order on Article 19 re Ice House Partners. Inc's Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Word</a>	52K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	16K	<a href="#">FILE</a>
Issuance 20100813-0020	08/11/2010 08/11/2010	P-12769-002	Letter to VP/GM Ice House Partners, Inc re the plans for fish passage and sediment removal at the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">Image</a>	53K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	67K	<a href="#">FILE</a>
Issuance 20101101-0475	09/21/2010 09/21/2010	P-12769-000	Letter to Icehouse Partners Inc informing that the eel passage design must be approved by the Commission before any work can proceed for the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">Image</a>	21K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	28K	<a href="#">FILE</a>
Issuance 20100930-4002	09/30/2010 09/30/2010	P-12769-004	Order modifying and approving Final Eel Passage Plans re Ice House Partners' Ice House Project under P-12769. (This replaces 20100930-3032). Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Word</a>	61K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	35K	<a href="#">FILE</a>
Issuance 20110614-0014	06/13/2011 06/13/2011	P-12769-002	Letter requesting Ice House Partners, Inc to file w/in 60 days plans with documentation of agencies consultation and approval for the run-of-river maintenance and monitoring plan etc pursuant to Article 14 re the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/>	<a href="#">Image</a>	58K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	69K	<a href="#">FILE</a>
Issuance 20111121-3023	11/21/2011 11/21/2011	P-12769-002	Order modifying and approving Run-of-River Maintenance and Monitoring Plan pursuant to License Article 14 re Ice House Partners, Inc's Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Word</a>	57K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	22K	<a href="#">FILE</a>
Issuance 20120413-0329	03/30/2012 03/30/2012	P-12769-000	Letter order accepting Ice House Partners Inc's 8/30/11 filing of the Dam Safety Surveillance and Monitoring Plan and the 2011 Dam Safety Surveillance and Monitoring Report for the Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Image</a>	23K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	29K	<a href="#">FILE</a>
Issuance 20120403-3008	04/03/2012 04/03/2012	P-12769-005	Order approving As-Built Exhibit F Drawings re Ice House Partners, Inc under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Word</a>	80K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	30K	<a href="#">FILE</a>
Issuance 20121002-0306	09/07/2012 09/07/2012	P-12769-000	Letter to Ice House Partners Inc confirming the arrangements made with the e-mail exchanges on 9/4/12 concerning the inspection re Hydro Projects under P-	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">Image</a>	54K	<a href="#">INFO</a>
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	66K	<a href="#">FILE</a>

				12769. Availability: Public				<a href="#">PDF</a>	
Issuance 20121010-0017	10/10/2012 10/10/2012	P-12769-006	Letter to Ice House Partners Inc re the deviation - Section 30(c) Condition 1 of Massachusetts Division of Fisheries and Wildlife for the House Power Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">Image</a>	35K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	44K	<a href="#">FILE</a>	
Issuance 20130304-0492	02/12/2013 02/12/2013	P-12769-000	Letter requesting Ice House Partners, Inc to provide a Public Safety Plan w/in 60 days re the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/>	<a href="#">Image</a>	27K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	34K	<a href="#">FILE</a>	
Issuance 20130715-0305	06/28/2013 06/28/2013	P-12769-000	Letter order accepting Ice House Partners Inc's 5/10/13 filing of the revised Public Safety Plan for the Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Image</a>	18K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	23K	<a href="#">FILE</a>	
Issuance 20140625-0244	05/08/2014 05/08/2014	P-12769-000	Letter order accepting Ice House Partners, Inc's 8/8/14 submittal of the 2013 Dam Safety Surveillance and Monitoring Report for the Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Image</a>	21K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	27K	<a href="#">FILE</a>	
Issuance 20140819-3037	08/19/2014 08/19/2014	P-12769-008	Letter to Ice House Partners Inc regarding the temporary modification in the run-of-river operation requirements for the Ice House Power Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">PDF</a>	135K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	144K	<a href="#">FILE</a>	
Issuance 20150928-0194	09/02/2015 09/02/2015	P-12769-000	Letter informing Ice House Partners, Inc. of the telephone inspection confirmation arrangements made on 9/1/15, regarding the Ice House Hydro Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">Image</a>	59K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	72K	<a href="#">FILE</a>	
Issuance 20160128-0279	12/30/2015 12/30/2015	P-12769-000	Letter order accepting Ice House Partners, Inc's 11/18/15 filing of the 2015 Dam Safety Surveillance and Monitoring Report for the Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Image</a>	18K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	24K	<a href="#">FILE</a>	
Issuance 20160128-0276	01/06/2016 01/06/2016	P-12769-000	Letter order accepting Ice House Partners, Inc's 12/15/15 filing of the 5-Year reprint for the Emergency Action Plan for the Low Hazard Ice House Project under P-12769. Availability: Public	Order/Opinion / Delegated Order	<input type="checkbox"/>	<a href="#">Image</a>	23K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	30K	<a href="#">FILE</a>	
Issuance 20160516-0164	04/27/2016 04/27/2016	P-12769-000	Letter to Ice House Partners, Inc regarding the 11/17/15 filing of the updated Public Safety Plan for the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/>	<a href="#">Image</a>	36K	<a href="#">INFO</a>	
					<input type="checkbox"/>	<a href="#">FERC Generated PDF</a>	45K	<a href="#">FILE</a>	
Issuance	06/17/2016	P-12769-000	Project Safety-Related Submission by NYRO of NEW	FERC Report/Study /		<a href="#">Word</a>	34K	<a href="#">INFO</a>	

4/25/2019

Results

20160617-5237  
[Document Components](#)

06/17/2016

YORK REGIONAL OFFICE under P-12769-MA, Ice House, Dam Safety Inspection Report  
Availability: Public

Dam Safety Inspection Report/Operation Report



[FILE](#)



[FERC  
Generated  
PDF](#)

7K

Issuance  
20160617-5238  
[Document Components](#)

06/17/2016 P-12769-000  
06/17/2016

Project Safety-Related Submission by NYRO of NEW YORK REGIONAL OFFICE under P-12769-MA, Ice House, Dam Safety Inspection Report  
Availability: CEII

FERC Report/Study / Dam Safety Inspection Report/Operation Report



[INFO](#)

[PDF](#)

2068K



[FERC  
Generated  
PDF](#)

2125K

Category/ Accession	Doc Date/ Filed Date	Docket Number	Description	Class/ Type	Files	Size	
Issuance 20180207-3015	02/07/2018 02/07/2018	P-12769-000	Letter to Ice House Partners, Inc regarding the Emergency Notification Flowchart review under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">PDF</a>	78K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	75K	<a href="#">FILE</a>
Issuance 20180613-3051	06/13/2018 06/13/2018	P-12769-000	Letter to Ice House Partners Inc. re the 2018 Inspection Follow-Up for the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">PDF</a>	82K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	79K	<a href="#">FILE</a>
Issuance 20180717-3004	07/17/2018 07/17/2018	P-12769-000	Letter requesting Ice House Partners, Inc. to submit the 2017 Dam Safety Surveillance Monitoring Report within 60 days re the 2018 Additional Inspection under P-12769. Availability: Public	FERC Correspondence With Applicant / Compliance Directives	<input type="checkbox"/> <a href="#">PDF</a>	82K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	79K	<a href="#">FILE</a>
Issuance 20181024-3015	10/24/2018 10/24/2018	P-12769-000	Letter to Ice House Partners, Inc. regarding the Review of 2017 Dam Safety Surveillance and Monitoring Report (DSSMR) for the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">PDF</a>	101K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	108K	<a href="#">FILE</a>
Issuance 20181101-3016	11/01/2018 11/01/2018	P-12769-000	Letter to Ice House Partners, Inc. re the 2018 Dam Safety Inspection Follow-up for the Ice House Project under P-12769. Availability: Public	FERC Correspondence With Applicant / General Correspondence	<input type="checkbox"/> <a href="#">PDF</a>	608K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	615K	<a href="#">FILE</a>
Issuance 20190110-3019 <a href="#">Document Components</a>	01/10/2019 01/10/2019	P-12769-000	Dam Safety Inspection Report by the New York Regional Office re Ice House Partners, Inc.'s Ice House Project, conducted on 05/22/2018 under P-12769. Availability: Public	FERC Report/Study / Dam Safety Inspection Report/Operation Report	<input type="checkbox"/> <a href="#">Word</a>	40K	<a href="#">INFO</a>
					<input type="checkbox"/> <a href="#">FERC Generated PDF</a>	30K	<a href="#">FILE</a>

Issuance  
20190110-3020  
[Document Components](#)

01/10/2019 P-12769-000  
01/10/2019

Dam Safety Inspection Report by the New York Regional Office re Ice House Partners, Inc.'s Ice House Project, conducted on 05/22/2018 under P-12769. Availability: CEII

FERC Report/Study /  
Dam Safety Inspection  
Report/Operation Report

[PDF](#) 2234K [INFO](#)  
 [FERC  
Generated  
PDF](#) 2307K [FILE](#)

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Class:

Category: issuance

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Docket: P-12769

Type:

FILED DATE is from to 4/25/2019

# Ice House Partners Hydro Plant Monthly Water Level and Generation Report

Report Generated On **00:00:35 02/01/19**

Month	Year	Minimum Water Level	Maximum Water Level	Average Water Level	Energy produced
Current Month To-Date		<b>0.87 "</b>	<b>28.90 "</b>	<b>9.26 "</b>	<b>117057 kWh</b>
January	<b>2019</b>	<b>0.87 "</b>	<b>28.90 "</b>	<b>9.26 "</b>	<b>117057 kWh</b>
February	<b>2018</b>	<b>4.68 "</b>	<b>19.09 "</b>	<b>10.89 "</b>	<b>53892 kWh</b>
March	<b>2018</b>	<b>0.41 "</b>	<b>18.53 "</b>	<b>6.41 "</b>	<b>139818 kWh</b>
April	<b>2018</b>	<b>2.11 "</b>	<b>22.87 "</b>	<b>9.06 "</b>	<b>140644 kWh</b>
May	<b>2018</b>	<b>0.11 "</b>	<b>12.10 "</b>	<b>2.87 "</b>	<b>97275 kWh</b>
June	<b>2018</b>	<b>0.09 "</b>	<b>6.57 "</b>	<b>1.76 "</b>	<b>44772 kWh</b>
July	<b>2018</b>	<b>0.13 "</b>	<b>4.47 "</b>	<b>2.09 "</b>	<b>29483 kWh</b>
August	<b>2018</b>	<b>0.17 "</b>	<b>19.04 "</b>	<b>5.59 "</b>	<b>89813 kWh</b>
September	<b>2018</b>	<b>0.14 "</b>	<b>25.08 "</b>	<b>8.13 "</b>	<b>62538 kWh</b>
October	<b>2018</b>	<b>7.66 "</b>	<b>16.86 "</b>	<b>11.63 "</b>	<b>16691 kWh</b>
November	<b>2018</b>	<b>8.31 "</b>	<b>27.58 "</b>	<b>18.98 "</b>	<b>26371 kWh</b>
December	<b>2018</b>	<b>7.10 "</b>	<b>19.58 "</b>	<b>13.88 "</b>	<b>103083 kWh</b>

# Appendix B



# CERTIFIED LOW IMPACT HYDROPOWER FACILITY

## ICE HOUSE

This certificate is issued on October 22, 2009 (with an effective date of August 6, 2009) for the Ice House Hydroelectric Project, located on the Nashua River in Ayer, Massachusetts, in recognition of its compliance with the certification criteria of the Low Impact Hydropower Certification Program administered by the Low Impact Hydropower Institute.

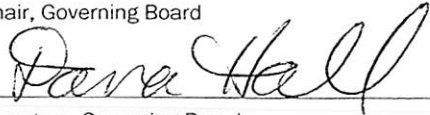
### LOW IMPACT HYDROPOWER INSTITUTE

34 PROVIDENCE STREET  
PORTLAND, MAINE 04103  
(207) 773-8190

WWW.LOWIMPACTHYDRO.ORG



Chair, Governing Board



Secretary, Governing Board

Certificate  
Number 000044

*"Certifying  
environmentally low  
impact hydropower  
facilities nationwide  
on behalf of 'green'  
energy consumers."*

# *Certified Low Impact Hydropower Facility*

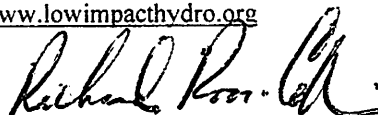
## Ice House Hydroelectric Project

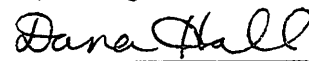
This certificate is effective August 6, 2014 for the Ice House Hydroelectric Project (FERC No. 12769), located on the Nashua River in Ayer, Massachusetts, at the intersection of the towns of Ayer, Harvard and Shirley, in recognition of its compliance with the certification criteria of the Low Impact Hydropower Certification Program as administered by the Low Impact Hydropower Institute.

This certificate will expire on August 6, 2019.



PO BOX 194  
Harrington Park, NJ 07640  
[www.lowimpacthydro.org](http://www.lowimpacthydro.org)

  
Chair, Governing Board

  
Secretary, Governing Board

Certificate Number 44

*"Certifying  
environmentally Low  
Impact hydropower  
facilities nationwide  
on behalf of green  
energy consumers."*

## Appendix B

IHP Bypass Flow Requirements: A Retrospective Study  
CEII Privileged Information  
Not for Public Disclosure

**Liisa Marino**

---

**Subject:** FW: Ice House Partners Bypass Study

**From:** Warner, John [mailto:john\_warner@fws.gov]  
**Sent:** Thursday, March 27, 2014 7:25 AM  
**To:** Liisa Marino; Caleb Slater  
**Subject:** Re: Ice House Partners Bypass Study

Liisa -- The Service is unable to participate in these proceedings due to limited staff resources and competing workload. Although we should still be copied on draft and final submittals, we defer comments on the subject activities at this time to Mass Wildlife. -- John Warner.

John P. Warner  
Assistant Supervisor, Conservation Planning Assistance and Endangered Species  
New England Field Office, U.S. Fish and Wildlife Service  
70 Commercial Street, Suite 300  
Concord, NH 0330-5087  
phone: 603-223-2541, Ext 15  
fax: 603-223-0104

**Liisa Marino**

---

**Subject:** FW: Ice House Partners Bypass Study

**From:** Slater, Caleb (MISC) [mailto:caleb.slater@state.ma.us]  
**Sent:** Thursday, March 27, 2014 9:39 AM  
**To:** Liisa Marino  
**Subject:** RE: Ice House Partners Bypass Study

Liisa,

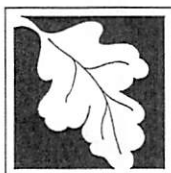
I have read the document "Ice House Partners, Inc. Bypass Flow Requirements A retrospective Study" submitted to the MA DFW via email on March 26, 2014. The report clearly demonstrates that the project (P-12769) is meeting its obligation to provide the minimum flow as required by the FERC. Further, MADFW agrees that the conservation flow of 1 mgd should be accepted as the permanent minimum flow required at the project.

Thank you for this opportunity to comment,

Caleb



Caleb Slater, PhD  
Anadromous Fish Project Leader  
Massachusetts Division of Fisheries and Wildlife  
PLEASE NOTE NEW FIELD HEADQUARTERS ADDRESS (Phones and Emails have not changed.)  
Mass. Division of Fisheries & Wildlife  
100 Hartwell Street, Suite 230  
West Boylston MA 01583  
508-389-6331  
[www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 5 – Order of Conditions**

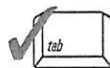
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
100-0321  
MassDEP File #  
eDEP Transaction #  
Ayer  
City/Town

**A. General Information**

Please note:  
this form has  
been modified  
with added  
space to  
accommodate  
the Registry  
of Deeds  
Requirements

**Important:**  
When filling  
out forms on  
the  
computer,  
use only the  
tab key to  
move your  
cursor - do  
not use the  
return key.



1. From: Ayer  
Conservation Commission

2. This issuance is for (check one):  
a.  Order of Conditions b.  Amended Order of Conditions

3. To: Applicant:  
Liisa Marino  
a. First Name b. Last Name

Ice House Partners, Inc.  
c. Organization  
323 West Main Street  
d. Mailing Address

Ayer MA 01432  
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):  
John K. Grady  
a. First Name b. Last Name

Ice House Partners, Inc.  
c. Organization  
323 West Main Street  
d. Mailing Address

Ayer MA 01432  
e. City/Town f. State g. Zip Code

5. Project Location:  
323 West Main Street Ayer  
a. Street Address b. City/Town  
38 1  
c. Assessors Map/Plat Number d. Parcel/Lot Number

Latitude and Longitude, if known: d m s d m s  
d. Latitude e. Longitude



**Massachusetts Department of Environmental Protection**  
**Bureau of Resource Protection - Wetlands**  
**WPA Form 5 – Order of Conditions**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
100-0321  
 MassDEP File #  
 \_\_\_\_\_  
 eDEP Transaction #  
Ayer  
 City/Town

**A. General Information (cont.)**

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):  
Middlesex Southern
- |              |  |
|--------------|--|
| a. County    | b. Certificate Number (if registered land) |
| <u>30179</u> | <u>185</u>                                 |
| c. Book      | d. Page                                    |
7. Dates: September 17, 2008 April 23, 2009 April 23, 2009  
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):  
Shirley-Ayer-Harvard- Lancaster, Exhibits G1, G2, & G3 in Ayer, MA 3 sheets of Plan C-7-31
- |                                   |                          |
|-----------------------------------|--------------------------|
| <u>Hannigan Engineering, Inc.</u> | <u>Larry R. Sabean</u>   |
| b. Prepared By                    | c. Signed and Stamped by |
| <u>8/6/2008</u>                   | <u>1"=1000</u>           |
| d. Final Revision Date            | e. Scale                 |
- |                                      |         |
|--------------------------------------|---------|
| _____                                | _____   |
| f. Additional Plan or Document Title | g. Date |

**B. Findings**

1. Findings pursuant to the Massachusetts Wetlands Protection Act:
- Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:
- |   |  |   |
|---|--|---|
| a. <input checked="" type="checkbox"/> Public Water Supply  | b. <input type="checkbox"/> Land Containing Shellfish          | c. <input checked="" type="checkbox"/> Prevention of Pollution        |
| d. <input checked="" type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries               | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Groundwater Supply   | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control                  |
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

**Approved subject to:**

- a.  the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**WPA Form 5 – Order of Conditions**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
 100-0321  
 MassDEP File # \_\_\_\_\_  
 eDEP Transaction # \_\_\_\_\_  
 Ayer  
 City/Town \_\_\_\_\_

**B. Findings (cont.)**

Denied because:

- b.  the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c.  the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
- 3.  Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) \_\_\_\_\_ a. linear feet

**Inland Resource Area Impacts:** Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
	_____ e. c/y dredged	_____ f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet





Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Wetlands  
**WPA Form 5 – Order of Conditions**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
 100-0321  
 MassDEP File #  
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 Ayer  
 City/Town

**B. Findings (cont.)**

**Coastal Resource Area Impacts:** Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____	_____	_____ cu yd	_____ cu yd
	a. square feet	b. square feet	c. nourishment	d. nourishment
14. <input type="checkbox"/> Coastal Dunes	_____	_____	_____ cu yd	_____ cu yd
	a. square feet	b. square feet	c. nourishment	d. nourishment
15. <input type="checkbox"/> Coastal Banks	_____	_____		
	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____	_____		
	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	_____	_____		
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	_____		
	a. square feet	b. square feet		
22. <input type="checkbox"/> Riverfront Area	_____	_____		
	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	_____	_____	_____	_____
	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	_____	_____	_____	_____
	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands  
**WPA Form 5 – Order of Conditions**  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
100-0321  
MassDEP File #

eDEP Transaction #  
Ayer  
City/Town

## B. Findings (cont.)

\* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23.  Restoration/Enhancement \*:

a. square feet of BVW

b. square feet of salt marsh

24.  Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

## C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
  - a. The work is a maintenance dredging project as provided for in the Act; or
  - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
  - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on \_\_\_\_\_ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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Bureau of Resource Protection - Wetlands  
**WPA Form 5 – Order of Conditions**  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
100-0321  
MassDEP File #  

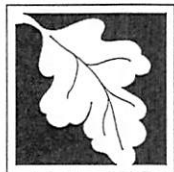
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eDEP Transaction #  
Ayer  
City/Town

### C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,
 

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]  
"File Number            100-0321 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

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**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1)  is subject to the Massachusetts Stormwater Standards
- (2)  is NOT subject to the Massachusetts Stormwater Standards

**If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:**

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
  - ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
  - iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



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**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

- g) The responsible party shall:
  - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
  - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
  - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

**See Special Conditions Attachment A**

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- 20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



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**D. Findings Under Municipal Wetlands Bylaw or Ordinance**

1. Is a municipal wetlands bylaw or ordinance applicable?  Yes  No
2. The \_\_\_\_\_ hereby finds (check one that applies):  
 Conservation Commission

- a.  that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw \_\_\_\_\_ 2. Citation \_\_\_\_\_

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b.  that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw \_\_\_\_\_ 2. Citation \_\_\_\_\_

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

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Provided by MassDEP:

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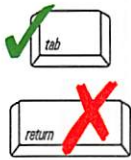
MassDEP File #

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**E. Signatures**

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

2/21/19

1. Date of Issuance

4

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy must be mailed, hand delivered or filed electronically at the same time with the appropriate MassDEP Regional Office.

Signatures:

*[Handwritten signatures of three individuals]*

*[Handwritten signature of a fourth individual]*

by hand delivery on

3/18/19

Date

by certified mail, return receipt requested, on

Date

**F. Appeals**

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.





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**G. Recording Information**

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Ayer  
 Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:  
 \_\_\_\_\_  
 Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location \_\_\_\_\_ MassDEP File Number \_\_\_\_\_

Has been recorded at the Registry of Deeds of:

County \_\_\_\_\_ Book \_\_\_\_\_ Page \_\_\_\_\_

for: \_\_\_\_\_  
 Property Owner

and has been noted in the chain of title of the affected property in:

Book \_\_\_\_\_ Page \_\_\_\_\_

In accordance with the Order of Conditions issued on:

Date \_\_\_\_\_

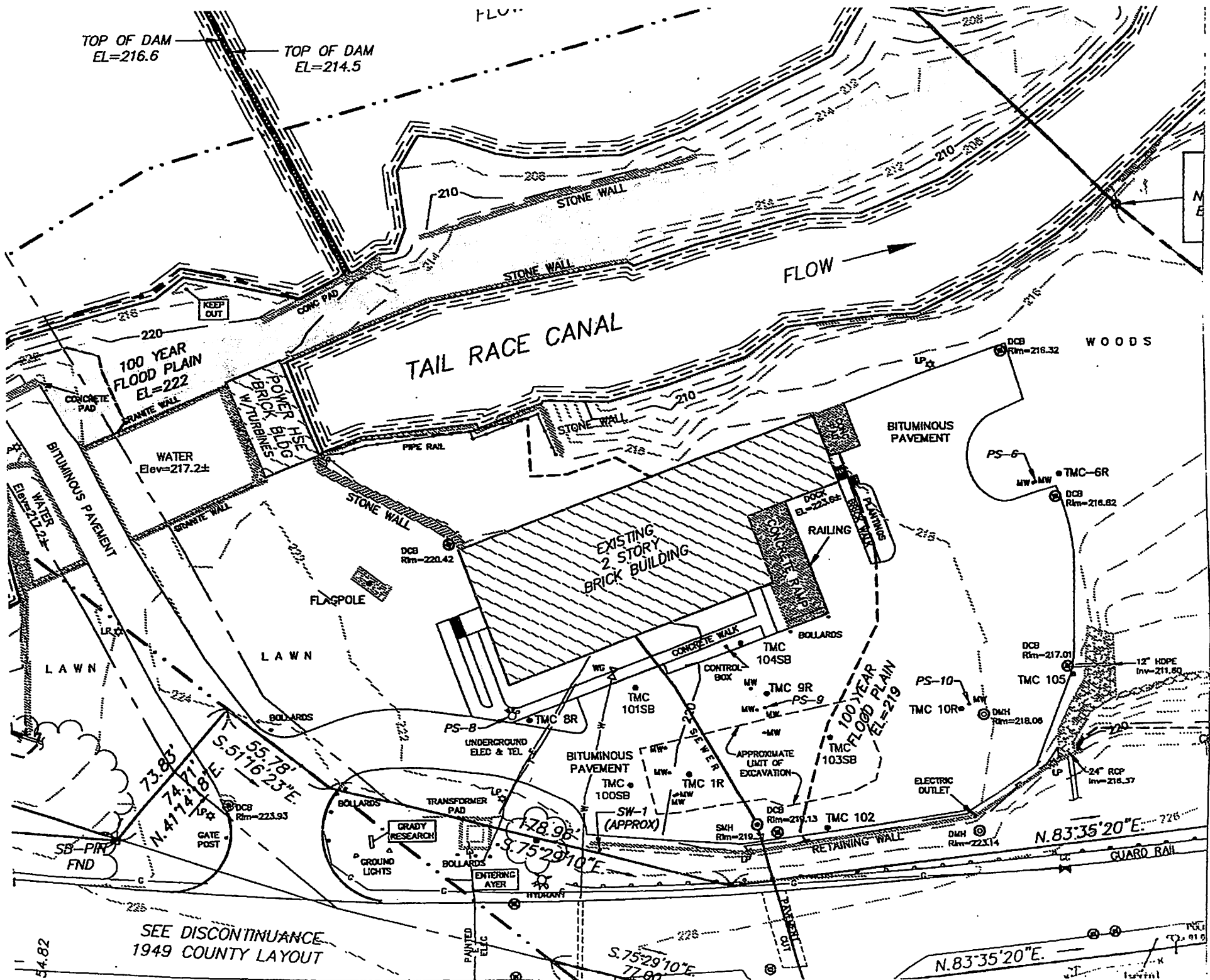
If recorded land, the instrument number identifying this transaction is:

Instrument Number \_\_\_\_\_

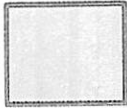
If registered land, the document number identifying this transaction is:

Document Number \_\_\_\_\_

Signature of Applicant \_\_\_\_\_



## Ice House Partners Land-Based Maintenance Activities:



Areas highlighted yellow are landscaped and maintained. This includes regular mowing, seeding, weed-whacking, watering, pruning, raking and mulching.



Areas highlighted in solid pink are mowed only occasionally to knock down woody growth. Some weed-whacking along the canal wall under the safety railing also occurs.



Areas highlighted in cross hatched pink are rarely maintained. 1X- 2X year growth may be knocked down.

**ATTACHMENT A**  
**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House (Dam) Partners, Inc.**  
**DEP File # 100-0321**

Under the Order of Conditions (“the Order”) issued under D.E.P. File Number 100-0321, The Ayer Conservation Commission (“the Commission”) hereby finds that in addition to the preceding General Conditions #1-18, the following special conditions are necessary in accordance with the Performance Standards set forth in the regulations to protect the interests checked above for this project. Any violation of these conditions will make the Applicant subject to an Enforcement Order.

The Commission orders that all work shall be performed in accordance with said conditions and with the referenced Notice of Intent and all other relevant documents listed below in Condition 19. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the Conditions shall prevail.

**GENERAL CONDITIONS (CONTINUED)**

Please review the preceding General Conditions 1-18 on the DEP WPA Form 5, particularly Condition 1.

19. All work must be in compliance with the Ayer Wetland Protection Bylaw, Regulations, and Policies.
20. The work shall conform to the following plans and documents, unless otherwise specified in this Order:
  - a. Notice of Intent: filed by Liisa Grady Dowd, submitted September 17, 2008.
  - b. Plan entitled “Shirley-Ayer-Harvard-Lancaster, Exhibit G1 – Identification Map in Massachusetts,” Sheet 1 of 3 of Plan C-7-31, dated August 6, 2008, signed and stamped by Larry R. Sebean.
  - c. Plan entitled “Existing Condition Plan – Exhibit G2 in Ayer, MA” Sheet 2 of 3 of Plan C-7-31, dated August 6, 2008, signed and stamped by Larry R. Sebean.
  - d. Plan entitled “Project Boundary, Exhibit G3 in Ayer, MA” Sheet 3 of 3 of Plan C-7-31, dated August 6, 2008, signed and stamped by Larry R. Sebean.
  - e. Letter to Shirley Conservation Commission, Ayer Conservation Commission, and Liisa Grady Dowd from Massachusetts Natural Heritage & Endangered Species Program, dated January 8, 2009, RE: 323 West Main Street, Regular Repair & Maintenance Activities.
  - f. A plan entitled “Ice House Partners Land-Based Maintenance Activities” drawn and annotated by Liisa Marino, January 17, 2019.
21. The Commission reserves the right to require additional conditions if deemed necessary to protect the resource areas and interests as defined in MGL Chapter 131 Section 40 (310 CMR 10.00) with proper notification of all parties.
22. **This Order of Conditions shall apply to any successor(s) in interest or successor(s) in control and shall survive the issuance of the Certificate of Compliance.** Within ten (10) calendar days inclusive of the transfer of ownership of the subject parcel, in whole or in part, including lots or buildings conveyed under individual deeds, the Conservation Commission shall be notified in writing by the seller of the name and address of the new owner.

Within ten (10) calendar days inclusive of such transfer, a written, notarized affidavit shall be filed with the Conservation Commission by the seller, stating that the new owner(s):

- Has read and understands the Order of Conditions;
- Understands all terms applicable to the project site;
- Understands that any work within 100 feet of wetlands or within 200 feet of perennial streams requires a permit from the Conservation Commission;
- Understands that dumping of yard waste, brush, or other materials is not allowed in wetlands;

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 2 of 10**

- Intends to comply with all provisions of the Order, including obtainment of a Certificate of Compliance if the seller has not already done so;
- In addition, this affidavit shall include the following sentence: "I, \_\_\_\_\_, the new owner of \_\_\_\_\_, understand that any work within 100 feet of wetlands or within 200 feet of perennial streams requires approval by the Ayer Conservation Commission and that dumping of yard waste, brush, or other materials is not allowed in wetlands."
- This affidavit shall also include a plan of the lot indicating the wetland boundary, building(s), and any other features.

All current and future new tenants shall be provided with a copy of this Order of Conditions and a signed affidavit acknowledging receipt shall be provided to the Commission.

23. Any violation of these conditions will make the Applicant subject to an Enforcement Order.
24. Members and agents of the Ayer Conservation Commission shall have the right to enter and inspect the premises to evaluate compliance with these conditions and to require submittal of any data deemed necessary by the Commission for that evaluation.
25. The Applicant, contractor, or site engineer responsible for the project's completion shall have on site at all times a copy of this Order of Conditions, including all referenced documents, while activities regulated by this Order are being performed.
26. No equipment is to enter or cross wetland resource areas at any time unless the location of the disturbance is marked on the plans referenced in this Order and is within the limit of work shown on the plan.
27. Any change in the plans approved under this Order, including those due to review by other boards or resulting from the aforementioned conditions, must be submitted to the Commission in writing for approval prior to implementation. The Commission will then decide whether the change is substantial enough to require a new Notice of Intent filing or a request for an amendment to this Order of Conditions. Any errors found in the plans or information submitted by the Applicant shall be considered as changes.
28. If any unforeseen problem occurs during the Project which affects any of the seven statutory interests of the Massachusetts Wetlands Protection Act and/or the Ayer Wetland Protection Bylaw and Regulations, the Applicant shall notify the Conservation Commission and an immediate meeting shall be held between the Commission, the Applicant, the Applicant's representative and/or engineer/contractor, and other concerned parties to determine the corrective measures to be employed. The Applicant shall then act to correct the problem using the corrective measures agreed upon. In the event of a dispute amongst the participants of any meeting, the Commission's view shall prevail.
29. Upon completion of this project [or within one year of the issuance of an occupancy permit] the owner or his designee shall submit the following to the Conservation Commission to receive a Certificate of Completion per Condition 11:
  - a) A letter from the owner or his designee requesting a Certificate of Compliance for DEP File # 100-0321.

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

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- b) A written statement from a registered professional engineer of the Commonwealth of Massachusetts certifying that the work has been completed in compliance with this Order of Conditions and the approved plans referenced herein (or approved revisions). Any discrepancies shall be noted. “The project has been completed in general compliance...” shall NOT be acceptable. If the work completed differs significantly from the work proposed in the Notice of Intent and approved by the Commission, the Commission may require the Applicant implement measures necessary to comply with this Order.
  - c) An as-built topographic plan signed and stamped by a registered professional land surveyor of the Commonwealth of Massachusetts, for the public record. This plan will include as-built elevations of all drainage ways constructed within 100 feet of any wetland or 200 feet of a perennial stream, distances to all structures and elevations within 100 feet of wetlands and 200 feet of perennial streams.
  - d) {For work in wetlands} A letter from a qualified wetland scientist certifying compliance with state regulations and this Order of Conditions regarding wetland restoration/replication. The as-built must show elevations of all filled, altered, or replicated wetlands.
30. The following special conditions shall extend beyond the issuance of a Certificate of Compliance, in perpetuity, and shall be referred to in all future deeds to this property:
- 22. Regarding notification of new property owners.
  - 52. Regarding limit of work, and prohibition of removal of fallen trees in wetland.
  - 57. Regarding prohibition of sodium chloride for deicing.
  - 59. Regarding limitations on the use of pesticides, herbicides, and fertilizers.
  - 60. Regarding prohibition of storage of hazardous fuels underground.
  - 61. Regarding notification of maintenance.
  - 62. Regarding maintenance of drainage structures.
31. No driveway, footing, or roof drain with an above-ground or subsurface discharge, nor any garage floor drain, deck, addition, shed, or pool, shall be installed within the 100-foot buffer zone or the 200-foot riverfront protection area without prior written approval by the Conservation Commission.
32. No proposed earthen embankment in the buffer zone shall have a slope steeper than 2:1 (horizontal : vertical) without prior written approval of the Commission.

**PRIOR TO CONSTRUCTION**

Please note General Condition 7, 8, and 9.

- 33. Prior to the commencement of any work on the site, the Applicant shall submit in writing to the Commission the names, addresses, and telephone numbers (both business and 24-hour emergency numbers) of the person(s) responsible on-site for compliance with this Order and his/her alternate. The Applicant shall also notify the Commission in writing of any changes to this information.
- 34. The Applicant or designee shall report in writing to the Ayer Conservation Commission prior to commencement of construction, every 30 days during construction, and for as long thereafter as the ground remains unstabilized, as well as upon completion of the project. These reports shall include an update of the status of the erosion controls, what work within 100 feet of wetlands or within 200

## ATTACHMENT A

### SPECIAL CONDITIONS

Order of Conditions – 323 West Main Street / Ice House Partners, Inc.

DEP File # 100-0321

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feet of perennial streams has been completed to date, and what work is proposed for the next week/month. This will update the construction sequence.

35. Prior to commencement of any work on site, the wetland boundaries shall be clearly marked and/or repaired with flags/stakes so that said areas are clearly distinguishable, and shall be confirmed by the Commission or its agent. **The Applicant shall maintain wetland flagging until the Certificate of Compliance is issued.**
36. Prior to commencement of any work on site, all erosion and sedimentation control measures shall be installed for inspection and approval by the Commission or its agent. The Commission must be notified at least 7 days prior to the commencement of work for such inspection.
37. The Applicant and project superintendent shall meet with the Commission or its agent to review the proposed work and measures designed to mitigate any impact on the wetlands, and to ensure that all conditions of the Order are understood.

### SEDIMENT AND EROSION CONTROLS

Please note General Condition 17.

38. Soil erosion and deposition into wetland resource areas shall be prevented at all times by effective control methods. The Applicant shall implement the methods indicated in the referenced Notice of Intent and as specified below.
  - a) The *minimum* required erosion control barriers shall consist of a continuous line of silt fencing and staked hay or straw bales, as inspected and approved by the Commission. Silt fencing shall be sunk at least three (3) inches into the ground. Hay bales shall be placed and maintained so as not to introduce invasive weeds into wetland resource areas.
  - b) Erosion control measures shall be installed and maintained in accordance with U.S. Natural Resources Conservation Service recommended methods.
  - c) The limit of work shall be the erosion control barriers beyond which no work shall occur. Erosion control barriers shall not be placed within 25 feet of the wetland boundary without written permission of the Commission.
  - d) The Commission may require the Applicant to employ additional erosion and/or damage prevention measures as it deems necessary.
  - e) Erosion controls shall be inspected daily and following storm events. Damaged or non-functioning erosion control devices shall be maintained, reinforced, or replaced as necessary.
  - f) Any failure of erosion control measures resulting in deposition of soils into the wetland resource area(s) shall be immediately reported to the Conservation Commission office at (978) 772-8249.
  - g) The Applicant shall take immediate steps to control any erosion that occurs on site that impacts areas under jurisdiction of the Wetlands Protection Act and the Ayer Wetlands Bylaw and Regulations.

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 5 of 10**

- h) Any sedimentation that occurs outside of the erosion control barriers shall be immediately removed using hand tools. The cause of the erosion/sedimentation shall be immediately addressed.
  - i) Accumulated sediment shall be removed from the face of the erosion control barriers using hand tools (e.g. shovels, rakes, and wheelbarrows) whenever the level of sediment is within six (6) inches of the top of the barrier.
  - j) The Applicant shall maintain a reserve of at least 25 bales, with stakes, to be used for emergency repairs. These bales are not be used for daily maintenance of erosion controls.
  - k) Soil, sediment, debris, or other material removed during maintenance or repair of erosion control barriers, or remediation of erosion damage, shall be disposed of outside the wetlands or riverfront buffer zone.
  - l) Exposed soils shall be stabilized as soon as practical following disturbance. Slopes and other disturbed areas not subject to construction activities shall be stabilized (either temporarily or permanently) immediately following excavation/grading. Temporary stabilization shall consist of seeding with ryegrass or other approved species, or installation of jute netting, staked mulches, or other U.S. Natural Resources Conservation Service accepted method.
  - m) Between April 15 and May 15 of each calendar year, and immediately following any storm event thereafter, the Applicant shall inspect all stabilized areas for erosion, wash-out, rills, or other damage. Any noted damage shall be immediately repaired using the original stabilization method or other U.S. Natural Resources Conservation Service accepted method.
39. Erosion control devices and wetland flags shall remain in place until all disturbed surfaces have been permanently stabilized and a Certificate of Compliance is issued by the Commission.
40. After the issuance of the Certificate of Compliance, the erosion control barriers shall be removed. The bales may be broken up and spread on site, but not within any wetland resource area(s) or Conservation Easement.

**SOIL STOCKPILES AND FILL STORAGE**

- 41. At no time shall debris or other material be buried or disposed of within the buffer zone, other than that fill which is allowed by this Order and as shown on the referenced plans.
- 42. Stockpiled earth and other materials shall be piled outside the 100-foot buffer zone and shall be stabilized to prevent erosion into wetland resource areas and/or prevent any runoff off site. In the case of Riverfront Resource areas, stockpiled earth and other materials shall be piled outside the 200-foot Outer Riparian Zone.
- 43. All fill, stumps, brush, logs, rubbish, construction debris, excavated materials, construction equipment and vehicles, and construction materials (i.e. gravel, bentonite, etc.) shall be stored in a designated location approved by the Commission.

**WELL CONSTRUCTION/DEWATERING**



**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 6 of 10**

44. Any dewatering, and/or stream diversion required on site shall be performed in accordance with the details and procedures approved by the Commission. Any and all dewatering or diversion shall take place under the supervision of the project superintendent. Water pumpage shall be directed into an on-site basin to settle out sediment and to direct flows away from wetlands; to prevent siltation of resource areas from fine particulate materials discharges from the well. Prior to dismantling temporary dams or sedimentation basins, the project superintendent shall manually remove all accumulated sediment and debris contained by such structures and legally dispose of it off-site. Stored water shall be released gradually so as not to cause erosion or flooding downstream.

**LAND SUBJECT TO FLOODING**

45. There shall be no filling within the 100-year floodplain without provision of compensatory flood storage. Such storage is to be provided prior to deposition of fill within the floodplain. The Applicant shall submit a topographic survey plan prepared by a Professional Land Surveyor licensed in Massachusetts of the compensatory flood storage areas with calculations showing that the required storage has been provided.

**STORMWATER MANAGEMENT**

46. There shall be no direct discharge of stormwater runoff into streams or other wetland resource areas. Nor is surface runoff leaving the site permitted. Runoff from the site shall be directed overland to maximize groundwater recharge and cleansing of the runoff through contact with natural soils and vegetation. Discharges from the perimeter drains shall be at least 25 feet from any wetland resource area.
47. The Applicant or his designee shall report any runoff issues immediately to the Ayer Conservation Commission office at (978) 772-8249.
48. All discharge pipes shall have rip-rap at the outlet to minimize erosion.

**OTHER CONDITIONS**

49. The Commission designates the “limit of work” under this Order as the erosion control barriers and the limit of work line depicted on the referenced plan(s).
50. Work or alterations, including but not limited to the removal of any standing or fallen trees or vegetation, may be conducted within a wetland resource area, when such work or alteration is necessary for the continued safe and proper operation of the hydroelectric facility, including its related appurtenances and/or when recommended by State or Federal agencies with jurisdiction over the works. The Ayer Conservation Commission shall be informed by written notice 21 days in advance of any such activity and shall be provided with a plan documenting the proposed activity. NHESP shall be notified in advance of any proposed work. **This condition shall survive the issuance of the Certificate of Compliance.**

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 7 of 10**

51. No vehicles or equipment are to enter or cross a wetland resource area at any time, unless the location of the disturbance is marked on the plan(s) referenced in this Order and is within the limit of work shown on the plan(s).
52. Equipment fuel storage, refueling, and lubrication operations shall be situated in an upland area outside the Buffer Zone. The Commission shall be notified immediately of any leakage of contaminants from this area and all fueling operations shall be suspended.
53. Pumps, generators, or other stationary equipment containing fuel, oil, hydraulic fluid, or other potential contaminants shall not be stored or operated within the resource area or buffer zone without written approval of the Commission. Equipment shall be located in a containment area on an impervious barrier. The barrier shall be of light color to allow observation of any liquid spillage. If spillage is observed, the equipment shall be taken out of service immediately and repaired or replaced.
54. All stumps, brush, and debris shall be removed from the site, including existing and construction debris. The Applicant or his designee shall be responsible for removing and disposing of such materials and surplus soils promptly and properly to an off-site disposal area which complies with all federal, state, and local requirements and regulations. Records as to the destination of all materials including stumps, brush, and excess fill shall be kept and supplied to the Commission if requested.
55. No sodium chloride shall be used within 100 feet of a wetland resource area or within 200 feet of a perennial stream, and any contract or agreement for snow or ice removal shall so stipulate. **This condition shall survive the issuance of the Certificate of Compliance.**
56. No oil, calcium chloride or other salt shall be used during any construction phase for the control of dust.
57. Non-organic fertilizers, pesticides, and herbicides shall not be used within 100 feet of a wetland resource area or within 200 feet of a perennial stream. Organic fertilizers used within 100 feet of a wetland resource area or within 200 feet of a perennial stream shall be slow-release. **This condition shall survive the issuance of the Certificate of Compliance.**
58. No underground storage of fuels is allowed within 100 feet of wetland resource areas or within 200 feet of a perennial stream. **This condition shall survive the issuance of the Certificate of Compliance.**
59. The Conservation Commission shall be notified in writing when any maintenance functions that may impact wetlands are to be performed, such as but not limited to replacing leachfields, repairing drains, and cleaning of stormwater appurtenances. **This condition shall survive the issuance of the Certificate of Compliance.**
60. The Applicant/current owner or his designee shall maintain all elements of the drainage systems within any areas subject to the Commission's jurisdiction under 310 C.M.R. 100.00 and M.G.L. Chapter 131, Section 40, as amended, unless put into an easement to the Town of Ayer, in order to avoid blockages and siltation which might cause failure of the system. Vegetative cover shall also be maintained on site to ensure the proper functioning of the drainage system. **This condition shall survive the issuance of the Certificate of Compliance.**

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 8 of 10**

61. Prior to issuance of the Certificate of Compliance, all disturbed areas shall be stabilized to the satisfaction of the Commission.

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 9 of 10**

**SITE SPECIFIC CONDITIONS**

62. The Applicant or designee shall report in writing to the Commission annually within two (2) weeks of the annual inspection. This annual inspection report shall detail dates of drawdown, work done, etc. and detail any additional work proposed so that the Ayer Conservation Commission can determine whether additional filing is required. These reports shall include an update of what work within 100 feet of wetlands or within 200 feet of perennial streams has been completed to date and what work (if any) is proposed.
63. The Commission shall be copied on any reports submitted to the Massachusetts Natural Heritage and Endangered Species Program (MNH&ESP).
64. The applicant shall operate the project in a run-of-river mode, whereby inflow to the project will equal outflow from the project on an instantaneous basis and water levels above the dam are not drawn down for the purpose of generating power. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the applicant, or for short periods upon mutual agreement between the applicant, the Massachusetts Division of Fisheries and Wildlife and the Shirley and Ayer Conservation Commissions.\
65. The applicant shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance (including flashboard repair/replacement) or emergency purposes, 90 percent of inflow is passed downstream and the head-pond is refilled on the remaining 10 percent of inflow to the project. This refill procedure may be modified on a case-by-case basis with the prior approval of both the Massachusetts Division of Fisheries and Wildlife and the Shirley and Ayer Conservation Commissions.
66. Until a permanent bypass flow has been mandated by the U.S. Fish and Wildlife Service, the applicant shall provide an interim conservation flow of 1 mgd (as suggested by the exemptee) at the dam to protect habitat in the bypass reach.
67. If the project plans change, the applicant must contact MNH&ESP prior to any work for further guidance.
68. If work is required that will require water levels to be lowered for more than several days, the applicant shall notify both the Shirley Conservation Commission and the Ayer Conservation Commission as well as MNH&ESP in writing.
69. All non-emergency drawdowns shall occur during the rare turtle activity period of April 15 through October 31 (6.5 months of the year). Your letter to our office indicated that you would not conduct drawdown during the months of April, May, and June. This would therefore mean that non-emergency work will only be conducted July, August, September, and October.
70. Due to the presence of the Triangle Floater, the bypass reach needs to retain sufficient flow and depth to ensure that oxygen levels are not significantly depleted, particularly during the months of July through August when the water is already carrying less oxygen and the air temperatures are high. As stated in the information provided, the minimum bypass flow is 1 mgd.
71. Should the routine inspection identify areas of concern or other work occur within the site, then details of the proposed work shall be provided in writing to the Commission.

**ATTACHMENT A**

**SPECIAL CONDITIONS**

**Order of Conditions – 323 West Main Street / Ice House Partners, Inc.**

**DEP File # 100-0321**

**Page 10 of 10**

72. ORDER INITIAL 1 – The Applicant, or the authorized representative, by initialing this block, acknowledges that no work shall be performed on site until the Order is final and it has been recorded in the Registry of Deeds or Land Court in which the land is located, within the chain of title of the affected property. This condition is a further definition of General Condition 8 from WPA Form 5.

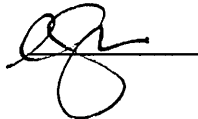
I so accept Condition 72 of this Order

A handwritten signature in black ink, consisting of a stylized 'A' and 'P' followed by a horizontal line.

73. ORDER INITIAL 2 – The Applicant, or authorized representative, by initialing this block, acknowledges that the Ayer Conservation Commission shall have the right to enter and inspect the area subject to this Order seven days a week within the hours from one hour after sunrise to one before sunset, or at any time work is occurring. This condition is a further definition of General Condition 14 from WPA Form 5 because of the volunteer makeup of the Commission.

Entry onto the project site by the Commission shall be in accordance with applicable State law and regulations, Town of Ayer bylaws and policies, and established site safety procedures.

I so accept Condition 73 of this Order

A handwritten signature in black ink, consisting of a stylized 'A' and 'P' followed by a horizontal line.

74. ORDER INITIAL 3 – The Applicant, or the authorized representative, by initialing this block, acknowledges that they have read and agree to all stipulations represented in these conditions.

I so accept Condition 74 of this Order

A handwritten signature in black ink, consisting of a stylized 'A' and 'P' followed by a horizontal line.

# Appendix C

ATTENDIA V (p.1)



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Central Regional Office 627 Main Street, Worcester, Ma. 01608

MARCO PAUL CELLUCCI  
Governor

TRUDY COXE  
Secretary

DAVID B. STRUHS  
Commissioner

PDF

WRP File No. JD00-0059  
Municipality: Ayer

**Determination of Applicability  
310 CMR 9.00**

From: Waterways Regulation Program - Issuing Authority

To: John K. Grady-----  
(Name of person making request)

Ice House Partners-----  
(Name of property owner)

Address: 5 Park Street  
Ayer, MA 01432

5 Park Street  
Ayer, MA 01432

This determination is issued and delivered as follows:

[ ] by hand delivery to person making request on \_\_\_\_\_  
[date]

[ X ] by certified mail, return receipt requested on 12/27/00  
[date]

Pursuant to 310 CMR 9.06, the Waterways Regulation Program has considered your request for a Determination of Applicability and its supporting documentation, and has made the following determination.

The Determination is positive:

[ ] The area of land or water, or activity thereon, described below, presently is subject to 310 CMR 9.00.

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

<http://www.State.MA.US> • Phone (508) 792-7650 • Fax (508) 792-7621 • TDD # (508) 767-2788



The Determination is negative:

[ X ] The area of land or water, or activity thereon, described below, presently is not subject to 310 CMR 9.00.

The subject dam is across the Nashua River. The dam is reported to have been constructed prior to 1939.

Continuation of this dam and associated structures is in conformance with 310 CMR 9.05.

310 CMR 9.05(3)(f)  
continuation of any existing, unauthorized use of fill or structures constructed prior to 1939 on any non-tidal river or stream subject to jurisdiction under 310 CMR 9.04(1)(e), provided that no unauthorized structural alteration or change in use has occurred subsequent to January 1, 1984;

310 CMR 9.05(3)(a)  
maintenance, repair, and minor modifications, as described in 310 CMR 9.22, of fill or structures for which a grant or license is presently valid, or which is exempt from licensing pursuant to 310 CMR 9.05(3)(b) through (h);

Issued by the Division of Wetlands and Waterways, Waterways Regulation Program.

Section Chief: Robert A. Kimball  
Robert A. Kimball, P.E., Environmental Engineer

On this 22ND day of December, 2000 before me personally appeared Robert A. Kimball to me known to be the person described in, and who executed, the foregoing instrument and acknowledge that he/she executed the same as his/her free act and deed.

Linda S. Anderson  
LINDA S. ANDERSON  
Notary Public

My commission expires on 6/21/02

This Determination does not relieve the applicant from complying with all other applicable federal, state, or local statues, ordinance, by-laws or regulations.



# Appendix D

132 FERC ¶ 62,205  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Ice House Partners

Project No. 12769-004

ORDER MODIFYING AND APPROVING FINAL EEL PASSAGE PLANS

(Issued September 30, 2010)

1. On September 22, 2010, Ice House Partners, Inc., exemptee for the Ice House Project, filed final plans for eel passage installation as required by the Commission's Order Granting Exemption from Licensing (5 MW or Less).<sup>1</sup> The Ice House Project is located on the Nashua River in the town of Ayer, Middlesex County, Massachusetts.

BACKGROUND

2. The project exemption includes terms and conditions (pursuant to section 30(c) of the Federal Power Act) issued by the U.S. Fish and Wildlife Service (FWS) and Massachusetts Division of Fisheries and Wildlife (DFW), attached as appendix A and B to the exemption, respectively. Article 14 of the exemption requires the exemptee to file several plans for Commission approval, as dictated by the FWS and DFW terms and conditions. DFW's condition 9 requires the exemptee to construct, operate, maintain, and evaluate upstream and downstream passage for American eels, and states that such passage should be operational concurrent with the commencement of project operation. Pursuant to Article 14, the exemptee is required to file its eel passage design plans with the Commission for approval.

3. In its November 9, 2009, letter, the exemptee states that it met with representatives from the U.S. Geological Survey (USGS), FWS, and DFW to review draft eel passage plans. At this meeting, the agencies and exemptee agreed that designs and plans would be exchanged over the next year for finalization, and that construction would not occur until autumn 2010, when the exemptee plans its annual dewatering for maintenance and inspection activities.

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<sup>1</sup> 122 FERC ¶ 62,262 (March 31, 2008).

## EXEMPTEE'S PLAN

4. Following the start of annual drawdown activity on October 1, 2010, the exemptee indicates that installation and inspection of the eel passage structure will begin on October 4, 2010, and should be completed no later than October 13, 2010. The exemptee's filing includes design drawings and correspondence detailing specifics of the passage structure.

5. The Ice House Project's dam is 190 feet long and 12 feet high, with 24-inch-high flashboards. The eel passage design consists of a ramp, upstream resting box, outlet structure, and siphon pipe, and will be located next to the laid up stone and earth island which separates the bypass flow from the tailrace. The ramp will be approximately 17 feet long with an angle not expected to exceed 45° (the appropriate angle will be determined following field evaluations). The ramp's interior channel is approximately 11.5 inches wide and will have flat and angled surfaces covered with Fish Pass eel substrate. The target water depth within the ramp channel is 1 to 2 inches, to provide adequate attraction flow and maintain a wetted margin to facilitate eel climbing. A four-foot resting box will be placed at the top of the dam, and the five-foot outlet to the upper impoundment will be equipped with a float (enabling it to articulate as water levels change).

6. To provide attraction flow to the ramp, the exemptee proposes to use a siphon pipe. The pipe's intake will be located near the resting box, and the outfall will be located at the end of, or higher in, the eel ramp. The exact location of the outfall will be determined following field evaluations; to ensure the outfall is in the best location, the exemptee proposes to use flexible pipe (1.5-2 inches diameter, or possibly larger) to facilitate trial placement of the outfall.

## AGENCY CONSULTATION

7. The exemptee worked collaboratively with the agencies in the development of the eel passage design. Additionally, the exemptee informed local resource and recreation agencies, the local Conservation Commissions, and the Commission's New York Regional Office of the drawdown and installation plans. Email correspondence from the DFW and FWS on September 21 and 22, 2010, respectively, provided approval of the eel passage design plans.

## DISCUSSION

8. Design drawings for an upstream eel passage structure have been developed in consultation with the resource agencies, and have been approved by the agencies. While

the exemptee has indicated that it will coordinate with the DFW to evaluate the eel ramp,<sup>2</sup> the plan does not include plans to report the evaluation results. In order to verify that eels are utilizing the ramp, thus ensuring that the ramp is placed in the proper location and has the appropriate attraction flow to direct eels to the ramp, the exemptee should file a report on eel ramp effectiveness. This report should include any data or observations collected on eel passage, document any changes or modifications to the eel passage structure or its operation, and contain any correspondence with the agencies regarding eel passage. The report should be filed with the Commission and the resource agencies by December 31 of each year, for at least the first three years of eel passage operation. Additionally, the exemptee should file, within 90 days of the completion of the eel passage structure, revised Exhibit F drawings of the eel ramp as built.

9. The exemptee's design plans for eel passage should provide adequate passage for upstream migrating eels at the project. The plans address the requirements of filing eel passage design plans pursuant to Article 14, and should be approved.

The Director orders:

(A) Ice House Partners, Inc.'s eel passage design plans, filed on September 22, 2010, pursuant to Article 14, as modified by paragraphs (B) and (C), is approved.

(B) The exemptee shall file with the Commission annual eel passage evaluation reports. These reports shall include data or observations regarding passage effectiveness, changes or modifications to the eel passage structure or its operation, and any correspondence with the U.S. Fish and Wildlife Service and Massachusetts Division of Fisheries and Wildlife. The reports shall be filed with the Commission and the resource agencies by December 31 for the first three years of operation, with the first report due in 2011.

(C) The exemptee shall file, for Commission approval, revised Exhibit F drawings showing the eel passage structure as built. The drawings shall be filed within 90 days of completion of the structure.

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<sup>2</sup> On September 27, 2010, Holly Frank from the Commission spoke with Liisa Dowd of Ice House Partners, Inc., concerning evaluation plans.

Project No. 12769-004

4

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

Steve Hocking  
Chief, Biological Resources Branch  
Division of Hydropower Administration  
and Compliance

## Liisa Marino

**From:** Slater, Caleb (FWE) <Caleb.Slater@state.ma.us>  
**Sent:** Monday, April 12, 2010 5:21 PM  
**To:** Liisa Grady Dowd  
**Subject:** RE: More crossing of t's and dotting of i's

Liisa,

As I stated in my previous comments: The Ice House Project does not need a fish passage plan until the Division and/or the USFWS call for the construction of such a fish passage facility. So I concur with the statement "a plan for fish passage is unnecessary until the physical facilities are required"

Caleb

---

**From:** Liisa Grady Dowd [liisa@gradyresearch.com]  
**Sent:** Monday, April 12, 2010 1:09 PM  
**To:** Slater, Caleb (FWE )  
**Subject:** More crossing of t's and dotting of i's

Hi-

This is the other issue that just needs your "stamp" of concurrence – in order for us to fulfill our requirement, for now. Take a look – and let me know what you think.

Again sorry for the hassle....

Best.  
Liisa

Liisa Grady Dowd, VP/GM  
Grady Research, Inc.  
Ice House Partners, Inc.

No virus found in this incoming message.  
Checked by AVG - [www.avg.com](http://www.avg.com)  
Version: 9.0.801 / Virus Database: 271.1.1/2808 - Release Date: 04/13/10 02:32:00

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No virus found in this message.  
Checked by AVG - [www.avg.com](http://www.avg.com)  
Version: 10.0.1170 / Virus Database: 426/3317 - Release Date: 12/15/10

**Liisa Marino**

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**Subject:** FW: Fish Passage question

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**From:** Holly Frank [mailto:Holly.Frank@ferc.gov]  
**Sent:** Tuesday, May 10, 2011 1:42 PM  
**To:** Liisa Grady Dowd  
**Subject:** RE: Fish Passage question

Hi Liisa,

Our August 11, 2010 letter states that, in light of agency concurrence that the fish passage plan was not currently needed, we agreed that you would not be required to file that plan prior to commencing project generation (<http://elibrary.ferc.gov/idmws/nvcommon/NVViewer.asp?Doc=12413892:0>). This letter is enough to exempt you from the requirement you mention in the February 18, 2010 extension of time order (ordering paragraph C about filing a plan 2 months prior to commencing operation). Let me know if you or Dr. Slater have any further questions.

Thank you,

Holly

**Holly Frank, Fishery Biologist**  
Division of Hydropower Administration and Compliance  
Federal Energy Regulatory Commission  
Washington D.C. 20426  
Phone: 202-502-6833  
Fax: 202-219-2732

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**Liisa Marino**

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**Subject:**

FW: UPDATE on Annual Ice House Dam Inspection & Maintenance Activities

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**From:** Slater, Caleb (FWE) [mailto:Caleb.Slater@state.ma.us]

**Sent:** Tuesday, September 21, 2010 10:55 AM

**To:** 'Liisa Grady Dowd'; 'Slater, Caleb (FWE)'; John\_Warner@fws.gov

**Subject:** RE: UPDATE on Annual Ice House Dam Inspection & Maintenance Activities

Liisa,

I have reviewed the proposed eelway plans and MassWildlife has no objections. Please forward this to FERC as agency approval.

Caleb



Caleb Slater, Ph.D.  
Anadromous Fish project Leader  
MA Division of Fisheries and Wildlife  
508.389.6331  
508.389.7890 fax



## Liisa Marino

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**Subject:** FW: UPDATE on Annual Ice House Dam Inspection & Maintenance Activities  
**Attachments:** pic08367.gif

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**From:** John\_Warner@fws.gov [mailto:John\_Warner@fws.gov]  
**Sent:** Wednesday, September 22, 2010 7:05 AM  
**To:** Slater, Caleb (FWE)  
**Cc:** 'Slater, Caleb (FWE)'; 'Liisa Grady Dowd'; Alex\_Haro@usgs.gov  
**Subject:** RE: UPDATE on Annual Ice House Dam Inspection & Maintenance Activities

Liisa -- Based on our review of the plans and correspondence you had with Alex Haro that indicate you have accepted his recommendations and guidance on the designs, the Fish and Wildlife Service concurs with the eelway plans and with you proceeding with installation -- John Warner

---

John P. Warner, Energy/Hydropower Coordinator  
New England Field Office, U.S. Fish and Wildlife Service  
70 Commercial Street, Suite 300  
Concord, NH 03301  
(603) 223-2541 - ext.15  
(603) 223-0104 - FAX

139 FERC ¶ 62,004  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Ice House Partners, Inc.

Project No. 12769-005

ORDER APPROVING AS-BUILT EXHIBIT F DRAWINGS

(Issued April 3, 2012)

1. On July 29, 2011, Ice House Partners, Inc., exemptee for the Ice House Project, FERC No. 12769, filed as-built Exhibit F drawings for Commission approval as required by article 14 of the exemption order<sup>1</sup> and paragraph (C) of the *Order Modifying and Approving Final Eel Passage Plans*.<sup>2</sup> The project is located on the Nashua River in the town of Ayer, Middlesex County, Massachusetts.

**Background**

2. The exemption order includes terms and conditions (pursuant to section 30(c) of the Federal Power Act) recommended by the U.S. Fish and Wildlife Service (FWS) and Massachusetts Division of Fisheries and Wildlife (MDFW), and attached as appendix A and B to the exemption, respectively. Article 14 of the exemption requires the exemptee to file several plans for Commission approval, as dictated by the FWS and DFW terms and conditions. MDFW's condition 9 requires the exemptee to construct, operate, maintain, and evaluate upstream and downstream passage for American eels, and states that such passage should be operational concurrent with the commencement of project operation. Pursuant to article 14, the exemptee is required to file its eel passage design plans with the Commission for approval.

3. On September 30, 2010, the Commission issued the *Order Modifying and Approving Final Eel Passage Plans*. Ordering paragraph (C) of this order requires the exemptee to file for approval, within 90 days of completion, as-built exhibit F drawings showing the completion of installation of the eel passage facilities at the Ice House Project.

---

<sup>1</sup> 122 FERC ¶ 62,262 (2008).

<sup>2</sup> 132 FERC ¶ 62,205 (2010).

**Review**

4. On July 29, 2011, the exemptee filed Exhibit F-5 and F-6 drawings to show as-built conditions after the completion of construction of the eel passage facilities for the Ice House Project.

5. The Exhibit F drawings accurately show the required project features and are of suitable quality. The drawings conform to the Commission's rules and regulations and will be approved, as indicated in ordering paragraph (A). In ordering paragraph (B), the exemptee is required to file the approved exhibit F drawings in aperture card and electronic file formats.

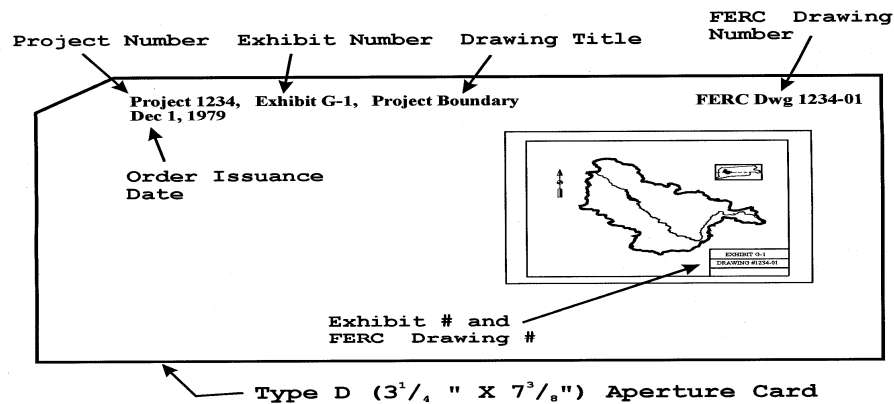
**The Director orders:**

(A) The following Exhibit F drawings, filed on July 26, 2011, conform to the Commission's rules and regulations, and are approved and made a part of the exemption.

<b>EXHIBIT No.</b>	<b>FERC DRAWING No.</b>	<b>FERC DRAWING TITLE</b>
F-5	12769-008	Dam View with Eel Ladder
F-6	12769-009	Eel Ladder Top ASM.

(B) Within 45 days of the date of issuance of this order, the exemptee shall file the approved exhibit drawings in aperture card and electronic file formats.

a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Drawing Number (i.e., P-12769-008) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-5), Drawing Title, and date of this order shall be typed on the upper left corner of each aperture card. See Fig. 1.



**Figure 1 Sample Aperture Card Format**

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office.

b) The exemptee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office. The exhibit drawings must be identified as **(CEII) material under 18 CFR § 388.113(c)**. Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file extension in the following format [i.e., P-12769-008, F-5, Dam View with Eel Ladder, MM-DD-2012.TIFF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file  
 FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4  
 RESOLUTION – 300 dpi desired, (200 dpi min.)  
 DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)  
 FILE SIZE – less than 1 MB desired

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2006), and the Commission's regulations at 18 C.F.R. § 385.713 (2011). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The exemptee's failure to file a request for rehearing shall constitute acceptance of this order.

William Guey- Lee  
Chief, Engineering Resources Branch  
Division of Hydropower Administration  
and Compliance

# Appendix E



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 7 – Extension Permit for Orders of Conditions**

284-408

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

**A. General Information**

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Liisa Marino  
Name  
323 West Main Street  
Mailing Address  
Ayer  
City/Town

2. Property Owner (if different):

Ice House Partners, Inc. (John K. Grady/CEO)  
Name  
323 West Main Street  
Mailing Address  
Ayer  
City/Town

*Expired*  
*2.9.2019*  
*Abbreviate NOI*  
*filed 4.17.2019*  
*to update #284-408*

**B. Authorization**

The Order of Conditions (or Extension Permit) issued to the applicant or property owner listed above on:

2/10/2009 Issued by: Shirley  
Date Conservation Commission

for work at: Walker Rd/ Nashua River 28  
Street Address Assessor's Map/Plat Number Parcel/Lot Number

recorded at the Registry of Deeds for:

Northern Worcester 53384 245  
County Book Page

Certificate (if registered land)

is hereby extended until: \_\_\_\_\_ Date the Order was last extended (if applicable)

This date can be no more than 3 years from the expiration date of the Order of Conditions or the latest extension. Only unexpired Orders of Conditions or Extension may be extended.

This Extension Permit must be signed by a majority of the Conservation Commission and a copy sent to the applicant and the appropriate DEP Regional Office (<http://www.mass.gov/dep/about/region/findyour.htm>)

Signatures: \_\_\_\_\_ Date \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**WPA Form 7 – Extension Permit for Orders of Conditions**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**C. Recording Confirmation**

The applicant shall record this document in accordance with General Condition 8 of the Order of Conditions (see below), complete the form attached to this Extension Permit, have it stamped by the Registry of Deeds, and return it to the Conservation Commission.

Note: General Condition 8 of the Order of Conditions requires the applicant, prior to commencement of work, to record the final Order (or in this case, the Extension Permit for the Order of Conditions) in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, it shall be noted in the Registry's Granter Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, it shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done.

Detach this page and submit it to the Conservation Commission prior to the expiration of the Order of Conditions subject to this Extension Permit.

To:

Shirley Conservation Commission  
Conservation Commission

Please be advised that the Extension Permit to the Order of Conditions for the project at:

Project Location

DEP File Number

has been recorded at the Registry of Deeds of:

County

for:

Property Owner

and has been noted in the chain of title of the affected property in accordance with General Condition 8 of the original Order of Conditions on:

Date

Book

Page

If recorded land the instrument number which identifies this transaction is:

Instrument Number

If registered land, the document number which identifies this transaction is:

Document Number

Signature of Applicant



\* 14 PAGES TOTAL \*



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 5 - Order of Conditions**

Massachusetts Wetlands Protection Act M.G. L. C. 131 S  
& Shirley Non-Zoning Wetlands Bylaw

DEP File Number

284-408

Provided by DEP



Bk: 53384 Pg: 245 Doc: ORD  
Page: 1 of 14 08/14/2009 08:10 AM

**A. General Information**

From: Shirley Conservation Commission

1. Conservation Commission

2. This issuance is for (check one):  Order of Conditions  Amended Order of Conditions

3. To: Applicant:

Liisa Grady Dowd  
a. First Name b. Last Name c. Company  
323 West Main Street  
d. Mailing Address  
Ayer MA 01432-  
e. City/Town f. State g. Zip Code

4. Property Owner (if different from Applicant)

John K. Grady Ice House Partners, Inc.  
a. First Name b. Last Name c. Company  
323 West Main Street  
d. Mailing Address  
Ayer MA 01432-  
e. City/Town f. State g. Zip Code

5. Project Location:

Walker Road/ Nashua River ✓  
a. Street Address b. city/town  
28  
c. Assessor Map/Plat Number d. Parcel/Lot Number  
Latitude and Longitude, if known  
e. Latitude f. Longitude

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Middlesex South Registry of Deeds  
a. county b. Certificate (if registered land)  
30179 ✓ 185  
c. Book d. Page

7. Dates: 9/16/2008 1/27/2009 2/10/2009  
a. Date Notice of Intent filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan references as needed):

"Shirley-Ayer-Harvard-Lancaster, Exhibits G1, G2, & G3 in Ayer, MA," 3 sheets of Plan C-7-31

a. Plan Title b. Prepared by c. Signed and stamped by  
Hannigan Engineering, Inc. Larry R. Sabean  
d. Final Revision Date e. Scale  
8/6/2008 1"=1000'

9. Total WPA Fee Paid: \$500.00 \$237.50 \$262.50  
a. Total Fee Paid b. State Fee Paid c. City/Town Fee Paid

Ice House Partners LLC  
323 W Main St  
Ayer Ma. 01432

RETURN ADDRESS: 323 WEST MAIN ST  
AYER, MA 01432



**WPA Form 5 – Order of Conditions**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**B. Findings**

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act. Check all that apply:

- a.  Public Water Supply
- b.  Land Containing Shellfish
- c.  Prevention of Pollution
- d.  Private Water Supply
- e.  Fisheries
- f.  Protection of Wildlife Habitat
- g.  Groundwater Supply
- h.  Storm Damage Prevention
- i.  Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

**Approved subject to:**

- a.  the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

**Denied because:**

- b.  the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect these interests, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c.  the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

**Inland Resource Area Impacts:** Check all that apply below. (For Approvals Only)

3.  Buffer Zone Impacts: Shortest distance between limit of project disturbance and wetland boundary (if available)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet e. c/y dredged	b. square feet f. c/y dredged	c. square feet	d. square feet



**WPA Form 5 – Order of Conditions**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**B. Findings (cont.)**

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

**Coastal Resource Area Impacts:** Check all that apply below. (For Approvals Only)

10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. c/y nourishmt.	d. c/y nourishmt.
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. c/y nourishmt.	d. c/y nourishmt.
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		



## WPA Form 5 – Order of Conditions

284-408

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

### C. General Conditions Under Massachusetts Wetlands Protection Act

(only applicable to approved projects)

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
  - a. the work is a maintenance dredging project as provided for in the Act; or
  - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
7. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
8. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to this Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
9. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number 284-408"



## WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

### C. General Conditions Under Massachusetts Wetlands Protection Act

10. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
11. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
12. The work shall conform to the plans and special conditions referenced in this order.
13. Any change to the plans identified in Condition #12 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
14. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
15. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
16. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
17. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
18. **The work associated with this Order is (1)  is not (2)  subject to the Massachusetts Stormwater Policy Standards. If the work is subject to the Stormwater Policy, the following conditions apply to this work and are incorporated into this Order:**
  - a) No work, including site preparation, land disturbance, construction and redevelopment, shall commence unless and until the construction period pollution prevention and erosion and sedimentation control plan required by Stormwater Standard 8 is approved in writing by the issuing authority. Until the site is fully stabilized, construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan, and if applicable, the Stormwater Pollution Plan required by the National Discharge Elimination System Construction General Permit.



**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs until written approval is received from the issuing authority. To request written approval, the following must be submitted: illicit discharge compliance statement required by Stormwater Standard 10 and as-built plans signed and stamped by a registered professional engineer certifying the site is fully stabilized; all construction period stormwater BMPs and any illicit discharges to the stormwater management system have been removed; and all post-construction stormwater BMPs were installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure they are not damaged and will function properly.
- c) Prior to requesting a Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall submit to the issuing authority an Operation and Maintenance (O & M) Compliance Statement for the Stormwater BMPs. This Statement shall identify the responsible party for implementing the Operation and Maintenance Plan and also state that: 1. "Future responsible parties shall be notified in writing of their continuing legal responsibility to operate and maintain the stormwater management BMPs and implement the Pollution Prevention Plan; and 2. The Operation and Maintenance Plan for the stormwater BMPs is complete and will be implemented upon receipt of the Certificate."
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the issuing authority shall presume that the responsible party for maintaining each BMP is the landowner of the property on which the BMP is located. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement acceptable to the issuing authority evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the Operation and Maintenance Plan section of the approved Stormwater Report, and the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three years including inspections, repairs, replacement and disposal (for disposal the log shall indicate the type of material and the disposal location);
  2. Make this log available to MassDEP and the Conservation Commission upon request; and
  3. Allow members and agents of the MassDEP and the Conservation Commission to enter and inspect the premises to evaluate and ensure that the responsible party complies with the Operation and Maintenance requirements for each BMP set forth in the Operations and Maintenance Plan approved by the issuing authority.
- h) All sediments or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.



# WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

## C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

j) The stormwater management system approved in the Final Order of Conditions shall not be changed without the prior written approval of the issuing authority. Areas designated as qualifying pervious areas for purpose of the Low Impact Site Design Credit shall not be altered without the prior written approval of the issuing authority.

k) Access for maintenance of stormwater BMPs shall not be obstructed or blocked. Any fencing constructed around stormwater BMPs shall include access gates. Fence(s) shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

**Please see attached.**

## D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable?  Yes  No

2. The Conservation Commission hereby finds (check one that applies):

a.  that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

b.  that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

ORDER OF CONDITIONS FOR WALKER ROAD/NASHUA RIVER, ICE HOUSE DAM  
(#284-408)

GENERAL CONDITIONS (CONT)

Please review the preceding General Conditions on the DEP Form 1 through 17, particularly Condition 1.

19. The work shall conform to the following plans and documents, unless otherwise specified in this Order:
  - a. Notice of Intent filed by Liisa Grady Dowd, submitted September 16, 2008.
  - b. Plan entitled "Shirley-Ayer-Harvard-Lancaster, Exhibit G1 - Identification Map in Massachusetts," sheet 1 of 3 of Plan C-7-31, dated August 6, 2008, signed and stamped by Larry R. Sabean.
  - c. Plan entitled "Existing Condition Plan - Exhibit G2 in Ayer, Mass.," sheet 2 of 3 of Plan C-7-31, dated August 6, 2008, signed and stamped by Larry R. Sabean.
  - d. Plan entitled "Project Boundary, Exhibit G3 in Ayer, Mass.," sheet 3 of 3 of Plan C-7-31, dated August 6, 2008, signed and stamped by Larry R. Sabean.
  - e. Letter to Shirley Conservation Commission, Ayer Conservation Commission, and Liisa Grady Dowd from Massachusetts Natural Heritage & Endangered Species Program, dated January 8, 2009, RE: 323 West Main Street, Regular Repair & Maintenance Activities.
  
20. This Order of Conditions is issued in addition to those issued under File #284-281 and File #284-286.
  
21. This Order of Conditions shall apply to any successor(s) in interest or successor(s) in control and shall survive the issuance of the Certificate of Compliance. Within ten (10) calendar days inclusive of the transfer of ownership of the subject parcel, in whole or in part, including lots or buildings conveyed under individual deeds, the Conservation Commission shall be notified in writing by the seller of the name and address of the new owner. Within ten (10) calendar days inclusive of such transfer, a written, notarized affidavit shall be filed with the Conservation Commission by the seller, stating that the new owner(s) has read and understood the Order of Conditions and all terms applicable to the project site and intends to comply with all provisions of the Order, including obtainment of a Certificate of Compliance if the seller has not already done so. In addition, this affidavit shall include the following sentence: "I, \_\_\_\_\_, the new owner of \_\_\_\_\_, understand that any work within 100 feet of wetlands or within 200 feet of perennial streams requires approval by the Shirley Conservation Commission and that no dumping of yard waste, brush, or other materials is allowed in wetlands." This letter shall include a plan of the lot indicating the wetland boundary, building(s), and any other features. All current and future new tenants shall be provided with a copy of this Order of Conditions and a signed affidavit acknowledging receipt shall be provided to the Commission.



22. Members and agents of the Shirley Conservation Commission shall have the right to enter and inspect the premises to evaluate compliance with these conditions and to require submittal of any data deemed necessary by the Commission for that evaluation.
23. The site engineer or contractor shall have a copy of this Order of Conditions at the site and available for inspection during all phases of construction.
24. No equipment is to enter the wetlands at any time during site preparation or construction or during any other phase of the project, and no materials are to be placed in or allowed to enter the wetland.
25. Any change in the plans approved under this Order, including those due to review by other boards or resulting from the aforementioned conditions, must be submitted to the Shirley Conservation Commission in writing for approval prior to implementation. The Commission will then decide whether the change is substantial enough to require a new Notice of Intent filing or a request for an amendment to this Order of Conditions. Any errors found in the plans or information submitted by the applicant shall be considered as changes.
26. Upon completion of this project (or within one year of the issuance of an occupancy permit), the owner or his designee shall submit the following to the Conservation Commission to receive a Certificate of Compliance per Condition 11:
  - a. A letter from the owner or his designee requesting a Certificate of Compliance for File #284-408.
  - b. A written statement from a registered professional engineer of the Commonwealth certifying that the work has been completed in compliance with this Order of Conditions and the approved plans referenced herein (or approved revisions). Any discrepancies shall be noted.
27. The following special conditions shall extend beyond the issuance of a Certificate of Compliance, in perpetuity, and shall be referred to in all future deeds to this property:
  21. Regarding notification of new property owners.
  32. Regarding prohibition of sodium chloride for deicing.
  33. Regarding limitations on the use of pesticides, herbicides, and fertilizers.
  34. Regarding prohibition of storage of hazardous fuels underground.
  35. Regarding notification of maintenance.
  36. Regarding maintenance of drainage structures.
28. No driveway, footing, or roof drain with an above-ground or subsurface discharge nor any garage floor drain or any deck or addition or shed or pool shall be installed within the 100-foot buffer zone or the 200-foot riverfront protection area without prior written permission of the Conservation Commission.

## PRIOR TO CONSTRUCTION

Please note General Conditions 7, 8, and 9.

29. The owner or his designee shall report in writing to the Shirley Conservation Commission annually within two (2) weeks of the annual inspection. This annual inspection report shall detail dates of drawdown, work done, etc. and detail any additional work proposed so that the Shirley Conservation Commission can determine whether additional filing is required. These reports shall include an update of what work within 100 feet of wetlands or within 200 feet of perennial streams has been completed to date and what work (if any) is proposed.
30. The Commission shall be copied on any reports submitted to the Massachusetts Natural Heritage and Endangered Species Program (MNH&ESP).

## SEDIMENT AND EROSION CONTROLS

31. There shall be no siltation or sedimentation of the river or associated wetlands at any time.

## OTHER CONDITIONS

32. Equipment fuel storage and refueling and lubrication operations shall be situated in an upland area at least 100 feet from any wetland resource area and outside the 200-foot riverfront protection area.
33. No sodium chloride shall be used within 100 feet of wetlands or within the 200-foot riverfront protection area, and any arrangement for snow removal shall so stipulate. This condition shall survive the issuance of the Certificate of Compliance within the Shirley Conservation Commission jurisdiction.
34. Pesticides and herbicides shall not be used within 100 feet of a wetland resource area or within the 200-foot riverfront protection area. Any fertilizer used within 100 feet of a wetland resource area or within the 200-foot riverfront protection area shall be slow-release. This condition shall survive the issuance of the Certificate of Compliance.
35. No underground storage of fuels, with the exception of propane tanks, is allowed within 100 feet of wetlands or within the 200-foot riverfront protection area. This condition shall survive the issuance of the Certificate of Compliance.
36. The Conservation Commission shall be notified in writing when any maintenance functions that may impact wetlands, such as but not limited to replacing leachfields and repairing drains, are to be performed. This condition shall survive the issuance of the Certificate of Compliance.
37. The owners and their designees shall maintain all elements of the drainage systems within any areas subject to the Commission's jurisdiction under 310 C.M.R. 10.00 and M.G.L.

Chapter 131, Section 40, as amended, unless put into an easement to the Town, in order to avoid blockages and siltation which might cause failure of the system. Vegetative cover shall also be maintained on site to ensure the proper working of the drainage system. This condition shall survive the issuance of the Certificate of Compliance.

38. The applicant shall operate the project in a run-of-river mode, whereby inflow to the project will equal outflow from the project on an instantaneous basis and water levels above the dam are not drawn down for the purpose of generating power. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the applicant, or for short periods upon mutual agreement between the applicant, the Massachusetts Division of Fisheries and Wildlife and the Shirley and Ayer Conservation Commissions.
39. The applicant shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance (including flashboard repair/replacement) or emergency purposes, 90 percent of inflow is passed downstream and the headpond is refilled on the remaining 10 percent of inflow to the project. This refill procedure may be modified on a case-by-case basis with the prior approval of both the Massachusetts Division of Fisheries and Wildlife and the Shirley and Ayer Conservation Commissions.
40. Until a permanent bypass flow has been mandated by the U.S. Fish and Wildlife Service, the applicant shall provide an interim conservation flow of 1 mgd (as suggested by the exemptee) at the dam to protect habitat in the bypass reach.
41. If the project plans change, the applicant must contact MNH&ESP prior to any work for further guidance.
42. If work is required that will require water levels to be lowered for more than several days, the applicant shall notify both the Shirley Conservation Commission and the Ayer Conservation Commission as well as MNH&ESP in writing.
43. All non-emergency drawdowns shall occur during the rare turtle activity period of April 15 through October 31 (6.5 months of the year). Your letter to our office indicated that you would not conduct drawdown during the months of April, May, and June. This would therefore mean that non-emergency work will only be conducted July, August, September, and October.
44. Due to the presence of the Triangle Floater, the bypass reach needs to retain sufficient flow and depth to ensure that oxygen levels are not significantly depleted, particularly during the months of July through August when the water is already carrying less oxygen and the air temperatures are high. As stated in the information provided, the minimum bypass flow is 1 mgd.
45. Should your routine inspection identify areas of concern or other work occur within the site, then details of the proposed work shall be provided in writing.



**E. Issuance**

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

2/10/09

1. Date of Issuance

Please indicate the number of members who will sign this form:

3

This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Denise Brauckmiller  
Pontus Brauckmiller  
Shirley Bear

**Notary Acknowledgement**

Commonwealth of Massachusetts County of

Middlesex

On this twenty-seventh of

January  
 Month

2009  
 Year

Before me, the undersigned Notary Public, personally appeared

Denise Brauckmiller, et al.  
 Name of Document Signer

proved to me through satisfactory evidence of identification, which was/were

Photo I.D.

Description of evidence of identification

to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

As member of

Shirley  
 City/Town

Conservation Commission

Anne Gagnon

Signature of Notary Public

Anne Gagnon

Printed Name of Notary Public

June 12, 2009

My Commission Expires (Date)

Place notary seal and/or any stamp above

This Order is issued to the applicant as follows:

by hand delivery on

by certified mail, return receipt requested, on

February 10, 2009

Date

Date



## WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

### F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant. Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

**Section G, Recording Information is available on the following page.**



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 4 – Abbreviated Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

Town

**A. General Information**

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



**Note:**  
Before completing this form, consult your local Conservation Commission regarding any municipal bylaw or ordinance.

1. Applicant:

Ice House Partners, Inc.

Name

liisa@gradyresearch.com

E-Mail Address

323 W Main Sreet

Street Address

Ayer

City/Town

MA

State

01432

Zip Code

9787723303

Phone Number

Fax Number (if applicable)

2. Representative (if any):

Firm

Contact Name

E-Mail Address

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Property Owner (if different from applicant):

Name

Mailing Address

City/Town

State

Zip Code

4. Total Fee:

1950.00

(from NOI Wetland Fee Transmittal Form)

5. Project Location:

Off Walker Rd

Street Address

Shirley

City/Town

Latitude and Longitude:

Latitude

Longitude

MAP 28

Assessors Map/Plat Number

D-2

Parcel /Lot Number

6. General Project Description:

Routine repair, maintenance and inspection activities for continued safe and proper operation of FERC jurisdictional hydro-electric power plant, its associated dam and related appurtanances.



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 4 – Abbreviated Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

Town

**A. General Information (cont.)**

7. Registry of Deeds:

Middlesex South Registry of Deeds  
County

30179  
Book

185  
Page

Certificate (if Registered Land)

**B. Site and Activities Subject to Regulation**

Complete any of the following sections that apply to the proposed work and project site.

1. Complete for proposed activities located, in whole or in part, in Buffer Zone.

a. Check all the following borders to the Buffer Zone:

**Inland Resource Areas**

- Inland Bank  
 Bordering Vegetated Wetland (BVW)

**Coastal Resource Areas**

- Coastal Beach       Barrier Beach  
 Rocky Intertidal Shore       Coastal Dune  
 Salt Marsh       Coastal Bank

b. Check all the methods used to delineate the Bordering Vegetated Wetland boundary:

- Final Order of Resource Area Delineation issued by Conservation Commission or DEP (attached)  
 DEP BVW Field Data Form (attached)  
 Final Determination of Applicability issued by Conservation Commission (attached)  
 Other Method of Determining BVW boundary (attach documentation):
- 50% or more wetland indicator plants
  - Saturated/inundated conditions exist
  - Groundwater indicators
  - Direct observation
  - Hydric soil indicators
  - Credible evidence of conditions prior to disturbance.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 4 – Abbreviated Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

Town

**B. Site and Activities Subject to Regulation (cont.)**

c. Describe, with reference to supporting plans and calculations where necessary, the size, type, and location of the proposed work and mitigating measures and designs to insure that the proposed work will not alter the resource area and Buffer Zone borders. Attach additional sheets, if necessary.

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2. Complete for proposed activities located, in whole or in part, in Land Subject to Flooding.

a. Resource area description:

Bordering Land Subject to Flooding:

Isolated Land Subject to Flooding:

Volume of Flood Storage Lost (cubic feet)

Volume of Flood Storage Lost (cubic feet)

Volume of Flood Storage Compensation (cubic feet)

Volume of Flood Storage Compensation (cubic feet)

b. Describe, with reference to supporting plans and calculations where necessary the size, shape, location, and type of work, mitigating measures, and designs proposed to meet the performance standards set forth in 310 CMR 10.57(4) and 10.60. Attach additional sheets, if necessary.

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3. Complete for proposed activities located, in whole or in part, in the Riverfront Area.

a. Name of Waterway (if available):

Nashua River





Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 4 – Abbreviated Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

Town

**B. Site and Activities Subject to Regulation (cont.)**

b. Width of Riverfront Area (check one):

25 ft. - Designated Densely Developed Areas only

100 ft. - New agricultural projects only

200 ft. - All other projects

c. Describe how the Mean Annual High-Water Line was determined:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. Distance of proposed activity closest to the Mean Annual High-Water Line:

0 ft. Work that may be required could include work in the river (lowering) and/or along the banks/retaining structures and let down gates.

e. Total area of Riverfront Area on the site of the proposed project:

23,522 (0.56 acres along the river bank)  
Square Feet

f. Proposed alteration of the Riverfront Area:

0	0	0
_____ Total Square Feet	_____ Square Feet within 100 ft.	_____ Square Feet between 100 ft. and 200 ft.

g. Indicate project purpose:

Single family house

Commercial development

Transportation

Residential subdivision

Industrial development

Other (describe):

Operation, repair, maintenance  
and inspection activities

h. Was the lot where the activity is proposed created prior to August 1, 1996?

Yes

No



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 4 – Abbreviated Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

Town

**B. Site and Activities Subject to Regulation (cont.)**

i. Describe how the project will meet all performance standards set forth in 310 CMR 10.58(4) for the Riverfront Area, including standards requiring consideration of alternative project design or location. Attach additional sheets, if necessary.

The project has been in operation since 2011. We have performed under previously issued OOC 284-408 since 2009 with no issues. We inadvertently missed the date to Extend the existing Order (expired 2-9-2019). The original order's intent was to provide proper guidance for work - when required and notice requirements to insure our adherence and performance to the standards. There are no possibilities for alternative locations or designs.

4. Is the project exempt from the DEP Stormwater Management Policy?

Yes If yes, explain why the project is exempt:

This project does not propose any alteration.

No

If no, stormwater management measures are required. Applicants are encouraged to complete the Stormwater Management Form and submit it with this Abbreviated Notice of Intent.

5. a. Is any portion of the proposed project located within estimated habitat as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program?

Yes

If yes, include proof of mailing or hand delivery of Abbreviated Notice of Intent to :

Natural Heritage and Endangered Species Program  
Division of Fisheries and Wildlife  
1 Rabbit Hill Road  
Westborough, MA 01581-3336

No

Date of Map

b. Is any portion of the proposed project in an Area of Critical Environmental Concern (ACEC)?

Yes

If yes, provide name of ACEC (see the Area of Critical Concern list for ACEC locations):

No

SQUANNASSIT  
ACEC Name



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

DEP File Number:

**WPA Form 4 – Abbreviated Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by DEP

Town

**B. Site and Activities Subject to Regulation (cont.)**

c. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

Yes

No

6. If any activity within Land Subject to Flooding, the Riverfront Area, or Buffer Zone is exempt from performance standards in accordance with any provision of the wetlands regulations, 310 CMR 10.00, identify the appropriate exemption:

Exemption

**C. Additional Information**

Applicants must include the following with this Abbreviated Notice of Intent (ANOI):

- USGS or other map of the area (along with a narrative description, if necessary), containing sufficient information for the Conservation Commission and the Department to locate the site.
- Plans identifying the location of proposed activities relative to the boundaries of each affected resource area.
- Other material identifying and explaining the determination of resource area boundaries shown on plans (e.g., a DEP BVW Field Data Form).
- List the titles and final revision dates for all plans and other materials submitted with this ANOI.

(1)Exhibit G1: Identification Map in Massachusetts, (2)Exhibit G2: Existing Condition Plan in Ayer, MA, (3)Exhibit G3: Project Boundary in Ayer, MA, (4)2019 Inspection Checklist Template, (5)Flow Schematic Drawing, (6)MrMapper WebMAP of area

**D. Fees**

The fees for work proposed under each Abbreviated Notice of Intent must be calculated and submitted to the Conservation Commission and DEP(see Instructions and NOI Wetland Fee Transmittal Form).

No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

Check Number

Ice House Partners, Inc.

Payor name on check

Check date

Ice House Partners, Inc.

Applicant name on check



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Eastern Massachusetts National Wildlife Refuge Complex  
73 Weir Hill Road  
Sudbury, MA 01776-1420

February 11, 2011

Ms. Liisa Grady Dowd  
Ice House Partners, Inc.  
323 West Main Street  
Ayer, MA 01432

Re: FERC Project No. 12769-000

Dear Ms. Dowd:

I am writing to address the requirement of Article 19 of the Federal Energy Regulatory Commission (Commission) Order Granting Exemption from Licensing, dated March 31, 2008, that is requiring you to file documentation showing you have obtained the right to occupy Federal lands necessary for the construction, operation, and maintenance of the Ice House Dam. A subsequent May 1, 2008 letter to you from the Commission attempted to clarify this requirement, but may in fact have further muddied the waters. That letter indicated that Ice House Partners has a quitclaim deed describing property rights conveyed to Ice House Partners when the property was purchased, which included the right to keep and maintain the dam and all water rights. That letter further states that the Commission recognizes that Ice House Partners possesses water rights to the impoundment, but that water rights typically do not also grant access to the property surrounding the water body itself. Therefore, FERC wants documentation that Ice House Partners may access Federal land for the operation of the project.

We have discussed the issue of "access" and agree that Ice House Partners does not need to access lands of the Oxbow National Wildlife Refuge (NWR), which is owned by the U.S. Government and managed by the U.S. Fish and Wildlife Service, to construct or maintain the dam. The dam is located on private property and is not directly adjacent to the Oxbow NWR. If, for some reason, you needed to physically enter closed areas of the refuge in conjunction with the dam maintenance, the appropriate vehicle for granting permission would be a Special Use Permit. I would be happy to work with you on that as needed on a case-by-case basis.

You also do not need access to the Oxbow NWR to physically operate the dam. However, as the dam does back water up into the Oxbow NWR, it could be said to

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IN AMERICA** 

"occupy" Federal lands. Perhaps this is what Mr. Dean was referring to in his May 1, 2008 letter, although he used to term "access".

The U.S. Fish and Wildlife Service acquired the majority of the lands that comprise the Oxbow NWR from the U.S. Army. These lands had been part of Ft. Devens. The U.S. Army began purchasing lands for Ft. Devens in 1917. It does not appear that they acquired the lands by condemnation, although I cannot confirm that at this time. However, these lands were inundated by what is now Ice House Dam when the land was acquired by the U.S. Army. Obviously, when we acquired these lands, they were still affected by the dam.

We are researching our files to determine whether there is an existing flowage easement on the Oxbow NWR. We are also in contact with the U.S. Army Corps of Engineers, which manages Army real estate, to see if they have a flowage easement in their records for this property. If not, we may need to issue Ice House Partners a permanent right-of-way easement. This is not a difficult process but will take some time to complete. It is also possible that, since this dam originally built long before even the U.S. Army acquired the property, that there is an easement by prescription for the flowage of backed-up river waters onto what is now Federally-owned lands.

The U.S. Fish and Wildlife Service has no concerns about the impacts associated with the operation of the Ice House Dam on the Federal lands that comprise the Oxbow NWR. Please ascertain with the Commission if this letter is sufficient documentation to meet the requirements of Article 19. If not, you will need to receive another extension and we will probably need to meet with the Commission to determine what documentation would satisfy their concerns.

Please do not hesitate to call me at 978-443-4661 if I can be of further assistance.

Sincerely,



Elizabeth A. Herland  
Project Leader  
Eastern Massachusetts NWR Complex

# Appendix F



DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

MESA Project Review Checklist

Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00)

Contact Information

1) Project Location:

323 W Main Street/Nashua River Ayer 01432
Street Address/Location City/Town Zip Code
Map 38 Parcel 1
Assessors Map/Plat Number Parcel/Lot Number

2) Applicant:

Liisa Marino Ice House Partners, Inc.
First Name Last Name Company
323 W Main Street
Mailing Address
Ayer MA 01432
City/Town State Zip Code
978-772-3303 liisa@gradyresearch.com
Phone Number Fax Number Email address

3) Property owner (if different from applicant):

First Name Last Name Company
Mailing Address
City/Town State
Phone Number Fax Number

4) Representative (if any):

Company
Contact Person First Name Contact Person Last Name
Mailing Address
City/Town State
Phone Number Fax Number

Current NH & BSP MESA Review in process. 4.2019

**Additional Information**

- 1. Will this project require a filing with the Conservation Commission and/or DEP?  No  Yes
- 2. Has this project previously been issued a NHESP Tracking Number (either by previous NOI Submittal or MESA Information Request Form)?  No  Yes, if Yes -Tracking No. 06-19106

**Project Description (attach separate sheet, as needed)**

Please note, certain projects or activities are exempt from review, see 321 CMR 10.14. The MESA does not allow project segmentation. Your filing must reflect all anticipated work associated with the proposed project (CMR 321 10.16).

The applicant has an existing OOC with the Town of Ayer (100-0321) and an NOI on file with the Town of Shirley (due to inadvertently missing the extension deadline on OOC 284-0408). The applicant owns and operates a small LIHI Certified, FERC jurisdictional small hydro-electric generating facility on the Nashua River, located in the Towns of Ayer, Shirley and Harvard. The activity proposed includes regular annual inspection, maintenance and repair on the dam and its related appurtenances. Reference previous MESA Filing 06-19106.

**Include the Following Information:**

ALL Applicants must submit:

- USGS map (1:24,000 or 1:25,000) with property boundary clearly outlined
- Project plans for entire site (including wetland Resource Areas, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work)
- Assessor's map or right-of-way plan of site
- Statement/proof that applicant is the Record Owner or that applicant is a person authorized in writing by the record owner to submit this filing
- Photographs representative of the site

Projects altering 10 or more acres, must also submit:

- A vegetation cover type map of the site
- Project plans showing Priority Habitat boundaries


The NHESP may request additional information, such as, but not limited to, species and habitat surveys, wetland reports, soil map and reports, and stormwater management reports (321 CMR 10.16). The NHESP will notify the applicant within 30 days if the materials submitted do not satisfy requirements for a filing and request submission of any missing materials (321 CMR 10.18(1)).

**Filing Fee, Payable to Comm. of MA - NHESP (see website for fee information)**

a. Total MESA Fee Paid 300 b. Acreage of Disturbance 0 c. Total Site Acreage 11

**Required Signatures**

I hereby certify under the penalties of perjury that the foregoing MESA filing and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.



 \_\_\_\_\_ Date 4/2/2019

Signature of Applicant (if different from Owner) \_\_\_\_\_ Date \_\_\_\_\_





## **Included Attachments:**

1. FERC Exemption Exhibit G1 – Identification Map
  2. FERC Exemption Exhibit G2 – Existing Condition Plan
  3. FERC Exemption Exhibit G3 – Project Boundary
  4. Ice House Partners Dame Safety Surveillance and Monitoring Plan (DSSMP)
  5. Town of Ayer Assessor's Map (38-1)
  6. Town of Shirley's Assessor's Map (28-D-2)
  7. Statement/Proof
    - Deed in the name of Ice House Partners, Inc.
    - Legal Existence Certificate for the Corporation
    - 2018 Annual Report Filing with the Commonwealth (naming its officers)
  8. Photographs of the site
- 
- 



**MassWildlife**

Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

January 8, 2009

Shirley Conservation Commission  
7 Keady Way  
Shirley MA 01464

Ayer Conservation Commission  
1 Main St  
Ayer MA 01432

Liisa Grady Dowd  
Ice House Partners, Inc.  
323 West Main Street  
Ayer, MA 01432

RE: Project Location: 323 West Main Street  
Project Description: Regular repair & maintenance activities  
NHESP Tracking No. 06-19106  
Filing Type: MESA/WPA NOI; response to determination of incomplete filing

Dear Commissioners and Ms. Dowd,

The Natural Heritage & Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries & Wildlife received a letter from Liisa Grady Dowd (Icehouse Partners) dated 12/18/2008 in response to our 10/30/08. Misty-Anne Marold (NHESP) also spoke with Shirley Conservation Administrator Anne Gagnon upon your suggestion to obtain further details about the proposed regular repair and maintenance activities at the site.

The NHESP understands that it is the applicant's intention to inspect the dam and associated structures annually, as described in the "Dam Safety Inspection Checklist" provided with the 12/18/2008 letter. During these inspections, the water level will only be lowered when structural concerns are observed during the inspection. In the past, the applicant has slowly lowered the water level over several days to afford visual inspection of the area of concern. Should the applicant find that work is required that will require the water level to be lowered for a longer period of time, the Conservation Commission, the NHESP and other parties will be notified in writing. The intent of this notification will be to determine conditions to the work and inquire as to if the work can be conducted under existing permits or additional permits are necessary. According to the 12/18/2008 letter, no vegetation alteration is conducted along the banks as part of the routine inspection/maintenance program.

The NHESP appreciates the additional details provided in the 12/18/2008 letter and procedural clarification from Gagnon. With this additional information, the NHESP finds your filing complete and can complete our review.

[www.masswildlife.org](http://www.masswildlife.org)

Division of Fisheries and Wildlife

Field Headquarters, North Drive, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7891

*An Agency of the Department of Fish & Wildlife*

As stated previously, the Nashua River and wetlands in the vicinity of the Ice House Hydro-facility is habitat for the following state-listed species:

	Scientific Name	Common Name	Taxonomic Group	MESA Status
INVERTEBRATE ANIMALS	<i>Alasmidonta undulata</i>	Triangle Floater	Mussel	Special Concern
	<i>Neurocordulia obsoleta</i>	Umber Shadowdragon	Dragonfly	Special Concern
	<i>Ophiogomphus aspersus</i>	Brook Snaketail	Dragonfly	Special Concern
	<i>Somatochlora forcipata</i>	Forcinate Emerald	Dragonfly	Special Concern
	<i>Stylurus scudderii</i>	Zebra Clubtail	Dragonfly	Endangered
	<i>Stylurus spiniceps</i>	A Clubtail Dragonfly	Dragonfly	Threatened
	*data sensitive*	*data sensitive*	Invertebrate Animal	Endangered
	<i>Zanclognatha martha</i>	Pine Barrens Zanclognatha	Moth	Threatened
PLANTS	<i>Carex typhina</i>	Cat-tail Sedge	Vascular Plant	Threatened
	<i>Eleocharis ovata</i>	Ovate Spike-sedge	Vascular Plant	Endangered
	<i>Senna hebecarpa</i>	Wild Senna	Vascular Plant	Endangered
	<i>Sparganium natans</i>	Small Bur-reed	Vascular Plant	Endangered
VERTEBRATE ANIMALS	<i>Ambystoma laterale</i>	Blue-spotted Salamander	Salamander	Special Concern
	<i>Emydoidea blandingii</i>	Blanding's Turtle	Turtle	Threatened
	<i>Glyptemys insculpta</i>	Wood Turtle	Turtle	Special Concern
	<i>Hemidactylium scutatum</i>	Four-toed Salamander	Salamander	Special Concern
	<i>Podilymbus podiceps</i>	Pied-billed Grebe	Bird	Endangered
	<i>Sorex palustris</i>	Water Shrew	Mammal	Special Concern

These species are protected pursuant to the Massachusetts Endangered Species Act (MESA, MGL c131A) and its implementing regulations (321 CMR 10.00). \*An additional species has been documented in the vicinity of the proposed project. The NHESP does not release the names of these species due to the high risk of collection

The NHESP finds that the project, as proposed, will not result in "adverse effects" to the actual Resource Area habitat or a "take" of rare species and thus will not require a Conservation and Management permit pursuant to 321 CMR 10.23 to commence. However, the NHESP finds that the project requires compliance with several conditions to avoid harm to state-listed species:

1. All non-emergency draw-downs shall occur during the rare-turtle activity period of 15 April through 31 October, 6.5 months of the year). Your letter to our office indicated that you would not conduct drawdown during the months of April, May and June. This would therefore mean that non-emergency work will only be conducted July, August, September, and October.
2. Due to the presence of the Triangle Floater, the bypass reach needs to retain sufficient flow and depth to ensure that oxygen levels are not significantly depleted, particularly during the months of July through August when the water is already carrying less oxygen and the air temperatures are high. As stated in the information provided, the minimum bypass flow is 1 mgd.
3. Should your routine inspection identify areas of concern or other work occur within the site, then details of the proposed work shall be provided in writing.

We note that similar to the WPA Order of Conditions, this MESA determination expires in three-years from the date of issuance; therefore, the applicant shall consult with the NHESP prior to the expiration of this determination to ensure compliance with the rare species provisions of the WPA and the MESA.

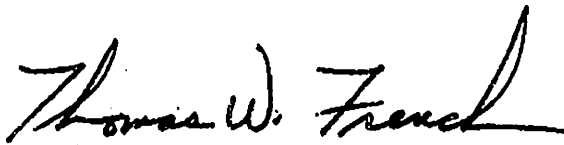
The NHESP additionally notes that several requirements detailed by the MA DFW-Fisheries Program associated with the proposed FERC permit are relevant to this routine work:

4. The applicant shall operate the project in a run-of-river mode, whereby inflow to the project will equal outflow from the project on an instantaneous basis and water levels above the dam are not drawn down for the purpose of generating power. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the applicant, or for short periods upon mutual agreement between the applicant, the Massachusetts Division of Fisheries and Wildlife.
5. The applicant shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance (including flashboard repair/replacement) or emergency purposes, 90% of inflow is passed downstream and the headpond is refilled on the remaining 10% of inflow to the project. This refill procedure may be modified on a case-by-case basis with the prior approval of both the Massachusetts Division of Fisheries and Wildlife.
6. Until a permanent bypass flow has been mandated by the U.S. Fish and Wildlife Service, the applicant shall provide an interim conservation flow of 1 mgd (as suggested by the exemptee) at the dam to protect habitat in the bypass reach.

If project plans change, the applicant must contact the NHESP prior to any work for further guidance. We note that all work is subject to the anti-segmentation provisions (321 CMR 10.16) of the MESA. The NHESP notes that any activity not included in the current filing (eg, increased water withdrawal, vegetation management, animals management, installation of additional structures) and located within *Priority Habitat* may require an additional filing with the NHESP for review if not otherwise exempt. This authorization for work does not relieve the applicant or any other persons of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

If you have any questions about this letter, please don't hesitate to contact Misty-Anne R. Marold (misty-anne.marold@state.ma.us) at 508-389-6356. If you have any specific questions about the above-noted Fisheries comments, please contact Caleb Slater (caleb.slater@state.ma.us).

Sincerely,



Thomas W. French, Ph.D.  
Assistant Director

cc: MA DEP Central Regional Office, Wetlands Program  
Pat Huckery, Northeast Wildlife District, MA Division of Fisheries & Wildlife



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

New England Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5087  
<http://www.fws.gov/newengland>

January 31, 2019

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

*<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm> (accessed January 2019)*

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact David Simmons of this office at 603-227-6425 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman  
Supervisor  
New England Field Office

**Subject:** Section 7 Consultation Inquiry - Ice House Dam (FERC No. 12769) LIHI Recertification

**From:** "Rosset, Julianne" <julianne\_rosset@fws.gov>

**Date:** 4/30/2019, 11:21 AM

**To:** <liisa@gradyresearch.com>

Hi Liisa,

It was nice speaking with you today.

As discussed on our call, based on the information currently available to us, no federally-listed or proposed, threatened, or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the Ice House Dam (FERC No. 12769) project area at this time.

If you have any questions or need additional information, please feel free to call or email me.

Kind regards,

Julianne

Julianne Rosset

Fish & Wildlife Biologist

USFWS New England Field Office

70 Commercial Street, Suite 300

Concord, NH 03301

603-227-6436

[julianne\\_rosset@fws.gov](mailto:julianne_rosset@fws.gov)

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN  
MASSACHUSETTS**

<b>COUNTY</b>	<b>SPECIES</b>	<b>FEDERAL STATUS</b>	<b>GENERAL LOCATION/HABITAT</b>	<b>TOWNS</b>
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN MASSACHUSETTS**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide



**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN MASSACHUSETTS**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot <sup>1</sup>	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

<sup>1</sup>Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.

-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.

-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

# Appendix G

FERC PROJECT NO.P-12769-000

# Historic Properties Management Plan

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© 2009, Ice House Partners, Inc.  
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## **Overview & Executive Summary**

*The Historic Properties Management Plan (HPMP) is a plan for considering and managing effects on significant historic properties from activities associated with constructing, operating and maintaining a hydropower project.*

This Historic Properties Management Plan (HPMP) has been created for Ice House Partners, Inc. in accordance with the guidelines<sup>1</sup> specified in a Memorandum of Agreement (MOA) among the Federal Energy Regulatory Commission (FERC), the Massachusetts State Historic Preservation Officer (SHPO) and Ice House Partners<sup>2</sup>, Inc in order to effectively manage any historic properties according to specified federal, state and local regulations. This MOA was created and executed as a result of Ice House Partners, Inc. filing of an Application for Exemption from Licensing with the FERC and the fact that the Commission determined that issuing the Exemption *may* affect properties eligible for inclusion on the National Register of Historic Places. This HPMP is created in fulfillment of Ice House Partners, Inc.'s Exemption conditions<sup>3</sup>

Specifically, this HPMP is being prepared in under and in accordance with the following standards and regulations:

- Part I of the Federal Power Act, 16 U.S.C. Sections 791(a) through 825(r), *as amended*;
- 36 C.F.R. Section 800.14(b) of the Advisory Council on Historic Preservation regulations;
- Section 106 of the National Historic Preservation Act.

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<sup>1</sup> Reference the following Guidance Document for format and content specifications, "Guidelines for Historic Properties management Plans for Hydroelectric Projects" issued on May 20, 2002 and in effect since January 11, 2001.

<sup>2</sup> See "Final Memorandum of Agreement for the Ice House Power Project" filed on March 21, 2008 with the Federal Energy Commission, under Project No. P12769-000.

<sup>3</sup> Reference "Order Granting Exemption from Licensing (5MW or less) issued by FERC on March 31, 2008 (Project No. P12769-000)

Additionally, as appropriate and applicable the following have been taken into account in the development of this HPMP:

- Archeology and Historic Preservation: Secretary of the Interior's Standards & Guidelines<sup>4</sup>
- Council and the Commission's *Guidelines* (ref. footnote 1)
- Development of this HPMP has been under the supervision and guidance of a professional Historic Preservation Planning and Archaeological Studies consultants, as we as in consultation with the MA SHPO.<sup>5</sup>

The HPMP identifies the historic properties within the project area<sup>6</sup> (reference Existing Conditions drawing included in the Appendix), ensures the protection and preservation of such properties from any threatening disturbance related to other project activities, documents the historic properties (or references such documentation) according to the Commonwealth's standards, considers mitigation actions to avoid any adverse effects to such properties, and treats and disposes of any human remains that may be discovered in a manner compliant with applicable state law.

Construction of the Grady Research / Ice House Partners facility is complete. Planned operation and required maintenance of the hydropower facility at 323 West Main Street, Ayer, MA will have minimal effect on any associated historic resources. The goals for preservation have been achieved through reconstruction of the historic resources related to or comprising the APE (*P. 2, Paragraph 2, HPMP Guidelines*). No modes of operation are expected to have an effect on, i.e. cause alteration to, any identified historic resources. All major reconstruction activity was completed in 2002, and no further alterations are planned (*P. 3, Para. 2*).

HPMP implementation will be carried out by staff of licensee, specifically the plant owners, Liisa Grady Dowd and John K. Grady, P.E (*P. 12, Principle 4*). Project staff involved in implementing the HPMP is the same as those responsible for its creation, lending them intimate knowledge of the plan's requirements. Project staff maintains a list of contacts for specialists in Historic Preservation

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<sup>4</sup> "Secretary's Standards". *Federal Register*, September 29, 1983, Vol. 48, No. 190, Part IV, pp.44716 – 44740.

<sup>5</sup> Sanford Johnson, Historic Preservation Planning Consultant in addition to Archeological Resources available from MHC.

<sup>6</sup> Historic Resource Inventory Forms completed for the property include MHC Form F #912 for the West Main Street Power House; MHC Form F #913 for the c. 1920 highway bridge over the canal but not the Nashua River; MHC Form F #914 for the West Main Street Canal; MHC Form F #915 for the Dam Across the Nashua River and MHC Form A (Area E) which documents the West Main Street Ice House Industrial Area as a whole and includes the four individual resources noted above. The survey forms were completed in 2007 and meet current MHC standards for documentation of historic resources in Massachusetts

Planning and Archaeological Studies (P. 4, Para. 2). Given that the HPMP was not completed prior to licensing, the applicant heeds the requirement by FERC to develop the HPMP within one year of licensing. The HPMP was prepared by staff in charge of operations, management and maintenance of Ice House Partners in conjunction with a Historic Preservation consultant (P. 5, Para. 1). Creation and approval of the HPMP was performed in consultation with the SHPO as well as several local governments (P. 6, Para. 1).

Information about any future proposed demolition or new construction within the project, or any future proposed alteration of the identified historic properties of the powerhouse, canal, bridge, and dam will be submitted by the project operator (presently Ice House Partners, Inc.) for review and comment by the Massachusetts Historical Commission (MHC) (the office of the Massachusetts State Historic Preservation Officer). A Project Notification form (950 CMR 71 Appendix A) (copy provided in the appendix of this HPMP) will be completed and submitted to the MHC with a USGS locus map clearly showing the boundaries of the project and the location of the activity, with scaled project plans showing existing and proposed conditions. The PNF shall reference the MOA for the project and this HPMP.

*NOTE: Revision 2 includes feedback from MHC.*

## **Background Information**

*Project Description, Historic Context, Survey Descriptions, Known Historic Properties (powerhouse, bridge, canal, and dam)*

### **Project Description**

Grady Research Inc. / Ice House Partners, Inc. owns and operates a hydroelectric plant at 323 West Main Street, Ayer, Massachusetts. Architectural resources on the property include the modern Grady Research Office Building, constructed in 2000-2002 and the Power House constructed of brick in 1909 and significantly rebuilt in 2000-2002. Structural resources include the Canal for diverting the flow of the Nashua River on the south bank, built c. 1790 and the Dam for impounding the Nashua River and feeding the Canal, built in 1909 and repaired in 2000-2002. Operations consist of electrical power generation from water flow as it is diverted from the Nashua River into the modern head gate of the Canal and through the Power House, now equipped with modern generators. The Area of Potential Effect (APE) coincides with the town of Ayer parcel 1 on map 38.

### **Historic Context**

The Grady Research Office Building and associated historic structures are located in the town of Ayer on the Nashua River in the former mill village of Mitchellville which, by the 1890s, contained a half dozen residences and the current buildings' industrial predecessors. The central existing building on the subject property is the modern Grady Research Office Building at 323 West Main Street. This is joined on the north by the 1909 Victorian Eclectic and Panel Brick style Power House as well as the canal and dam for the power house. The four resources occupy a parcel of 11 acres and are surrounded by wooded land. The former Fort Devens military base is across West Main Street to the south and the Nashua River and CSX Railroad (north of the Nashua River) are adjacent to the north. The river is approximately 220' wide at this point and attracted industrialists involved in grist milling, paper making, dye manufacture, power generation and ice making from 1790 to 1967. The one-story brick building formerly used as the dye house, dynamo room and later the ice house fell into extreme disrepair by the 1980s, was burned in 2000 and replaced with the current three story modern brick Grady Research Office Building. The power house, canal and dam have been repaired using historically accurate materials and designs and placed back into



service. The Mitchellville section of Ayer was historically and continues to be a small industrial node in comparison to downtown Ayer where a variety of large scale industries once did business. The section of town known as Pingryville on Route 2A at the Littleton town line is comparable in scale and use to Mitchellville. Areas of Historical Significance or Themes include Archaeology, Architecture (Existing historic Power House, Canal and Dam), Commerce (Former use as street railway Power House, later as an ice manufacturing and storage building), Engineering (Former Power House), Industry (Former use as saw mill) and Transportation (Former use as a street railway power generating facility).

#### **Existing Survey Description**

Massachusetts Historical Commission (MHC is the Massachusetts State Office of Historic Preservation or SHPO) Historic Resource Inventory Forms completed for the property include MHC Form F #912 for the West Main Street Power House; MHC Form F #913 for the c. 1920 highway bridge over the canal but not the Nashua River; MHC Form F #914 for the West Main Street Canal; MHC Form F #915 for the Dam Across the Nashua River and MHC Form A (Area E) which documents the West Main Street Ice House Industrial Area as a whole and includes the four individual resources noted above. The survey forms were completed in 2007 and meet current MHC standards for documentation of historic resources in Massachusetts. No known additional resources are in need of documentation. Any potential historic or pre-historic resources that are currently unknown and are discovered later will be documented to MHC standards. (*P. 11-12, Principle 3, P. 13, Principle 6*)

#### **Known Historic Properties**

##### **Power House**

The Power House at the property at 323 West Main Street, Ayer was built in 1906 to house electrical power generating turbines for the Fitchburg & Leominster Street Railway. Water from the river is channeled to the power house by the associated canal (MHC F Form #914; built 1790); water is impounded by the associated dam, (MHC F Form #915, built 1906).

The building had deteriorated significantly by the mid 20<sup>th</sup> century and the brick exterior was partly reconstructed in 2001 with the intention of matching surviving materials and design elements including the configuration, size and trim of openings, building footprint, side elevations, eave trim, ornamental brick work and brick type. Historic window sash configurations have been replaced with single pane fixed sash and the north facing openings are now filled in with brick as is the south facing unit adjacent to the main entry to the building. The design of the south-facing entry doors was unknown prior to the 2001 rehabilitation. The original roof was flat but is now a modern-built ridge hip form. The south wall of the power house was entirely rebuilt of brick that closely matches the original. The remaining walls all underwent repairs, repointing and replacement of some

brick and window sills. Original turbines have been replaced with modern hydroelectric power generating equipment.

The three-story building has at its lowest level the canal outflow structure built on a concrete foundation; the second level contains the two power generating turbines rotating horizontally and the upper level, visible from West Main Street, contains two electrical generators manufactured by Canadian Hydro Components. Dimensions of the building are approximately 50' x 20'. Water enters the building from the west at approximately five feet below the grade of West Main Street and flows out to the east approximately 20' below.

Decorative architectural features on the exterior of the powerhouse include the segmental arched window tops, wall fields divided into four bays on the long axis and two on the short sides. Eaves are decorated with canted soldier bricks while the tops of the panels are denticulated. Window sills are quarry-faced modern cut granite. Modern steel safety railings line the southern edge of the canal above which the power house is built. The ridge-hipped roof form has at its center a pyramidal ventilator with metal roof while the main roof is shingled in asphalt. The overall design and condition are excellent as is the quality of the recent work to reconstruct the building.

The site, while largely reconstructed, altered by the removal of ruins of historic industrial buildings and construction of the large modern industrial building at 323 West Main Street (MHC #128), continues to function as a hydroelectric power generating complex constructed in brick with traditional design concepts that incorporate the Nashua River and surviving canal, dam and other elements of the historic mill site. The Power House is locally significant for its embodiment of Late Industrial Period (1870-1915) power generation technology and architectural design features. As a power generation plant of the Fitchburg and Leominster Street Railway, it also contributed to the development of the regional streetcar network in the early 20<sup>th</sup> century.

### **Bridge**

The disused highway bridge over the canal is located just upriver or west of the Powerhouse and was built c. 1920. The bridge has concrete abutments and a concrete deck. Located on the disused concrete bridge over the canal are concrete blocks bearing stamped eagle motifs that symbolize the National Recovery Administration's 1930s efforts to promote fair trade during the depression. These were scattered over the property at the time of purchase by Grady Research and were relocated to this location during construction of the modern office building. The concrete bridge replaced an earlier wood bridge from the mid 19<sup>th</sup> century.

### **Canal**

The canal off the Nashua River at the property at 323 West Main Street, Ayer was built in 1790 to channel water along the south bank of the Nashua River to a grist

mill and later to the Power House of the Fitchburg and Leominster Street Railway (MHC F Form #912, built c. 1906; water is impounded by the associated dam, MHC F Form #915, also built 1906). Construction of the canal walls is rubble stone with a combination of granite capstones and a concrete cap at various locations along the head and tail races. Canal walls were repaired and repointed in 2001. The bottom of the canal is bedrock. The headrace is spanned by a disused highway bridge of concrete abutments and concrete deck as well as concrete blocks stamped with the eagle symbol of the Depression era National Recovery Administration. The canal, including the head and tail races, measures 50' in width, 17' in depth and 109' in length.

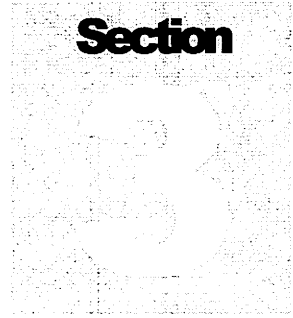
The head gate wall, upstream of the headrace, has at its core the historic concrete wall built for the Fitchburg and Leominster Street Railway in 1906, over which has been applied modern concrete as a method of repair and stabilization. The steel head gate on the upstream side of the head gate wall is a modern replacement and consists of two electrically operated openings while the historic wood and steel head gate formerly contained four openings powered by hand. Dimensions of the head gate wall are 50' in width, 17' in height, and 6' in thickness.

The canal is the only example of the type and size surviving in the town of Ayer. The rubble stone construction, some of which may date to 1790, with historic as well as modern repairs, indicates the continuity of industrial activity in the town. The Canal is locally significant as a rare surviving Federal Period structure that contributed to the industrial development of the town of Ayer. As part of the power generation complex of the Fitchburg and Leominster Street Railway, it also contributed to the development of the regional streetcar network in the early 20<sup>th</sup> century.

#### **Dam**

The dam across the Nashua River with its south end at the property at 323 West Main Street, Ayer was built in 1906 to impound water of the Nashua River and to channel water to the associated canal and former Fitchburg and Leominster Street Railway Power House (MHC F Form #912, also built 1906; water is channeled through the associated canal, MHC F Form #914). The dam is (based on low water observation by the owner) a rock filled timber crib example of the gravity type with a concrete cap. The design head is 10' and the overflow or spillway section is uncontrolled and occupies the full width of the dam crest. The rock filled timber crib, which may pre-date the 1906 concrete construction, is combined with concrete buttresses and a concrete cap approximately 220' in length. Fourteen buttresses or slabs with their narrow edges facing up and down river are spaced 13.5' on center and retain flashboards in between. The construction date is stamped in concrete on the north side and suggests the dam is a transitional structure from the time when purely earth and stone masonry construction was being augmented and later entirely displaced by the relatively new material of concrete.

Repairs to the dam from 2000-2002 included creating a profiled (to the river bed) concrete form on the downstream face to pump concrete up and under the Walker Road (north) side where significant turbulence had created an undercut area; capping old stone construction with concrete on the north side abutment; placement of additional concrete on the upstream toe to plug small leaks that occurred over time as the wooden cribbing rotted and failed; replacement of the Walker Road let-down gate and repair of the operating mechanisms for same; repair of spalling concrete on the Walker Road (north) abutment and construction of the downstream retaining wall from the north abutment. The dam is the only example on the Nashua River between Pepperell, Massachusetts, approximately 10 miles downriver and Fitchburg, approximately 10 miles upriver. The dam is locally significant for its associations with the industrial development of the town of Ayer and as part of the power generation complex of the Fitchburg and Leominster Street Railway which contributed to the development of the regional streetcar network in the early 20<sup>th</sup> century.



## **Project Management**

### *Preservation Goals & Priorities*

#### **Description of Goals for Operation and Historic Preservation**

Goals for operation of the West Main Street Ice House Industrial Area include continued power generation and occupancy of the modern Office Building as professional office space. Ice House Partners intends to guide management of the property through the principal of continued use. The licensee recognizes the desirability of maintaining a historic property's associations with its past by discouraging structural and functional changes. (*P. 9, Para. 1*)

Goals for preserving historic resources comprising the West Main Street Ice House Industrial Area include the continued use and regular maintenance of the Power House, Canal and Dam. Maintenance of buildings, machinery and structures is integral to continued use and shall be a priority. As appropriate management of historic properties is a requirement for licensing by FERC, all potential effects of facility operations on historic resources will be considered when implementing the HPMP. Potential effects arise mainly from repairs to the Power House, Canal and Dam.

As of 2008, reconstruction of the structures is complete and no new construction or structural alterations are anticipated. Repairs are to be carried out as necessary with materials to match the existing. Materials appropriate for repairing the structures generally include water struck brick in the case of the Power House; split granite in the case of the Canal and concrete for the Dam. Techniques for maintenance and repair are to be minimally intrusive and are selected on the basis of preserving and protecting the character, associations, feeling and integrity of the historic structures.

The Technical Preservation Services Division of the National Park Service publishes Preservation Briefs to aid in maintaining historic properties, examples include: Preservation Brief #2 "Repointing Mortar Joints in Historic Masonry Buildings", Brief #15 "Preservation of Historic Concrete" and Brief #47 "Maintaining the Exterior of Small and Medium Size Historic Buildings" may be consulted prior to performing any repair work. The primary goal in choosing

maintenance materials and techniques is to minimize the loss or degradation of the resources that constitute the West Main Street Ice House Industrial Area.

The HPMP will occupy a place in the Ice House Partners Management Structure. The HPMP will provide project staff with access to pertinent information but will include mechanisms to protect sensitive data should such data be identified. (P. 14-15, Principle 10).

## **Project Effects & Mitigation/Management Measures**

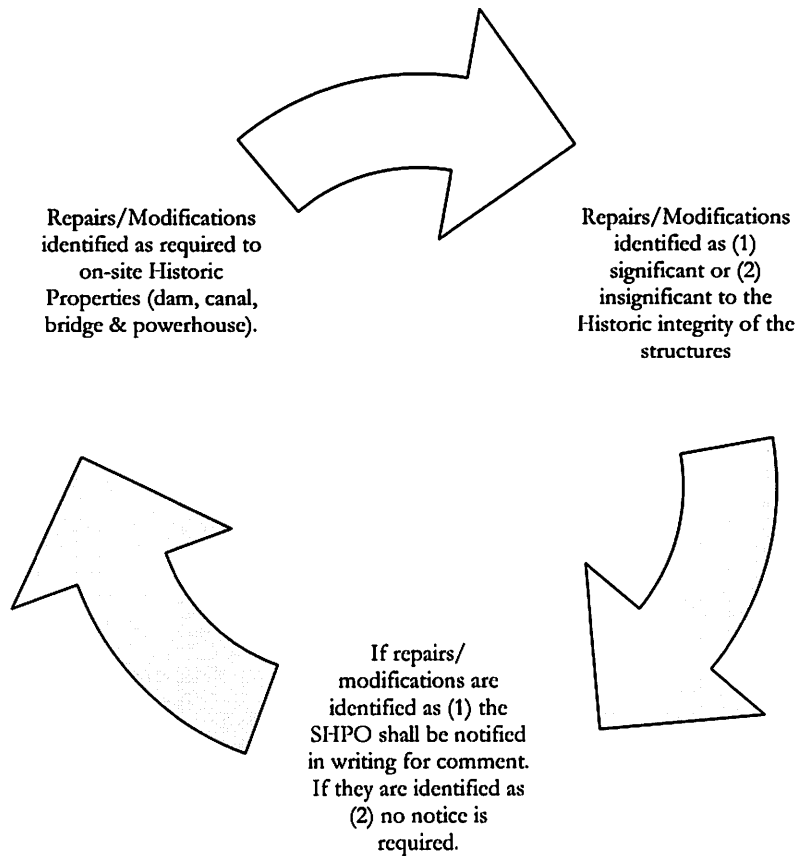
**Schedule:**

Draft of HPMP to MA SHPO and FERC	February 15, 2009
Review Process Comment & Editing Period	Feb/March 2009
Approved Final Draft	March 15, 2009
Submit Approved HPMP to MA SHPO and FERC	November 10, 2009 <sup>7</sup>

See next page for a **Flow Chart** to determine SHPO notification requirement for repairs/modifications/alteration to onsite historic structures

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<sup>7</sup> According to the Exemption Order as issued on March 31, 2008 – Article 16 issued a due date for filing of the HPMP as 12 months from the date of Exemption Order issuance.



Additionally, Ice House Partners, Inc. has a daily, weekly, monthly and annual self-inspection schedule and checklist. Due to the fact that the building on site is owner-occupied, there is a regular vigilance over the entire property. Specifically, on a an annual basis the condition of the identified Historic Properties will be visually inspected, and any changes, repairs or alterations shall be described and discussed and classified as to whether or not SHPO involvement will be required.

**Monitoring Protocol**

Monitoring of the loss or degradation of the resources that constitute the West Main Street Ice House Industrial Area will be carried out by the management and employees of the property owner, Ice House Partners. Findings of regular visual inspections of shoreline areas, building components and structural materials will be entered into the Maintenance Log and addressed as necessary (*P. 13, Principle 6*).



**Procedures for Addressing Unanticipated Effects**

Discovery of unanticipated historic resources is highly unlikely. All structural and architectural resources on the 11 acre site were documented in 2007 by a Historic Preservation Planning consultant to the management of Ice House Partners and are now accounted for in the HPMP. Effects to historic resources during project emergencies will be addressed within the framework of the HPMP and with adherence to the Goals for Historic Preservation, i.e. Techniques for maintenance and repair are to be minimally intrusive and are selected on the basis of preserving and protecting the character, associations, feeling and integrity of the historic

Any renovation and/or repair made to any identified Historic Properties will take into account the historic significance of the properties and will document and evaluate each activity to determine its potential effects on such properties and will take mitigation measures, where appropriate to minimize and disturbance of such properties.

**Treatment of Human Remains**

All human remains encountered on the property will be reported in accordance with MGL Chapter 38, section 3.

Although not anticipated, should human remains be discovered at any point during the project activities, Ice House Partners, Inc. will alert the MA State Police Detectives in the appropriate county for proper handling and reporting.<sup>8</sup>

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<sup>8</sup> State Police team for discovery of human remains typically includes a forensic pathologist and a forensic archeologist. Also, please note the need to include any specific requirements related to the Native American Grave Protection and Repatriation Act (NAGPRA).

## **Implementation Procedures**

The Ice House Partners, Inc. **HPMP Coordinator** is: Liisa Grady Dowd, VP/GM.

Where training for a particular employee is appropriate (based on his/her job description) a written record of such training shall be kept in his/her personnel file.

Ice House Partners shall conduct a meeting annually to discuss the results of the site self-inspections. At such time, any issues or concerns regarding on site historic properties will be discussed and expedited, as appropriate.

### **Identification of Exempt Activities**

Activities exempt from review by FERC and SHPO will include regular operations and routine maintenance of the Power House, Canal and Dam as these activities possess little or no chance of affecting historic resources (*P. 13, Principle 6*).

Implementation of Rehabilitation Standards and Oversight Protocol  
Rehabilitation of the structural and architectural resources in the West Main Street Ice House Industrial Area is complete

### **Evaluation Procedures**

Effects to the West Main Street Ice House Industrial Area caused by its continued use are considered to be normal structural wear and deterioration to the Power House and future construction of the Fish Ladder and Eel Passage over the Dam.

Shoreline erosion along the Canal and Dam are expected to be minimal as the riverbed and canal bed are bedrock.

Vandalism is non-existent to date and is not expected to increase.

Evaluation of these effects is to be carried out by weekly visual monitoring in the case of structural deterioration and shoreline erosion.

A formal review by with FERC and the SHPO will be employed in the case of the Fish Ladder and Eel Passage construction (*P. 13, Principle 6*). The HPMP will consider other applicable local, state and federal laws and be implemented in conjunction with them. (*P. 14, Principles 8, 9*)

This HPMP will be reviewed and revised upon request from appropriate resource agencies in response to changing regulatory conditions, as they might apply to the historic properties on site.

Information about any future proposed demolition or new construction within the project, or any future proposed alteration of the identified historic properties of the powerhouse, canal, bridge, and dam will be submitted by the project operator (presently Ice House Partners, Inc.) for review and comment by the Massachusetts Historical Commission (MHC) (the office of the Massachusetts State Historic Preservation Officer). A Project Notification form (950 CMR 71 Appendix A) (copy provided in the appendix of this HPMP) will be completed and submitted to the MHC with a USGS locus map clearly showing the boundaries of the project and the location of the activity, with scaled project plans showing existing and proposed conditions. The PNF shall reference the MOA for the project and this HPMP.

**Public Interpretation**

No provision for public interpretation is planned since the West Main Street Ice House Industrial Area is private property.

## Section



## Appendices

**Property Survey Forms & Photos**

**Project Map/Drawing/Photo**

**Relevant Correspondence**

**Inspection Report(s) (HPMP specific page(s))**

**Copy of the Memorandum of Agreement**

**\*\*Please note that all photos related to the Project Survey Forms are included on a CD submitted to MHC with the hardcopy version of the Revision 2 document. Original copies of these accepted forms are on file with both FERC & the MHC. The FERC uploaded online Revision 2 version has the photos as additional uploaded files.\*\***

FORM F - STRUCTURE

Assessor's Number USGS Quad Area(s) Form number  
Map 38 Parcel 1 Ayer E 914  
Town Ayer

Massachusetts Historical Commission  
20 Morrissey Boulevard  
Massachusetts Archives Building  
Boston, MA 02125

Place (neighborhood or village)

Address or Location 323 West Main Street

Photographs  
See Continuation Sheet

Name West Main Street Canal

Ownership Public Private X

Type of Structure (check one):

- bridge
- powerhouse
- canal X carousel
- dam
- boat or ship
- fort street
- gate tower
- kiln wall
- lighthouse windmill
- pound tunnel
- other (specify)

Date of Construction 1790

Source Hurd's County History, p. 666

Architect, Engineer or Designer:

Materials Stone

Alterations (with dates)

Condition Excellent

Moved no X yes Date

Acreage 11

Setting Rural-industrial

Sketch Map  
See Continuation Sheet

Recorded by Sanford Johnson  
Organization Grady Research/Ice House Partners  
Date (Month/Year) 8/07

DESIGN ASSESSMENT Describe important features and evaluate in terms of other structures within the community.

The canal off the Nashua River at the property at 323 West Main Street, Ayer was built in 1790 to channel water from the Nashua River to a grist mill and later to the power house of the Fitchburg and Leominster Street Railway (MHC F Form 912, built c. 1906; water is impounded by the associated dam, MHC F Form 915, also built 1906). Construction of the canal walls is rubble stone with a combination of granite capstones and a concrete cap at various locations along the head and tail races. Canal walls were repaired and repointed in 2001. The bottom of the canal is bedrock. The headrace is spanned by a disused highway bridge of concrete abutments and concrete deck as well as concrete blocks stamped with the eagle symbol of the Depression era National Recovery Administration. The canal, including the head and tail races, measures 50' in width, 17' in depth and 109' in length.

The headgate wall, upstream of the headrace, has at its core the historic concrete wall built for the F&L in 1906, over which has been applied modern concrete as a method of repair and stabilization. The steel headgate on the upstream side of the headgate wall is a modern replacement and consists of two electrically operated openings while the historic wood and steel headgate formerly contained four openings powered by hand. Dimensions of the headgate wall are 50' in width, 17' in height, and 6' in thickness.

The canal is the only example of the type and size surviving in the town of Ayer. The rubble stone construction, some of which may date to 1790, with historic as well as modern repairs, indicates the continuity of industrial activity in the town.

HISTORICAL NARRATIVE Explain the history of the structure, and how it relates to the development of the community.

Industrial activity at the site began c. 1790 when Joshua Longley of Shirley bought the parcel which was then in Groton, and constructed the canal as well as a previously existing dam and mill. According to Hamilton Hurd's History of Middlesex County, Massachusetts, published in 1890, the "canal above and below the mill was constructed by plowing and flowing water over it." Mr. Longley was, according to Groton historian Samuel Green, a founding member of the Western Society of Middlesex Husbandmen in 1794, a group concerned with promoting improvements in agriculture, a pursuit that would benefit the grist mill operator. He is described as "Esquire" in marriage records of his daughter and is listed as a trustee of the Groton Academy (later Lawrence Academy) in 1799, served as town clerk of Shirley and was the father of eight children.

Mr. Longley sold the property, according to the owner's current owner's historical research, to Edward Staples in 1811, by which time the land had been annexed by the town of Shirley. The subsequent owners were Whitcomb, Edgerton and Priest from 1827-1834. The three men leased a mill privilege on the site to Henry P. Howe who built a shop for his 30 employees to manufacture paper drying equipment, a business that lasted for three years before moving to Worcester. Whitcomb, Edgerton and Priest also built a four-engine paper mill at the site and dug a second canal for additional water power. The paper mill is depicted on the 1830 map of Shirley drawn by Caleb Butler.

The paper mill burned in 1837, bankrupting Whitcomb, Edgerton and Priest who sold the property to Eli Page in 1839. Caleb Butler's 1847 history of Groton describes Mr. Page's mill and canal as the only one on the Nashua in Shirley and long occupied by a grist and saw mill and a papermill. Mr. Butler notes that the site is desirable for its plentiful flow throughout the year, its proximity to the Fitchburg Railroad (then just recently built) and that it is capable of much improvement. A subsequent owner of the canal and associated property was William Mitchell from c. 1870-1873, a manufacturer of shoddy wool fabric until fire destroyed his mill and caused the abandonment of the canal and dam until 1895. The Nashoba Manufacturing Company, makers of mordant dyes, bought the property in that year and made use of the canal by building a wheel house above it at the approximate location of the present power house. The company also constructed a one-story brick mill just south of the canal adjacent to the wheel house. The Nashoba Manufacturing Company wheel house was replaced in 1906 with the current power house when the Fitchburg and Leominster Street Railway Company bought the mill privilege for electricity generation purposes, a use they continued until 1925. Subsequent owners named Horgan operated an ammonia plant for ice making in the former dye house from 1933-1967. Turbines in the wheel house over the canal appear to have remained in operation during the tenure of the ice plant.

Throughout the multiple transfers of the property, the 1790 canal appears to have been the least altered feature of the mill privilege, the dam, power house and mill all having been replaced or rebuilt. Changes did occur from 1999-2002 when the current owner caused some of the rubble walls of the canal to be repointed and some of the capstone to be replaced. The headgate wall of the canal was probably rebuilt during the F&L period of ownership and was again largely repaired in the early 21<sup>st</sup> century. Repairs at that time include replacement of the three hand-powered wooden and steel headgates with two modern steel gates powered by electricity. The second canal dug in the 1830s was filled in during construction of the 1949 highway bridge over the Nashua River that replaced the north-south route over the canal and river. During the recent rehabilitation efforts, the filled canal was found to contain the concrete blocks stamped with the eagle motif of the Depression Era National Recovery Administration, an agency established to promote fair trade symbolized by the eagle. It is unknown how the blocks arrived in the canal but seem to have served as fill.

The site represents a relatively small industrial node for Ayer when considering its much larger historical industrial center surrounding the downtown and the railroad depot. However, the surviving power house, dam and canal represent the ongoing industrial use of one of Ayer's notable historic mill seats.

**BIBLIOGRAPHY and/or REFERENCES:** Hurd, Hamilton, History of Middlesex County, 1890; USGS Topographic Quadrangles, 1887-1950; County Atlases, 1875, 1889; Historic maps, 1795, 1830, 1856; Current owners' field notes; Condit, Carl, American Building Art, 19<sup>th</sup> and 20<sup>th</sup> Century, 1960; Butler, Caleb. History of the Town of Groton. 1848; Resident Directory, 1931; Green, Samuel Abbott. Groton Historical Series. 1877-1899; Richardson, Ralph A. "Historical Articles About Ayer", 1980-1981; Sargent, William. Town of Ayer: Some of the Leading Industries, Principal Buildings and Prominent Citizens. 1902;

Recommended for listing in the National Register of Historic Places. *If checked, you must attach a National Register Criteria Statement Form.*

#### Photos

See photos included on enclosed CD or uploaded as HPMP photos

Town Ayer

Place (neighborhood or village)

Address or Location 323 West Main Street

Name West Main Street Power House

Ownership Public Private X

Type of Structure (check one):

- bridge
- powerhouse X
- canal carousel
- dam
- boat or ship
- fort street
- gate tower
- kiln wall
- lighthouse windmill
- pound tunnel
- other (specify) Hydroelectric Power House

Date of Construction 1906

Source Turbine manufacturer's plan dated June, 5 1906

Architect, Engineer or Designer:

Materials Brick, stone sills, concrete foundation

Alterations (with dates)

Condition Excellent

Moved no X yes Date

Acreage 11

Setting Rural-industrial

Massachusetts Historical Commission  
220 Morrissey Boulevard  
Massachusetts Archives Building  
Boston, MA 02125

Photographs  
See Enclosed CD or uploaded photos

Sketch Map  
See Continuation Sheet

Recorded by Sanford Johnson  
Organization Grady Research/Ice House Partners  
Date (Month/Year) 8/07

**DESIGN ASSESSMENT** Describe important features and evaluate in terms of other structures within the community.

The Power House at the property at 323 West Main Street, Ayer was built in 1906 to house electrical power generating turbines for the Fitchburg & Leominster Street Railway. Water from the river is channeled to the power house by the associated canal (MHC F Form 914; built 1790; water is impounded by the associated dam, MHC F Form 915, built 1906).

The building had deteriorated significantly by the mid 20<sup>th</sup> century and the brick exterior was partly reconstructed in 2001 with the intention of matching surviving materials and design elements including the configuration, size and trim of openings, building footprint, side elevations, eave trim, ornamental brick work and brick type. Historic window sash configurations have been replaced with single pane fixed sash and the north facing openings are now filled in with brick as is the south facing unit adjacent to the main entry to the building. The design of the south-facing entry doors was unknown prior to the 2001 rehabilitation. The original roof was flat but is now a modern-built ridge hip form. The south wall of the power house was entirely rebuilt of brick that closely matches the original. The remaining walls all underwent repairs, repointing and replacement of some brick and window sills. Original turbines have been replaced with modern hydroelectric power generating equipment.

The three-story building has at its lowest level the canal outflow structure built on a concrete foundation; the second level contains the two power generating turbines rotating horizontally and the upper level, visible from West Main Street, contains two electrical generators manufactured by Canadian Hydro Components. Dimensions of the building are approximately 50' x 20'. Water enters the building from the west at approximately five feet below the grade of West Main Street and flows out to the east approximately 20' below.

Decorative architectural features on the exterior of the powerhouse include the segmental arched window tops, wall fields divided into four bays on the long axis and two on the short sides. Eaves are decorated with canted soldier bricks while the tops of the panels are denticulated. Window sills are quarry-faced modern cut granite. Modern steel safety railings line the southern edge of the canal above which the power house is built. The ridge-hipped roof form has at its center a pyramidal ventilator with metal roof while the main roof is shingled in asphalt. The overall design and condition are excellent as is the quality of the recent work to reconstruct the building.

The site, while largely reconstructed, altered by the removal of ruins of historic industrial buildings and construction of the large modern industrial building at 323 West Main Street (MHC #128), continues to function as a hydroelectric power generating complex constructed in brick with traditional design concepts that incorporate the Nashua River and surviving canal, dam and other elements of the historic mill site.

**HISTORICAL NARRATIVE** *Explain the history of the structure, and how it relates to the development of the community.*

Industrial activity at the site of 323 West Main Street began in 1790 when Joshua Longley of Shirley bought the parcel, which was then in Groton, and constructed the dam, grist mill and canal. According to Hamilton Hurd's History of Middlesex County, Massachusetts, published in 1890, the "canal above and below the mill was constructed by plowing and flowing water over it." Mr. Longley sold the property, according to the owner's historical research, to Edward Staples in 1811, by which time the land had been annexed by the town of Shirley.

Subsequent owners of the property operated a paper mill in the 1830s-1850s and a lumber mill in the 1840s-1850s. The lumber mill was run by Eli Page, a farmer from Shirley who moved to the site in 1839. Caleb Butler's 1848 History of the Town of Groton states that this was the only one on the Nashua in Shirley and that the site was long occupied by a grist mill and a papermill. Mr. Butler notes that the site is desirable for its plentiful flow throughout the year, its proximity to the Fitchburg Railroad (then just recently built) and that it is capable of much improvement. The area by this time was known as "Papermill Village" as depicted on the 1856 Walling map of Middlesex County which also depicts the saw mill. Later, a shoddy mill on the site in the 1870s run by William Mitchell was destroyed by fire which left the parcel vacant until c. 1890 according to Hurd's county history and to Middlesex County atlases from 1875 and 1889.

The Nashoba Manufacturing Company, makers of dyeing mordant, a component that improves fastness of dyes in the presence of moisture and light, bought the parcel in 1895. By their construction efforts, the facility began to resemble the current configuration of structures. A wheel house at the location of the current power house was built over the canal. Power came out of the wheel house via a belt and entered the one-story brick dye factory which was located slightly closer to the canal than is the modern office (MHC #128), although the rectangular shape is similar to the current building.

The Fitchburg and Leominster Street Railway bought the property by 1906 and quickly adapted it for electrical power generation. The most significant change the company made was the replacement of the c. 1895 wheel house with the current power house building, although its function in 1906 was still that of wheel house rather than power generation. Copies of the manufacturers' plans for installing the power generating equipment are in the possession of the current owner and depict one left hand and two right hand 48" turbines of the McCormick type in the wheel house that turned a shaft connected to the dynamos on the former dye house. The James Leffel Company of Ohio was responsible for construction of the turbines in the wheel house and for the headgate machinery that admitted water to the power house. The F&L Street Railway operated cars through Ayer into Shirley and environs and had a route described by Ralph Richardson in a 1981 "Public Spirit" newspaper article that went down West Main Street and, rather than turning north as did the roadway at that time, went straight west over the river on its own bridge. The F&L operated the power house and associated dynamo room until competition with the automobile forced the company out business in 1925. The building was put to use after this time to provide power to the Horgan family's ice making plant, located in the former dynamo room from c. 1933-1967. The Sanborn Fire Insurance map from 1944 labels the wheel house but does not specify if it powered machinery in the ice plant.

Structural deterioration set in after the ice business ceased, resulting in the collapse of the south wall of the power house and either the collapse or vandalism of smaller parts of the remaining walls including granite window sills and some brick. Reconstruction efforts by the current owner have returned the power house to much the same appearance it had at the time of initial construction. Also, installation of modern power generating equipment has allowed for the continued function of the power house, though its use has changed slightly from a wheel house to an electrical power generating facility.

The site represents a relatively small industrial node for Ayer when considering its much larger historical industrial center surrounding the downtown and the railroad depot. However, the surviving power house, dam and canal represent the ongoing industrial use of one of Ayer's notable historic mill seats.

**BIBLIOGRAPHY and/or REFERENCES:** Hurd, Hamilton, History of Middlesex County, 1890; USGS Topographic Quadrangles, 1887-1950; County Atlases, 1875, 1889; Historic maps, 1795, 1830, 1856; Current owners' field notes; Condit, Carl, American Building Art, 19<sup>th</sup> and 20<sup>th</sup> Century, 1960; Butler, Caleb. History of the Town of Groton. 1848; Resident Directory, 1931; Green, Samuel Abbott. Groton Historical Series. 1877-1899; Richardson, Ralph A. "Historical Articles About Ayer", 1980-1981; Sargent, William. Town of Ayer. Some of the Leading Industries, Principal Buildings and Prominent Citizens. 1902;

Recommended for listing in the National Register of Historic Places. *If checked, you must attach a National Register Criteria Statement Form.*



INVENTORY FORM CONTINUATION SHEET

Town

Property Address

Massachusetts Historical Commission  
220 Morrissey Boulevard  
Massachusetts Archives Building  
Boston, MA 02125

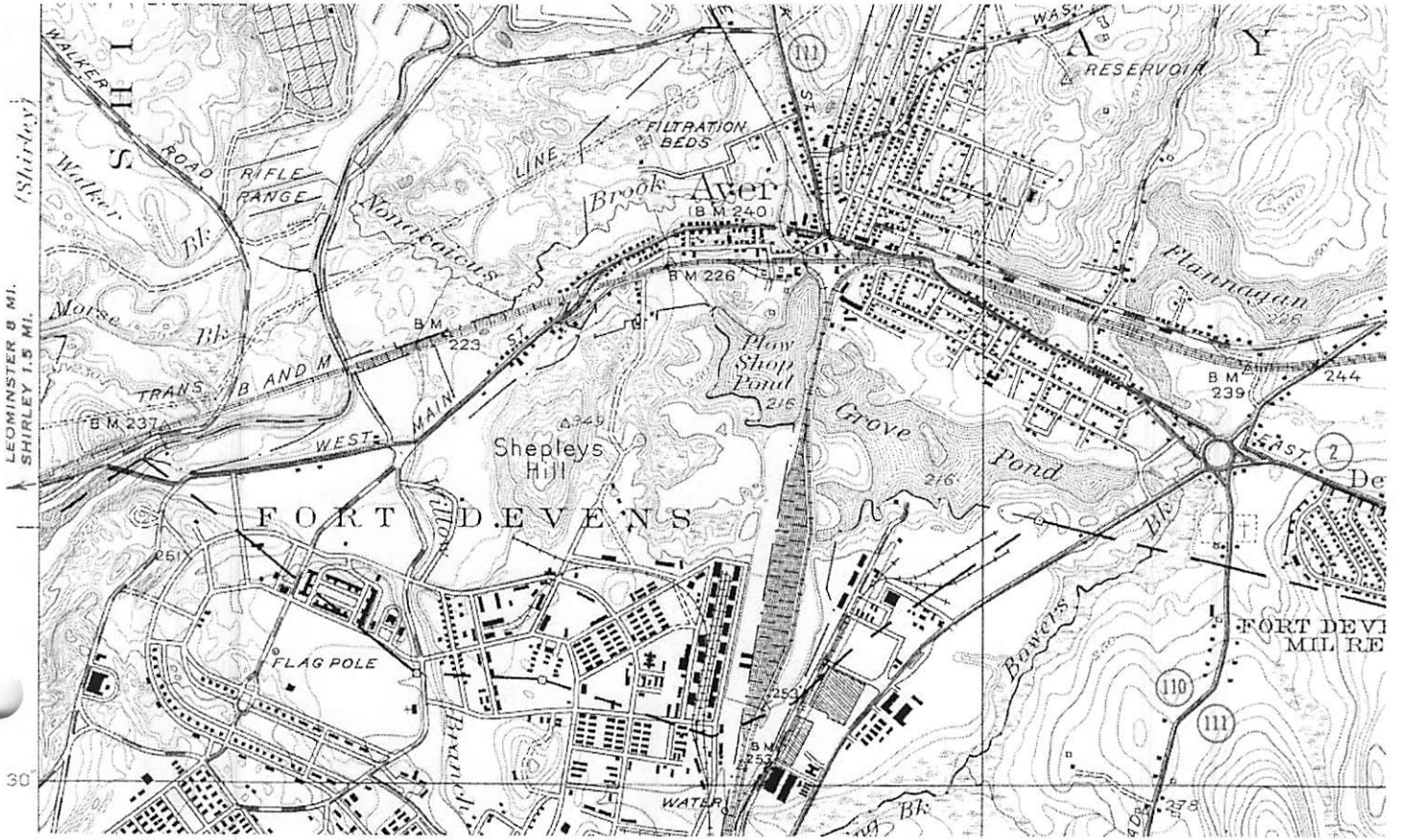
Ayer

323 West Main Street

Area(s) Form No.

Sketch Map

North Toward Top



INVENTORY FORM CONTINUATION SHEET

Town

Property Address

Ayer

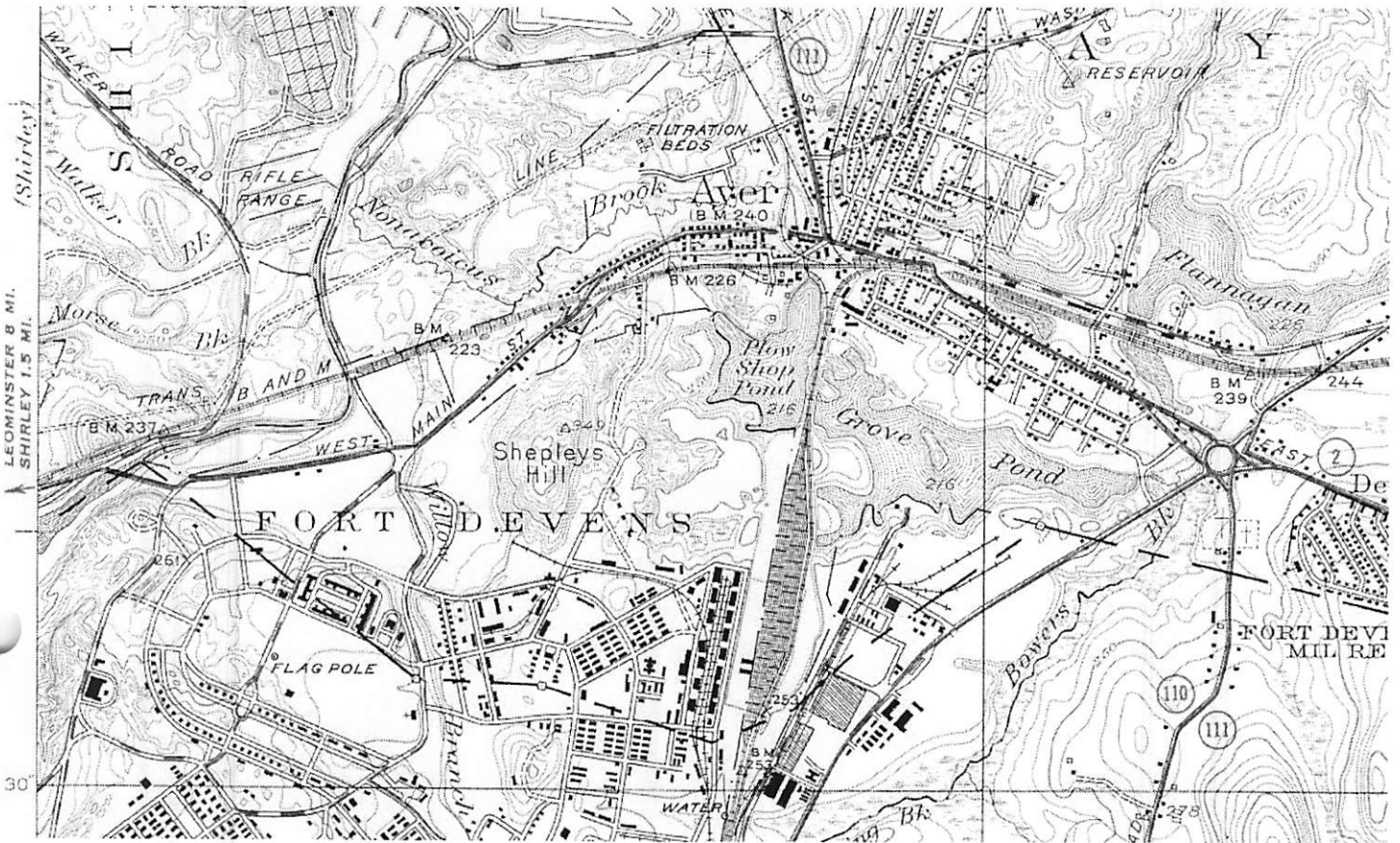
323 West Main Street

Massachusetts Historical Commission  
20 Morrissey Boulevard  
Massachusetts Archives Building  
Boston, MA 02125

Area(s) Form No.  
E E 914

Sketch Map

North Toward Top



**FORM F - STRUCTURE**

**Assessor's Number** Map 38, Parcel 1  
**USGS Quad** Ayer  
**Area(s)** E  
**Form number** 915  
 Town Ayer

Massachusetts Historical Commission  
 10 Morrissey Boulevard  
 Massachusetts Archives Building  
 Boston, MA 02125

**Place (neighborhood or village)**  
**Address or Location** 323 West Main Street

**Photographs**  
 See enclosed CD or uploaded photos

**Name** Dam across Nashua River

**Ownership** *Public* *Private X*

**Type of Structure (check one):**

bridge  
 powerhouse  
 canal carousel  
 dam X  
 boat or ship  
 fort street  
 gate tower  
 kiln wall  
 lighthouse windmill  
 pound tunnel  
 other (specify)

**Date of Construction** c. 1790; rebuilt, 1906

**Source** Hurd county history, p. 666, Concrete date stamp, north bank

**Architect, Engineer or Designer:**

**Materials** Concrete cap, stone, earth crib, wood  
 flashboards

**Alterations (with dates)**

**Condition** Excellent

**Moved** no X yes Date

**Acreage** 11

**Setting** Rural-industrial

**Sketch Map**  
 See Continuation Sheet

**Recorded by** Sanford Johnson  
**Organization** Grady Research/Ice House Partners  
**Date (Month/Year)** 8/07

**DESIGN ASSESSMENT** Describe important features and evaluate in terms of other structures within the community.

The dam across the Nashua River with its south end at the property at 323 West Main Street, Ayer was built in 1906 to impound water of the Nashua River and to channel water to the associated canal and former Fitchburg and Leominster Street Railway power house (MHC F Form 912, also built 1906; water is channeled through the associated canal, MHC F Form 914. The dam is (based on low water observation by the owner) a rock filled timber crib example of the gravity type with a concrete cap. The design head is 10' and the overflow or spillway section is uncontrolled and occupies the full width of the dam crest. The rock filled timber crib, which may pre-date the 1906 concrete construction, is combined with concrete buttresses and concrete cap approximately 220' in length. Fourteen buttresses or slabs with their narrow edges facing up and down river are spaced 13.5' on center and retain flashboards in between. The construction date is stamped in concrete on the north side and suggests the dam is a transitional structure from the time when purely earth and stone masonry construction was being augmented and later entirely displaced by the relatively new material of concrete.

Repairs to the dam from 2000-2002 included creating a profiled (to the river bed) concrete form on the downstream face to pump concrete up and under the Walker Road (north) side where significant turbulence had created an undercut area; capping old stone construction with concrete on the north side abutment; placement of additional concrete on the upstream toe to plug small leaks that occurred over time as the wooden cribbing rotted and failed; replacement of the Walker Road let-down gate and repair of the operating mechanisms for same; repair of spalling concrete on the Walker Road (north) abutment and construction of the retaining downstream retaining wall from the north abutment. The dam is the only example on the Nashua River between Pepperell, Massachusetts, approximately 10 miles downriver and Fitchburg, approximately 10 miles upriver.

**HISTORICAL NARRATIVE** Explain the history of the structure, and how it relates to the development of the community.

Industrial activity at the site began in 1790 when Joshua Longley of Shirley bought the parcel which was then in Groton, and constructed the dam, a grist mill and canal. This is according to Hamilton Hurd's *History of Middlesex County, Massachusetts*, published in 1890, which also states that Mr. Longley built a saw mill shortly after his initial construction. Dams built during this period were most frequently built of earth, timber or a combination, although rubble and cut stone examples did exist. It is unknown which form was in place at this location. Mr. Longley was, according to Groton historian Samuel Green, a founding member of the Western Society of Middlesex Husbandmen in 1794, a group concerned with promoting improvements in agriculture, a pursuit that would benefit the grist mill operator.

Mr. Longley's dam survived until 1840 when it was rebuilt by a subsequent owner, Eli Page who used the dam, canal and his mill to saw lumber. Mr. Page was a farmer in Shirley before coming to Ayer (then South Groton or Groton Junction) and is described in William Sargent's Town of Ayer. Some of the Leading Industries, Principal Buildings and Prominent Citizens as a miller and lumberman who sold a great deal of product to the Fitchburg Railroad during its construction in the 1840s and to builders in the new railroad center of Groton Junction. Caleb Butler's 1847 history of Groton describes Mr. Page's mill as the only one on the Nashua in Shirley and long occupied a grist and saw mill and a papermill. Mr. Butler notes that the site was desirable for its plentiful flow throughout the year, its proximity to the Fitchburg Railroad (then just recently built) and that it is capable of much improvement. The area by this time was known as "Papermill Village" as depicted on the 1856 Walling map of Middlesex County which also depicts the saw mill.

Research by the property owner indicates the presence of a sawmill run by John and William Chisholm in the 1890s who, again according to Hurd, rebuilt the dam a second time, again in an unknown configuration or material. The publication date of 1890 for Hurd and his mention of the reconstruction suggest it happened in the mid 1880s, although no descriptive information is given. The Fitchburg and Leominster Street Railway bought the property by 1906 and quickly adapted it for electrical power generation. The most significant change was the replacement of the c. 1890 wheel house with the current power house, but the dam was also rebuilt, this time with the current rubble-filled timber crib and concrete cap. The date stamp on the north abutment of 1906 confirms F&L as the builder, as they stamped corporate initials and the same date on the headgate wall of the associated canal. Since 1999, the dam has been repaired, mainly at the north abutment but remains largely in the form it had at the initial construction in 1906.

The site represents a relatively small industrial node for Ayer when considering its much larger historical industrial center surrounding the downtown and the railroad depot. However, the surviving power house, dam and canal represent the ongoing industrial use of one of Ayer's notable historic mill seats.

**BIBLIOGRAPHY and/or REFERENCES:** Hurd, Hamilton, History of Middlesex County, 1890; USGS Topographic Quadrangles, 1887-1950; County Atlases, 1875, 1889; Historic maps, 1795, 1830, 1856; Current owners' field notes; Condit, Carl, American Building Art, 19<sup>th</sup> and 20<sup>th</sup> Century, 1960; Butler, Caleb. History of the Town of Groton. 1848; Resident Directory, 1931; Green, Samuel Abbott. Groton Historical Series. 1877-1899; Richardson, Ralph A. "Historical Articles About Ayer", 1980-1981; Sargent, William. Town of Ayer. Some of the Leading Industries, Principal Buildings and Prominent Citizens. 1902;

Recommended for listing in the National Register of Historic Places. *If checked, you must attach a National Register Criteria Statement Form.*

INVENTORY FORM CONTINUATION SHEET

Town

Property Address  
Ayer

323 West Main Street

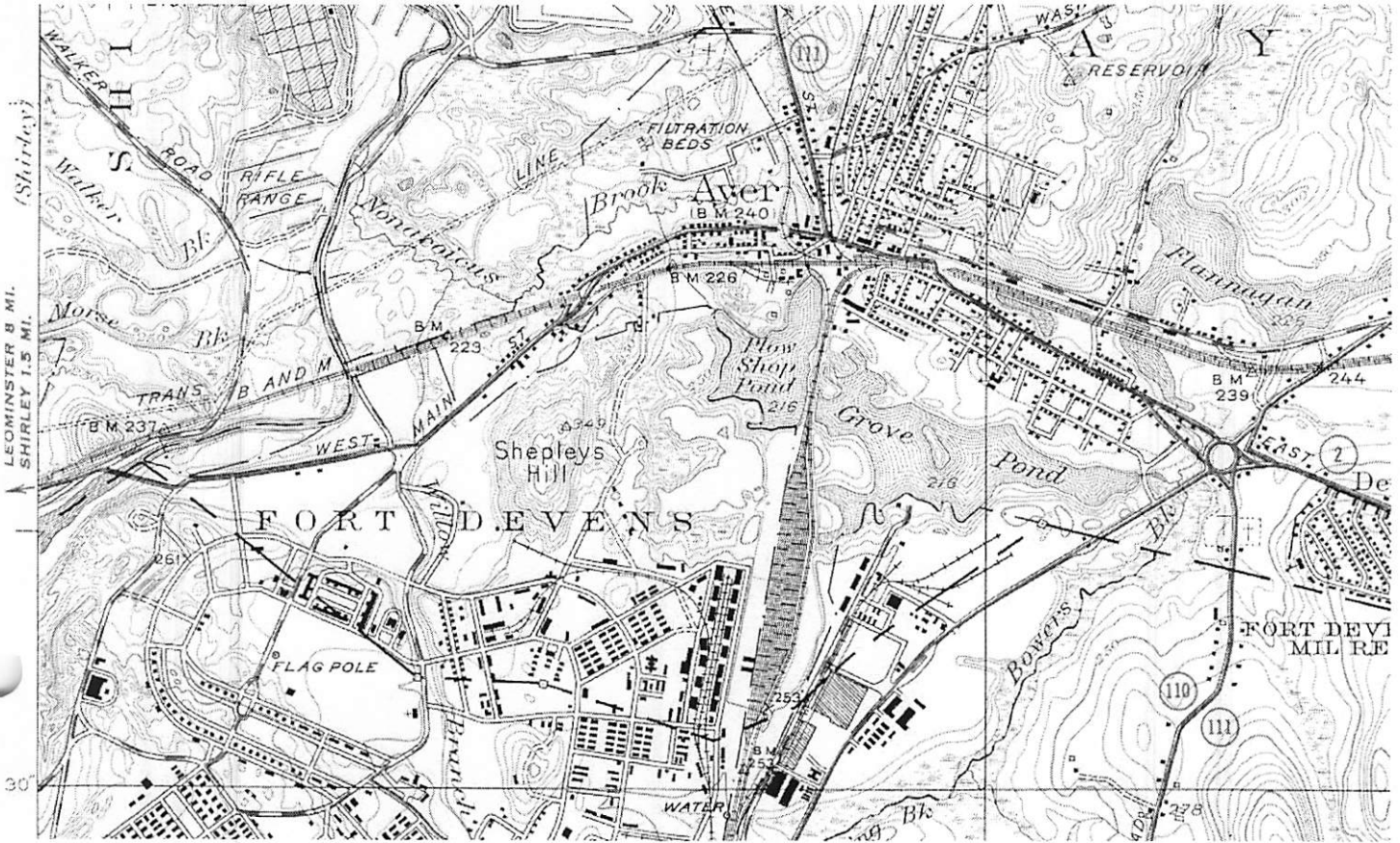
Massachusetts Historical Commission  
10 Morrissey Boulevard  
Massachusetts Archives Building  
Boston, MA 02125

Area(s) Form No.  
E E

915

Sketch Map

North Toward Top



**FORM A - AREA**

Assessor's Sheets USGS Quad Area Letter Form Numbers in Area  
Map 38 Parcel 1 Ayer E 912-915, 128

Massachusetts Historical Commission  
20 Morrissey Boulevard  
Massachusetts Archives Building  
Boston, MA 02125

**Town:** Ayer

**Place:** Mitchellville

**Photographs**  
*See enclosed CD or uploaded photos*

**Name of Area:** West Main Street Ice House  
Industrial Area

**Current Use:** Industrial/Professional

**Construction Dates or Period:** 1790, 1906, 2002

**Overall Condition:** Excellent

**Major Intrusions and Alterations:** Modern professional office building, reconstructed  
powerhouse

**Acreage:** 11

**Recorded by:** Sanford Johnson

**Organization:** Grady Research/Ice House Partners

**Date (Month/Year):** 8/07

**Sketch Map**  
*See continuation sheet*

## AREA FORM

### ARCHITECTURAL DESCRIPTION:

*Describe architectural, structural and landscape features and evaluate in terms of other areas within the community. See Continuation Sheet*

#### Introduction

The Grady Research building and associated historic structures are located on the Nashua River in the former mill village of Mitchellville which, by the 1890s, contained a half dozen residences and the current buildings' industrial predecessors. The central existing building is the modern Grady Research building at 323 West Main Street. This is joined on the north by the Victorian Eclectic and Panel Brick style Power House as well as the canal and dam for the power house and the disused concrete highway bridge that crosses the canal but not the river. The five resources occupy a parcel of 11 acres and are surrounded by wooded land. The former Fort Devens military base is across West Main Street to the south and the Nashua River and CSX Railroad (north of the Nashua) are adjacent to the north. The river is approximately 220' wide at this point and attracted industrialists involved in grist milling, paper making, dye manufacture, power generation and ice making from 1790 to 1967. The one-story brick building formerly used as the dye house, dynamo room and later the ice house fell into extreme disrepair by the 1980s, was burned in 2000 and replaced with the current three story brick building. The power house, canal and dam have been repaired using historically accurate materials and designs and placed back into service. The Mitchellville section of Ayer was historically and continues to be a small industrial node in comparison to downtown Ayer where a variety of large scale industries once did business. The section of town known as Pingryville on Route 2A at the Littleton town line is comparable in scale and use to Mitchellville.

#### Buildings

The principal building at 323 West Main Street is the 60' x 160' modern three-story, front-gabled brick office of three by five bays and. Decorative features include ornamental brickwork at the eaves and across the façade at the top of the second story and the near symmetrical fenestration in the west-facing façade. Windows are mostly paired casements with fixed transom lights above and have segmental arched tops with slim brick hoods. The wheel window in the gable peak of the façade which has soldier brick trim in the round and single casements in the north and south elevations are exceptions to this. The main entry below the wheel window has simple trim with a flat-roofed hood above. The northwest corner of the second story is the site of a steel balcony overlooking the dam and power house. The gabled roof is oriented parallel to the road.

The Power House (MHC #912) is located approximately 75' to the northwest and is built of brick that closely matches the modern office. It was built above the associated canal off the Nashua River to generate electricity for the Fitchburg & Leominster Street Railway in 1906. Water from the river is channeled to the power house by the associated canal (MHC F Form 914, built c. 1790; water is impounded by the associated dam, also built in 1906 MHC F Form 915).

The power generating building had deteriorated significantly by the late 20<sup>th</sup> century and the brick exterior was largely rebuilt in 2001 with the intention of matching surviving materials and design elements including the configuration, size and trim of openings, building footprint, side elevations, eave trim, ornamental brick work and brick type. Historic window sash configurations have been replaced with single pane fixed sash and the north facing openings are now filled in with brick as is the south facing unit adjacent to the main entry to the building. The design of the south-facing entry doors was unknown prior to the 2001 rehabilitation. The original roof was flat but is now a modern-built ridge hip form clad in asphalt shingles. The south wall of the power house was entirely rebuilt of brick that closely matches the original. The remaining walls all underwent repairs, repointing and replacement of some bricks and window sills. Original turbines have been replaced with modern hydroelectric power generating equipment.

The three-story form has at its lowest level the canal outflow structure built on a concrete foundation; the second level contains the two power generating turbines rotating horizontally and the upper level, visible from West Main Street, contains two turbines and electrical generators manufactured by Canadian Hydro Components. Dimensions of the building are approximately 50' x 20'. Water enters the building from the west at approximately five feet below the grade of West Main Street and flows out to the east approximately 20' below.

Decorative architectural features on the exterior of the powerhouse include the segmental arched window tops, wall fields divided into four paneled bays on the long axis and two on the short sides. Eaves are decorated with canted soldier bricks, as on the eaves of the office building, while the tops of the panels are denticulated. Window sills are quarry-faced modern cut granite. Modern steel safety railings line the southern edge of the canal above which the power house is built. The ridge-hipped roof form has at its center a pyramidal ventilator with metal roof while the main roof is shingled in asphalt. The overall design and condition are excellent as is the quality of the recent work to reconstruct the building.

The Power House is the only functioning mini-hydro facility in the town. And may be Ayer's only remaining evidence of the presence of the Fitchburg and Leominster Electric Street Railway. Additionally, it is one of a decreasing number of early 20<sup>th</sup> century industrial structures that continues to function as it was originally designed to do.

#### Canal

The canal off the Nashua River was built in 1790 to channel water from the Nashua River to a grist mill built over the canal in the same year. The mill was replaced several times, most recently in 1906 by the current power house. Construction of the walls is rubble stone with a combination of granite capstones and a concrete cap at various locations along the head and tail races. Canal walls were repaired and partially repointed in 2001. The bottom of the canal is bedrock. The headrace is spanned by a disused highway bridge of concrete (MHC #913) abutments and concrete deck, built c. 1920. The canal, including the head and tail races, measures 50' in width, 17' in depth and 109' in length.

The concrete headgate wall at the west end of the canal has at its core the historic concrete wall, over which has been applied modern concrete as a method of repair and stabilization. The steel headgate on the upstream side of the headgate wall is a modern replacement and consists of two electrically operated openings while the historic wood and steel headgate formerly contained four openings powered by a system of hand-turned shafts and gears. Dimensions of the headgate wall are 50' in width, 17' in height, and 6' in thickness.

The canal is the only example of the type surviving in the town of Ayer. The rubble stone construction, with historic as well as modern repairs, indicates the continuity of industrial activity in the town.

#### Dam

The dam across the Nashua River with its south end at the property at 323 West Main Street was built in 1906 to impound water of the Nashua River and to channel water to the former Fitchburg and Leominster Street Railway power house. The dam is (based on low water observation by the owner) a rock filled timber crib example of the

gravity type with a concrete cap. The design head is 10' and the overflow or spillway section is uncontrolled and occupies the full width of the dam crest. The rock filled timber crib, which may pre-date the 1906 construction, is combined with concrete buttresses, concrete cap and upstream face approximately 220' in length, built in 1906. Concrete is also the material of the 14 buttresses or slabs with their narrow edges facing up and down river, spaced 13.5' on center. The construction date is stamped in concrete on the north side and suggests it is a transitional structure from the time when purely earth and stone masonry construction was being augmented and later entirely replaced by the relatively new material of concrete.

Repairs to the dam from 2000-2002 include capping old stone construction with concrete on the north side abutment as well as filling leaks with concrete. The Dam is the only example on the Nashua River between Pepperell, Massachusetts, approximately 10 miles downriver and Fitchburg, approximately 10 miles upriver.

#### **Conclusion**

Additional modern features of the property include the low wall off the northwest corner of the office made of split granite reclaimed from the site and two ornamental arrangements of historic electrical power generating equipment placed on concrete pads and also reclaimed from the site. Located on the disused concrete bridge over the canal are concrete blocks bearing stamped eagle motifs that symbolize the National Recovery Administration's 1930s efforts to promote fair trade during the depression.

The overall complex, while largely reconstructed, altered by the removal of ruins of historic industrial buildings and construction of the large modern industrial building at 323 West Main Street, continues to function as a hydroelectric power generating facility constructed in brick with traditional design concepts that incorporate the Nashua River and surviving canal, dam and other elements of the historic mill site.



## **HISTORICAL NARRATIVE:**

*Explain historical development of the area. Discuss how the area relates to the historical development of the area. See Continuation Sheet*

### **Introduction**

The West Main Street Ice House Industrial Area is a relatively small component of the town Ayer's formerly significant industrial economic base. It is located around two and one half miles west of the downtown and was the site of Federal Period grist and saw mills, operated by Joshua Longley of Shirley. The tradition of grinding corn and sawing lumber continued under the power of the flow of the Nashua River until the mid 19<sup>th</sup> century when fire destroyed the buildings and the property was put to different uses. These included lumber milling, the manufacture of paper, dye, generating electrical power for the Leominster and Fitchburg Street Railway and later the manufacture of ice in the mid 20<sup>th</sup> century.

Decline of streetcar travel and improvements in industrial freezing techniques in the 1960s brought on the change from industrial use to disuse. Streetcar services were discontinued in 1925 and ice manufacture in 1967 which preceded the abandonment of the mill building, power house, canal and dam. The vacant state of the property had allowed structural deterioration to claim significant building elements such as the power house roof, parts of the wall and nearly all the windows. The former dye house and dynamo room, located just south of the power house, were badly deteriorated by the 1990s and demolished around the end of the 20<sup>th</sup> century to make way for the modern office building. The canal and dam remained largely unchanged but somewhat deteriorated. Repairs have since been completed on the dam and canal.

### **Federal Period 1775-1830**

Industrial activity at the site began in 1790 when Joshua Longley of Shirley (b. 1751, d. 1814) bought the parcel which was then in Groton, and constructed the dam, grist mill and canal. According to Hamilton Hurd's History of Middlesex County, Massachusetts, published in 1890, the "canal above and below the mill was constructed by plowing and flowing water over it." Hurd also states that Mr. Longley was influential in construction of the first bridge over the Nashua River at this location, (possibly near the current c. 1920 concrete bridge) and that he paid to have it located near his property. A bridge is depicted at this location on the 1795 Series map of Groton by Oliver Prescott, although no mills are shown. Mr. Longley was, according to Groton historian Samuel Green, a founding member of the Western Society of Middlesex Husbandmen in 1794, a group concerned with promoting improvements in agriculture, a pursuit that would benefit the grist mill operator. He is described as "Esquire" in marriage records of his daughter and is listed as a trustee of the Groton Academy in 1799, town clerk of Shirley and father of eight children. Alan Whipple describes him in Academy Days as a federal tax assessor in 1798, justice of the peace, and a private in the militia.

Mr. Longley sold the property, according to the owner's historical research, to Edward Staples in 1811, by which time the land had been annexed by the town of Shirley. The subsequent owners from 1827-1834 were Whitcomb, Edgarton and Priest who built a four-engine paper mill and dug a second canal for additional water power, located south of the first and almost parallel to West Main Street, under the area that is currently the parking area. The three men also leased a mill privilege on the site to Henry P. Howe who built a shop for his 30 employees to manufacture paper drying equipment, a business that lasted for three years before moving to Worcester. The paper mill is depicted on the 1830 map of Shirley drawn by Caleb Butler. The man named Whitcomb may be Adolphus Whitcomb who is referred to in Caleb Butler's 1848 History of the Town of Groton as a resident of Shirley who served in the Massachusetts General Court from 1827-1829.

### **Early Industrial Period 1830-1870**

The paper mill burned in 1837, bankrupting Whitcomb, Edgarton and Priest who sold the property to Eli Page in 1839. While no mills are depicted on Caleb Butler's 1847 map of the area, Hurd states that Mr. Page rebuilt Joshua Longley's dam and the paper mill in 1840 before leasing it to several operators over the ensuing 20 years, by the end of which time it had deteriorated significantly, prompting Mr. Page (or possibly one of his sons, either Thomas, born in 1811 or Alfred, born in 1817) in 1862 to rebuild the building. Eli Page and his sons were farmers in Shirley before coming to Ayer (then South Groton or Groton Junction). Eli is described in William Sargent's Town of Ayer: Some of the Leading Industries, Principal Buildings and Prominent Citizens as a miller and lumberman who sold a great deal of product to the Fitchburg Railroad during its initial construction in the 1840s and to builders in the new railroad center of Groton Junction. Caleb Butler's 1847 history of Groton describes Mr. Page's millsite as the only one on the Nashua in Shirley and long occupied by a grist and saw mill and a papermill. Butler notes that the site is desirable for its plentiful flow throughout the year, its proximity to the Fitchburg Railroad (then just recently built) and that it is capable of much improvement. The area by this time was known as "Papermill Village" as depicted on the 1856 Walling map of Middlesex County which also depicts the saw mill. John Roberts acquired the mill and privilege in 1862 and operated the paper mill until it was again destroyed by fire in 1866, shortly after which time it was bought by William Mitchell.

### **Late Industrial Period 1870-1915**

In 1871, Mr. Mitchell constructed a 150' x 50' "Handsome, three-story, brick mill" according to Hurd, and did business in wool shoddies (fabric made from scrap) until another fire destroyed the building in 1873. Despite Mr. Mitchell's short tenure, the name Mitchellville is how residents sometimes refer to the area today. Mr. Mitchell's obituary from 1898 states that he served in the Civil War and died at the Chelsea, MA Soldier's Home where he was admitted in 1873. The property was idle from that time until at least 1890 according to Hurd's county history and to the 1875 and 1889 atlases for Middlesex County. Research by the property owner indicates the presence of a sawmill run by John and William Chisholm in the 1890s before the mill ruins and privilege were sold in 1895 to the Nashoba Manufacturing Company, makers of dyeing mordant, a dye ingredient that improves fastness of color in the presence of moisture and light.

By the Nashoba Manufacturing Company's construction efforts, the facility began to resemble the current configuration of structures. A wheel house at the location of the current power house was built over the initial canal (the second one dug in the 1820s or 1830s having been filled in 2001.) Power came out of the wheel house via a belt and entered the dye factory which was located closer to the canal than is

the modern office, although the rectangular shape is similar to the current building. At the time of the 1902 Sanborn map, the bridges over the canal and the river were wooden structures. Also, a 60' chimney at the south side gave draft to the furnace, a steam engine provided auxiliary power when the river was low and half the building was used for storage. The building was a one-story brick form with a low gabled roof according to undated historic photos on file in the Ayer library historical room. The bridges appear in the photos to be wood pony-truss designs, meaning the trusses rose above the sides of the roadway but were not joined above as in a through-truss. The dam is pictured but is made of an undetermined material. The wheel house is not pictured.

The Fitchburg and Leominster Street Railway bought the property by 1906 and quickly adapted it for electrical power generation. The most significant change was the replacement of the c. 1890 wheel house with the current power house. The former dye house was put to use as the dynamo room, work shop, office, store room and oil house. Also, the F&L rebuilt the dam once again, this time with the current rubble-filled timber crib and concrete cap. While the F&L Street Railway operated cars through Ayer into Shirley and environs, it does not appear from Sanborn maps to have had trackage on the bridge over the canal or the Nashua River. The streetcar route as described by Ralph Richardson in a 1981 "Public Spirit" newspaper article indicates it went down West Main Street and, rather than turning north as did the roadway, went straight west over the river on its own bridge. Manufacturers' 1906 plans for installing the power generating equipment are in the possession of the current owner and depict one left hand and two right hand 48" turbines of the McCormick type that turned a shaft connected to the dynamos in the former dye house. Construction of the turbines was done by the James Leffel Company in Ohio.

#### **Early Modern Period 1915-1945**

The configuration of the property remained virtually unchanged at least until 1921 with the exception of the replacement of the wooden bridges over the canal and river with concrete structures. (The existing concrete bridge over the canal appears to date from c. 1920 while the one over the river has been removed) Termination of streetcar service occurred in 1925 as a result of competition with the automobile and caused the property to revert to the town of Ayer for non-payment of taxes.

In 1933, the Horgan family bought the canal, dam, former power house and dynamo room and adapted it for use as an ice-making plant. The 1931 resident directory for Ayer gives Charles Horgan's address as East Main Street where he also ran the Ayer Ice Company in that year. Presumably he bought property and used it to make ice the following year. The 1944 Sanborn Fire Insurance map depicts an ammonia plant with office and work room located in the west end of the building as they had been during the ownership of F&L, ice storage and loading dock in the south side and miscellaneous storage in the east end of the building. The Horgans sold a great deal of their product to the army at Fort Devens.

During the Depression, the Works Progress Administration was responsible for constructing or reconstructing the bridge over the Nashua River and chose to stamp some concrete blocks with the eagle symbol of the National Recovery Administration. It is unknown what purpose the blocks served, whether guardrails, abutments or something else. These have been recovered from the second canal in the area of the current parking lot where they were dumped as fill around 1949 and are now recovered and located at the north end of the disused concrete bridge over the headrace of the canal.

#### **Modern Period 1945-1960**

Ice manufacture by the Horgan family reached 30 tons per day and survived until 1967, giving the ice company the longest duration of any enterprise at this location since its initial use in 1790. According to USGS topographic quadrangles, the crossing of the Nashua River was altered between 1944 and 1950 from a north south route over the existing but now disused concrete bridge to the current east-west route. Ralph Richardson, writing in the "Public Spirit" newspaper in 1981 gives the date of 1949 for construction of the current right of way into Shirley if not the existing bridge. It was at this time the second canal south of the original was filled in with the concrete from the deck of the bridge over the Nashua. The scrap remained in that location until its removal in 2002 by Grady Research.

#### **1999-2007**

The current owner of the building, dam and canal is the company Ice House Partners, (which also owns Grady Research, occupant of the modern offices) who bought the property from the Horgan family in 1999 with a view toward constructing the office building to run on the reconstructed dam and power house. This was accomplished by the year 2001. The architect of the office was John Grady, PE, owner of Grady Research and Ice House Partners. Mr. Grady worked closely with John Manners of CASLE Corporation in Avon, CT.

#### **BIBLIOGRAPHY and/or REFERENCES:**

Ayer, Groton, Harvard and Littleton, Massachusetts Directory. Salem, Massachusetts: Charles H. Dunham, Pub., 1931. Contains addresses, occupations of Ayer residents. Available at the Ayer Library Historical Room.

Ayer. Map. USGS Topographic Quadrangle, 1939, 194, 1951. Depict buildings, roads, railroads and numerous additional cultural and natural features from the early to mid 20<sup>th</sup> century. Available at the State Library.

Ayer. Map. Sanborn Fire Insurance Company. New York, New York: Sanborn Map Company, August 1887; July 1892; May 1897; October 1902; March 1912; November 1921; November 1921 corrected to April 1949. Depicts building types, uses, number of stories, building materials, interior features. Available at the State Library.

Beers, F. W. Atlas of Middlesex County, Massachusetts. New York: 1875. Available at the State Library Special Collections.

Butler, Caleb. History of the Town of Groton. Boston: T. R. Marvin, 1848. Narrative history of Ayer's predecessor town from the point of view of an antiquarian. Available at the Groton Public Library.

Conklin, Edward P. Middlesex County and Its People. New York: Lewis Historical Publishing Company, Inc., 1927. Available at the local library.

Green, Samuel Abbott. Groton Historical Series. Groton, Massachusetts: 1877-1899. Narrative history of Ayer's predecessor town from the point of view of an antiquarian. Available at the Groton Public Library and Ayer Library.

Groton. Map. 1795. Depicts some roads and some features in Ayer's predecessor town. Available at the state archives.

Hurd, Hamilton D. History of Middlesex County, Massachusetts. Philadelphia: J. W. Lewis and Co., 1890. Contains a chapter with narrative history on Ayer; describes industrial cultural, social, commercial and agricultural activities during the late 19th century. Available at the Ayer Library.

Richardson, Ralph A. "Historical Articles About Ayer Written by Ralph A. Richardson and Published in "The Public Spirit", January 1980-January 1981."

Sargent, William. Town of Ayer: Some of the Leading Industries, Principal Buildings and Prominent Citizens. Ayer: William Sargent, 1902. Noted by the local librarian to be an excellent source of local history. Available at the Ayer Library Historical Room.

Walker, George H. Atlas of Middlesex County, Massachusetts. Boston: 1889. Shows land use, building footprints, owner names. Available at the Ayer Public Library Historical

Walling, H. F. Middlesex County. Map. 1856. Available in files of the local historical commission.

Whipple, Alan. Academy Days. Groton, Ma: Published by the author. 1985.

Wright, William. "Photographs: c. 1853-1900". Unpublished collection of images of buildings, street scenes, railroad activity with captions by an anonymous source. Available at the Ayer Library Historical Room.

X Recommended as a National Register Historic District. *If checked, you must attach a completed National Register Criteria Statement Form.*

**Area Data Sheet**

MHC No.	Assessor No.	Street No.	Address	Historic Name	Date of Construction	Style/Form	Uses: Present
912	Parcel 1, Map 38	323	West Main Street	Fitchburg and Leominster Street Railway Power House	1906	Victorian Eclectic/Panel Brick	Power House
913	Parcel 1, Map 38	323	West Main Street	Concrete bridge	c. 1920	N/A	Unused
914	Parcel 1, Map 38	323	West Main Street	Canal	c. 1790	N/A	Power generation
128	Parcel 1, Map 38	323	West Main Street	Modern office	2002	No style	Professional
915	Parcel 1, Map 38	323	West Main Street	Dam	1906	Concrete, gravity	Water impoundment

## National Register of Historic Places Criteria Statement Form

Check all that apply:

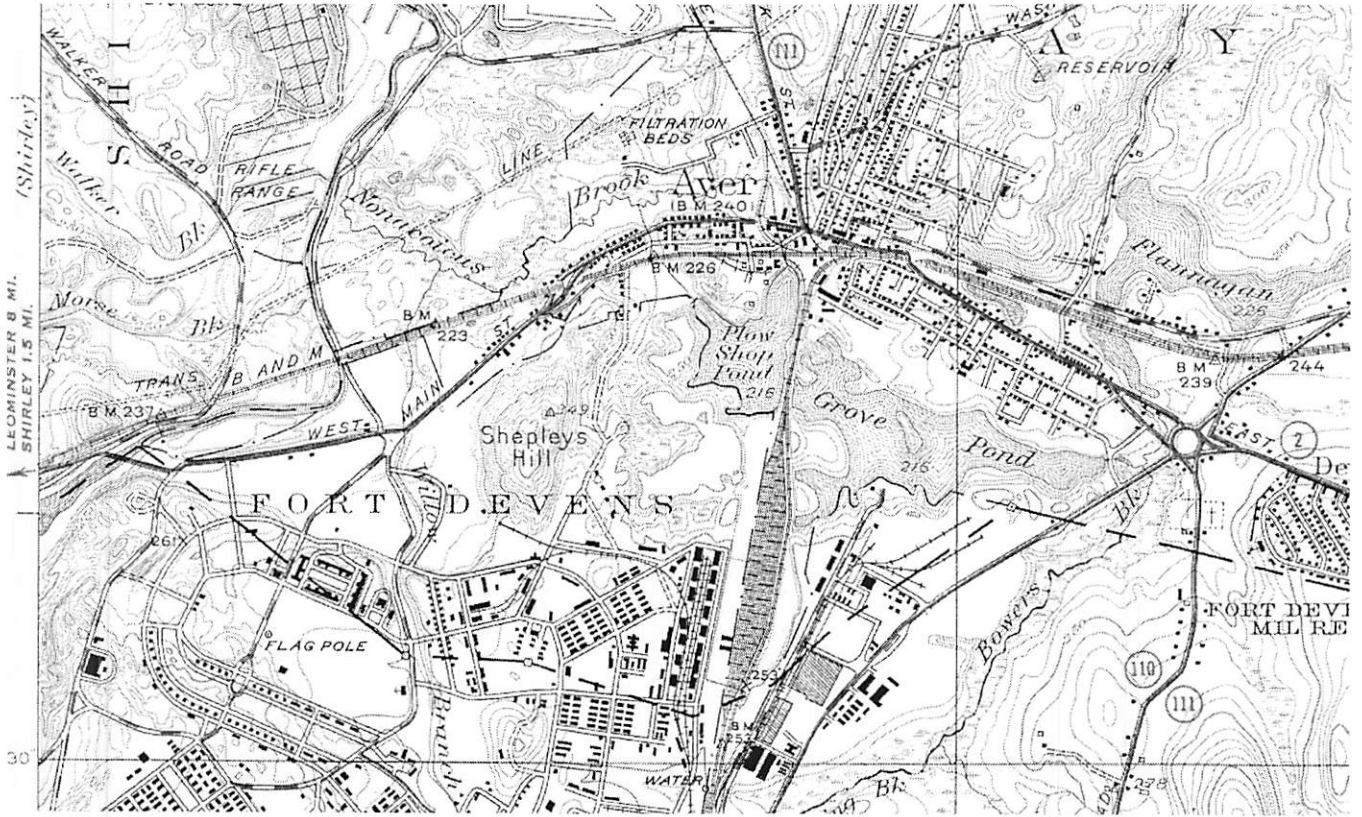
	Individually eligible	Eligible <u>only</u> in a historic district						
	Contributing to a potential historic district				Potential historic district			
Criteria:	<input checked="" type="checkbox"/> A	<input type="checkbox"/> B	<input checked="" type="checkbox"/> C	<input type="checkbox"/> D				
Criteria considerations:	A	B	C	D	E	F	G	

Statement of significance by: Sanford Johnson  
*The criteria that are checked in the above sections must be justified here.*

The former Fitchburg and Leominster Street Railway Power generating facility on West Main Street is potentially eligible for listing in the National Register of Historic Places under criterion A. The canal, dam and power house are associated with the events and activities surrounding the development of the industrial component of the town's economy. The combination of grist and lumber milling, paper making, dye manufacture, electrical power generation and ice manufacture from the early 19<sup>th</sup> century through the mid 20<sup>th</sup> century confirm the utility of the dam and canal site. While the site is smaller than some others in Ayer, it has a longer period of significance than others in town, having endured almost two centuries from 1790-1967. Most other industrial sites in the town post date the coming of the railroad in 1845. The site continues to bear a strong connection through its surviving historic structures to the industrial trends and activities established in Ayer in the mid 19<sup>th</sup> century. The area including the dam, canal and power house as well as the associated modern office building is eligible at the local level.

Sketch Map

North Toward Top



Relevant Correspondence related to REVISION 2 changes

09/24/2009 12:11 FAX 817 727 5128

MASS HIST COMH

002/05



**The Commonwealth of Massachusetts**

February 27, 2009 William Francis Galvin, Secretary of the Commonwealth  
Massachusetts Historical Commission

Liisa Dowd  
VP/GM Ice House Partner's Inc.  
323 West Main Street  
Ayer, MA 01432

RE: Ice House Partners Inc. Hydroelectric, Ayer, MA. FERC No. P-12769-000.  
MHC #RC.38557.

Dear Ms. Dowd:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the draft Historic Properties Management Plan (HPMP) submitted for the project referenced above in accordance with the Memorandum of Agreement (MOA) for the project.

The HPMP provides useful advice in the operation and maintenance of the facility in accordance with professional historic preservation standards. Please provide the MHC with one (1) copy of the final HPMP, that is finalized in accordance with MHC's comments.

To finalize the HPMP, please include the following additional information:

- A table of contents.
- A USGS locus map that shows the boundaries of the project.
- A copy of the MOA as an appendix.
- A copy of a blank Project Notification Form (950 CMR 71, Appendix A, copy available through the MHC website under "Forms").
- Photocopies of the photographic images of historic properties, and USGS locus maps and smaller scale maps clearly showing the locations of the historic properties. The photocopies of the text of the MHC inventory forms in the HPMP appendix are not identical to the original inventory forms submitted to the MHC for MHC's inventory, missing the photographs, USGS locus maps and smaller scale maps showing the locations of the historic properties.
- On pages 3 and 15, add a paragraph:  
Information about any future proposed demolition or new construction within the project, or any future proposed alteration of the identified historic properties of the powerhouse, canal, bridge, and dam, will be submitted by the project operator (presently Ice House

220 Morrissey Boulevard, Boston, Massachusetts 02125  
(617) 727-8470 • Fax: (617) 727-5128  
[www.state.ma.us/sec/mhc](http://www.state.ma.us/sec/mhc)

Partners Inc.) for review and comment by the Massachusetts Historical Commission (MHC) (the office of the Massachusetts State Historic Preservation Officer). A Project Notification Form (950 CMR 11 Appendix A) (copy provided as an appendix to this HPMP) will be completed and submitted to the MHC with a USGS locus map clearly showing the boundaries of the project and the location of the activity, with scaled project plans showing existing and proposed conditions. The PNF shall reference the MOA for the project and this HPMP.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800) and the terms of the MOA. Please contact me if you have any immediate questions.

Sincerely,

  
Edward L. Bell  
Technical Services Division  
Massachusetts Historical Commission

cc:  
Vince Yearick, FERC Hydro East Branch 1  
Sanford Johnson

**HISTORIC PROPERTIES PAGE FROM ANNUAL INSPECTION PACKET**

Date:

**Historic Properties Management Plan:**

**As required by our 3-31-2008 FERC Exemption, we shall review any changes made or planned to any of the historically significant structures on an annual basis.**

**These structures have been identified as: the canal, the dam, the bridge and the powerhouse.**

**List any changes/repairs/modification made since the previous Inspection Period:**


**List any plans to change/repair/modify any of the historic structures in the coming Inspection Period:**


***Please refer to the Historic Properties Management Plan for additional information.***

***Significant changes/repairs/modifications to these structures may require additional filing with the State Historic Preservation Officer.***



## MEMORANDUM OF UNDERSTANDING

This e-mail request was sent to FERC on 11-10-09 – with no answer received as of today.

The hardcopy version of this REV 2 HPMP which was sent to MHC includes a hard copy of the MOA. The online version submitted to FERC references, by way of this placeholder the MOA which FERC has already on file.

**From:** liisa grady dowd [mailto:liisa@gradyresearch.com]  
**Sent:** Tuesday, November 10, 2009 1:32 PM  
**To:** 'kristen.murphy@ferc.gov'  
**Subject:** FW: MOA for Ice House Partners, Inc (P-12769-000-MA)

Good afternoon,

I am working on incorporating changes requested by the Mass Historical Commission to our Historic Property Management Plan. One of the changes included a request to append the entire MOA to the HPMP. I only have it as a hard copy and wonder if you could forward me the electronic copy to include?

Many thanks!

**Liisa Grady Dowd, VP/GM**  
**Grady Research, Inc.**  
**Ice House Partners, Inc.**

[www.gradybox.com](http://www.gradybox.com)

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

**MAR 21 2008**

OFFICE OF ENERGY PROJECTS

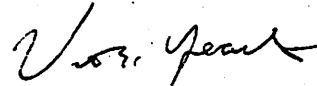
Project No. 12769-000 - MA  
Ice House Power Project  
Ice House Partners, Inc.

To: The Parties Addressed

**Reference: Final Memorandum of Agreement for the Ice House Power Project**

Attached is a copy of the executed Memorandum of Agreement for the Ice House Power Project for your files. Thank you for your assistance in this matter. If you have any questions, please contact Kristen Murphy, at (202) 502-6236, or e-mail at [kristen.murphy@ferc.gov](mailto:kristen.murphy@ferc.gov).

Sincerely,



Vince Yearick, Chief  
Hydro East Branch 1

Addressees:

Mr. Don L. Klima  
Advisory Council on Historic Preservation  
1100 Pennsylvania Ave, NW, Suite 809  
Washington, DC 20004  
ATTENTION: Dr. Laura Dean

Ms. Brona Simon, Massachusetts Historical Commission  
State Historic Preservation Officer  
220 Morrissey Boulevard  
ATTENTION: Ms. Ann Lattinville  
Boston, MA 02125

Ms. Lisa Dowd  
Ice House Partners, Inc.  
323 West Main Street  
Ayer, MA 01432

Enclosure: Memorandum of Agreement

cc: Public Files

**MEMORANDUM OF AGREEMENT  
AMONG  
THE FEDERAL ENERGY REGULATORY COMMISSION  
AND THE  
THE MASSACHUSETTS STATE HISTORIC PRESERVATION OFFICER  
FOR  
MANAGING HISTORIC PROPERTIES THAT MAY BE AFFECTED BY  
ISSUING AN EXEMPTION FROM LICENSING FOR THE  
ICE HOUSE POWER PROJECT  
IN MIDDLESEX COUNTY, MASSACHUSETTS  
(FERC No. 12769-000)**

**WHEREAS**, the Federal Energy Regulatory Commission (hereinafter, "Commission") is considering a proposal filed by Ice House Partners, Inc. (hereinafter, "Exemptee") for an exemption from licensing for the Ice House Power Project (hereinafter, "Project") in accordance with Part I of the Federal Power Act, 16 U.S.C. Sections 791(a) through 825(r) *as amended*; and

**WHEREAS**, the Commission has determined that issuing such an exemption may affect properties included in or eligible for inclusion on the National Register of Historic Places (hereinafter, "historic properties"), including, but not necessarily limited to, the West Main Street Ice House Industrial Area, which may be eligible for listing in the National Register of Historic Places; and

**WHEREAS**, the attached Appendix A provides a description of the Project, area of potential effects, historic properties and anticipated effects as of the date of this Memorandum of Agreement; and

**WHEREAS**, the Commission has consulted with the Massachusetts Historical Commission (hereinafter, "SHPO") pursuant to 36 C.F.R. Section 800.14(b) of the Advisory Council on Historic Preservation (hereinafter, "Council") regulations (36 C.F.R. Part 800), implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f; hereinafter, "Section 106"); and

**WHEREAS**, the Exemptee has participated in the consultation and has been invited to concur in this Memorandum of Agreement; and

**WHEREAS**, the Commission will require the Exemptee to implement the provisions of this Memorandum of Agreement as a condition of any exemption issued for the Project; and

**WHEREAS**, documentation of the project facilities, a condition of the Historic Properties Management Plan (hereinafter, "HPMP"), will be completed according to

Massachusetts Historical Commission's standards within six months of issuing the exemption and prior to beginning construction of the Project.

**NOW THEREFORE**, the Commission and the SHPO agree that the Project's exemption will be administered in accordance with the following stipulations in order to satisfy the Commission's Section 106 responsibilities.

### STIPULATIONS

The Commission will ensure that, upon acceptance of an order approving an exemption for this project, and prior to completion of all conditions involving this exemption, the Exemptee implements the following stipulations. All stipulations that apply to the Exemptee will similarly apply to any and all of the Exemptee's successors. Compliance with any of the following stipulations does not relieve the Exemptee of any other obligations it has under the Federal Power Act, the Commission's regulations, or its exemption.

#### I. HISTORIC PROPERTIES MANAGEMENT PLAN

- A. Within six months of the issuance of an order approving an exemption for this Project, the Exemptee will complete and file for the Commission's approval an HPMP specifying how historic properties will be managed in the Project's area of potential effects, as defined in 36 C.F.R. Section 800.16 (d). During development of the HPMP, the Exemptee will consult with the SHPO as defined in 36 C.F.R. Section 800.2.<sup>1</sup> The Exemptee will seek concurrence of the SHPO in the HPMP.
- B. The following will be taken into account in developing the HPMP: Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines" (*Federal Register*, September 29, 1983, Vol. 48, No. 190, Part IV, pp. 44716-44740; hereinafter, "Secretary's Standards"); and the Council and Commission's *Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects* (issued May 20, 2002). The HPMP will be developed by or developed under the direct supervision of a person or persons who meet, at a minimum, the professional qualifications standards for architectural history and archeology in the Secretary's Standards (48 *Federal Register* 44738-39).

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<sup>1</sup> All consulting parties need to respond within 30 days of receipt of a request for review of a finding or determination involving the HPMP.

- C. The HPMP will, at a minimum, address the tasks listed below. The HPMP will also specify how each task will be carried out and when it will be completed.
1. If necessary, completion of identification of historic properties within the area of potential effects, defined as the lands enclosed by the Project's boundary and lands or properties outside the project's boundary where project operation, project construction, or other project-related effects may cause changes in the character or use of historic properties;
  2. Protection and preservation of historic properties threatened by ground-disturbing activities or other potential adverse effects caused by Project operations;
  3. Documentation of the Project facilities according to Massachusetts Historical Commission's standards prior to beginning construction of the Project;
  4. Consideration and implementation of appropriate treatment that would mitigate any unavoidable adverse effects;
  5. Consultation with the SHPO regarding identification and evaluation of historic properties, determination of effects, and ways to avoid, minimize or mitigate adverse effects;
  6. Treatment and disposition of any human remains that may be discovered, taking into account applicable state laws;
  7. Action plan for discovery of previously unidentified properties during construction activities; and
  8. Coordination with the SHPO during implementation of the HPMP.

## II. HPMP REVIEW AND IMPLEMENTATION

- A. The Exemptee will submit the HPMP, along with documentation of the views of the SHPO to the Commission for review and approval.
- B. If the SHPO has not concurred in the HPMP, or the Commission finds the HPMP inadequate, the Commission will consult with the Exemptee and SHPO to seek agreement on the HPMP. If concurrence is not reached within 45 days, the Commission will request that the Council enter into the consultation to seek agreement on the HPMP.

1. If agreement on the HPMP cannot be reached among the Commission, SHPO, Exemptee, and the Council; the Commission will request that the Council comment pursuant to Stipulation III.B of this Memorandum of Agreement;

### III. DISPUTE RESOLUTION

- A. If at any time during implementation of this Memorandum of Agreement and the resulting HPMP, the SHPO, the Exemptee, or the Council objects to any action or any failure to act pursuant to this Memorandum of Agreement or the HPMP, they may file written objections with the Commission.
  1. The Commission will consult with the objecting party, and with other parties as appropriate, to resolve the objection.
- B. If the Commission determines that the objection cannot be resolved, the Commission will forward all documentation relevant to the dispute to the Council and request that the Council comment. Within 30 days after receiving all pertinent documentation, the Council will either:
  1. Provide the Commission with recommendations, which the Commission will take into account in reaching a final decision regarding the dispute; or
  2. Notify the Commission that it will comment pursuant to 36 C.F.R. Section 800.7(c)(1) through (c)(3) and Section 110(a)(1) of National Historic Preservation Act, and proceed to comment.
- C. The Commission will take into account any Council comment provided in response to such a request, with reference to the subject of the dispute, and will issue a decision on the matter. The Commission's responsibility to enforce all actions required under this Memorandum of Agreement that are not the subject of dispute will remain unchanged.

### IV. TERMINATION OF THIS MEMORANDUM OF AGREEMENT

Execution of this Memorandum of Agreement evidences that the Commission has satisfied its responsibilities pursuant to Section 106 of the National Historic Preservation Act, *as amended*, for all individual actions carried out under the order for the exemption from license. Provided, however, that unless and until the Commission issues the exemption from license for the Project and this Memorandum of Agreement is incorporated by reference therein, this Memorandum of Agreement has no independent

Memorandum of Agreement  
FERC Project No. 12769-000  
Massachusetts

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legal effect for any specific exemption applicant or Project.



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Memorandum of Agreement  
FERC Project No. 12769-000  
Massachusetts

FEDERAL ENERGY REGULATORY COMMISSION

By: Edward A. Abrams for Date: 02/19/08  
Ann F. Miles, Director  
Division of Hydropower Licensing

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Memorandum of Agreement  
FERC Project No. 12769-000  
Massachusetts

MASSACHUSETTS STATE HISTORIC PRESERVATION OFFICER

By: Brona Simon

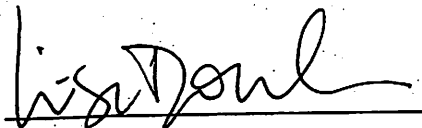
Date: March 11, 2008

Brona Simon  
State Historic Preservation Officer

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Memorandum of Agreement  
FERC Project No. 12769-000  
Massachusetts

CONCUR: ICE HOUSE PARTNERS, INC.

By: 

Date: 2.20.08

Lisa Dowd  
Ice House Partners, Inc.

Appendix A to:

**MEMORANDUM OF AGREEMENT AMONG THE FEDERAL ENERGY REGULATORY COMMISSION AND THE MASSACHUSETTS STATE HISTORIC PRESERVATION OFFICER FOR MANAGING HISTORIC PROPERTIES THAT MAY BE AFFECTED BY ISSUING AN EXEMPTION FROM LICENSING FOR THE ICE HOUSE POWER PROJECT IN MIDDLESEX COUNTY, MASSACHUSETTS (FERC No. 12769-000)**

**PROJECT, HISTORIC PROPERTIES, AND ANTICIPATED EFFECTS**

The purpose of this appendix is to specify the factual basis of the Memorandum of Agreement. Here, relevant facts concerning the project and modifications to the project proposed by the exemptee are reviewed; historic properties subject to the Memorandum of Agreement's stipulations are, in part, identified; and the anticipated effects of the exemption are disclosed.

**I. THE PROJECT**

**A. Project Facilities**

The Ice House Project would consist of: (1) the existing 190-foot-long, 12-foot-high Ice House dam and spillway topped with existing 24-inch-high flashboards impounding; (2) an existing 137-acre, 965-acre-foot reservoir with a normal full pond elevation of 216.45 feet National Geodetic Vertical Datum; (3) an existing headgate structure equipped with four 8-foot-high, 10-foot-wide gates of which two are operational and two are stationary leading to; (4) an existing 50-foot-wide, 109-foot-long power canal connected to; (5) a restored powerhouse containing two Kaplan turbine generating units with a total installed capacity of 280 kilowatts discharging flow to; (6) an existing 50-foot-wide, 200-foot-long tailrace; (7) an existing 480-volt, 100-foot-long underground transmission cable; and (8) appurtenant facilities. The Nashua River reach that would be bypassed by operating the project (from the headgate structure to the tailrace outlet) is about 300-feet-long. The project does not involve any new construction or modifications of the existing facilities. The project would have an average annual generation of 2,500 megawatt-hours.

**B. Proposed Project Operations**

Ice House would operate the project in a run-of-river mode, and maintain one mgd (about 1.55 cfs) of water through a notch in the flashboards year-round. The project would be equipped with a real time water level recording device to match turbine

discharge with river inflow. When flow in the Nashua River is equal to or less than the minimum hydraulic capacity of the two turbine units (160 cfs each), the units would drop off-line, and all river inflow would spill over the flashboards. When flow exceeds 160cfs, one turbine unit would begin generating and the excess would be spilled over the flashboards until such inflow exceeds another 160 cfs or 320 cfs (the maximum hydraulic capacity of two units), at which time the second turbine unit would begin generating, with all flows over 320 cfs spilled over the flashboards.

In addition to the operational measures identified above, Ice House Partners proposes to: (1) provide fish and eel passage when requested by the U.S. Fish and Wildlife Service (FWS); and (2) continue to provide designated canoe portage locations with signage and access for fishermen.

### C. Agency Conditions

Pursuant to section 30(c) of the FPA, 16 U.S.C. § 823a(c), federal and state fish and wildlife agencies have mandatory conditioning authority on exempted projects. The U.S. Department of Interior (Interior) and the Massachusetts Department of Fish and Wildlife (Massachusetts DFW) filed such conditions on October 10 and 11, 2007, respectively (see appendices A and B of the enclosed EA). The conditions are summarized below and the filing agencies identified.

- Operate the project in a run-of-river mode (Interior, Massachusetts DFW).
- Discharge a minimum flow over the project spillway to be determined in consultation with the agencies (Interior), and provide an interim flow of 1mgd in the bypassed reach (Massachusetts DFW).
- Prepare and file a plan for maintaining and monitoring run-of-river operation and spillway flows at the project (Interior, Massachusetts DFW), and conduct a bypassed reach flow study to be used to establish a permanent minimum flow (Massachusetts DFW).
- During impoundment refilling after drawdowns for maintenance (including flashboard repair/replacement) or emergency purposes, pass 90 percent of inflow downstream (Massachusetts DFW).
- If necessary, develop a sediment removal plan for periodic removal of accumulated sediment from the project (Massachusetts DFW).
- Construct, operate, maintain and evaluate upstream and downstream fish passage facilities at this project when notified by the agencies (Interior, Massachusetts DFW).
- Construct, operate, maintain and evaluate upstream and downstream passage for American eels by the time the project is operational (Massachusetts DFW).

- Prepare and file plans and schedules for operation, maintenance, monitoring, and evaluation of the fishways (Massachusetts DFW).
- File for approval for routine vegetation management associated with the project (Massachusetts DFW).
- Notify the agencies when the project commences operation, and provide a set of as-built drawings (Interior, Massachusetts DFW).
- Allow the agencies to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions (Interior, Massachusetts DFW).
- Reserves the right to add to and alter terms and conditions of this exemption to carry out its responsibilities with respect to fish and wildlife resources (Interior, Massachusetts DFW).
- Include the above terms and conditions in any conveyance by lease, sale, or otherwise (Interior, Massachusetts DFW).

Interior and Massachusetts DFW also filed one recommendation pursuant to section 10(a) of the FPA to permit access to the project area wherever possible to allow for public utilization of fish and wildlife resources, taking into consideration any necessary restrictions to maintain public safety, and protect project civil works.

#### D. Additional Staff Recommended Measures

In addition to Ice House Partners' proposed measures and the conditions filed by Interior and the Massachusetts DFW (except for the vegetation management approval, fish passage plans and schedules, and eel passage conditions), we recommend Ice House Partners develop and implement a historic properties management plan, and revised Exhibit G drawings enclosing the project impoundment.

## II. HISTORIC PROPERTIES IDENTIFIED

The dam at the project has been in use since at least the 1790s, and was used as a reference marker in laying out the towns of Ayer, Harvard, and Shirley as it sits at the intersection of the three towns. The location was probably chosen due to availability of a rock outcrop in the river bed, allowing a solid anchorage for a dam.

A succession of mills occupied the site until approximately 1900, at which time a group from the Fitchburg and Leominster Street Railway purchased the facility. In 1907, they installed a new electrical powerhouse and used the electricity to operate trolley cars along a dedicated single track from Ayer, through Shirley and Lunenburg to Leominster at Whalom Park, with further connection on to Fitchburg. It appears from the remains that the trolley line generation facility stored water overnight and used the turbines during

peak load periods. The trolley business died out in the 1920s with the arrival of the automobile.

Around 1930, a new group purchased the facility and installed ice-making machinery. The ice-making industry continued until the 1950s, with the primary customer being the Fort Devens military facility. With the general use of refrigerators in the post-war period, the ice business ceased. The location was used as a storage and transfer area for fuel oil and oil truck loading for some time. The hydroelectric site was abandoned at some point in the 1950s or 1960s and the dam fell into disrepair; the turbines and other parts were sold for scrap. In the 1970s, the original trolley repair/ice house mill building caught fire and was destroyed.

For almost 30 years the site remained abandoned due to a known oil spill problem from the years of use as a fuel oil depot. One effort to clean the area failed. The Massachusetts DEP initiated legal actions since the site was within the water quality impact zone of several wells, including a Shirley town well, and the nearby groundwater continued to test positive for petroleum contamination.

Due to the passage of the "Brownfields Act" in Massachusetts, and allowances made under the "Rivers Act" with respect to restoration of older mill sites, it became possible to consider rehabilitation of the site. Ice House Partners purchased the site in 1999 and began to clean up the problems described. Ice House Partners repaired the powerhouse, canal, and dam, using historically accurate materials and designs. Where a one-story brick building (formerly used as the dye house, dynamo room, and for ice making, burned down in 2000) once existed, Ice House Partners built a modern three-story brick office building that runs on the reconstructed dam and powerhouse. Grady Research, owned by Ice House Partners, currently occupies this office building, which is located at 323 West Main Street.

As described in the Historical Area and Structure Inventory Reports (historical reports), filed by Ice House Partners on August 6, 2007, the West Main Street Ice House Industrial Area, including the power canal, dam, and power house, and associated modern office building, are potentially eligible for listing in the National Register of Historic Places for their association with the events and activities surrounding the development of the industrial component of the town's economy. The reports indicate the site continues to bear a strong connection through its surviving historic structures to the industrial trends and activities established in Ayer in the mid 19<sup>th</sup> century.

### III. ANTICIPATED EFFECTS AND MITIGATIVE MEASURES

Ice House proposes to provide fish and eel passage when requested by the U.S.

Fish and Wildlife Service (FWS) and to continue to provide designated canoe portage locations with signage and access for fishermen. Ice House Partners does not propose any new construction or modifications to the existing facilities.

In a letter filed June 6, 2007, the SHPO noted that the project does not involve any new construction or modifications of the existing facilities, and because of the nature of the existing hydropower facilities and the undertaking, the project is not likely to have any effect on historic or archaeological resources. At that time, the SHPO requested that a Massachusetts Historical Commission historic properties inventory form be completed for the project facilities. Ice House Partners prepared and filed these forms on August 6, 2007, the results of which are described above. In its comments on the draft MOA, described below, the SHPO confirms that the West Main Street Ice House Industrial Area may be eligible for listing in the National Register.

The area of potential effect (APE) for the project is defined as: (a) lands enclosed by the project boundary; and (b) lands or properties outside the project boundary where the project may cause changes in the character or use of Historic Properties. There are currently no proposed activities that would have a likely effect on the eligibility of the West Main Street Ice House Industrial Area; but, in the case that potential future activities, such as fish passage in the event that Interior or Massachusetts DFW requires it, could have an effect on this site, staff recommend a historic properties management plan (HPMP).

Preparing and implementing a HPMP would provide the necessary outline of actions to manage the affects on historic resources within the APE. The HPMP would be prepared and implemented in consultation with the SHPO and include provisions for documenting the project facilities according to the Massachusetts Historic Commission's standards prior to beginning construction activities.

#### IV. COMMENTS ON THE DRAFT MOA

On December 26, 2007, the Commission issued a draft Memorandum of Agreement (MOA). Final execution of the MOA would require the development of a historic properties management plan (HPMP); the MOA and HPMP would be incorporated into any exemption from license issued for the Ice House Power Project.

On February 7, 2008, Commission staff received comments on the draft MOA from the SHPO, which included a the following revision to the draft MOA: to include, in the second WHEREAS clause, "including, but not necessarily limited to, the West Main Street Ice House Industrial Area, which may be eligible for listing in the National Register of Historic Places." The MOA is revised accordingly.



## V. CONCLUSION

Proposed project operation is not likely to have an adverse effect on the identified historic resources because the proposed project would not involve any new construction or modifications to the existing facilities. However, future actions involving any necessary project maintenance or construction may impact the eligibility of the industrial complex. The HPMP, which would include measures to protect historic properties and would ensure that any modification to project facilities that are listed on or are eligible to be listed on the National Register of Historic Places would be consistent with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A  
MASSACHUSETTS HISTORICAL COMMISSION  
220 MORRISSEY BOULEVARD  
BOSTON, MASS. 02125  
617-727-8470, FAX: 617-727-5128

**PROJECT NOTIFICATION FORM**

Project Name: \_\_\_\_\_

Location / Address: \_\_\_\_\_

City / Town: \_\_\_\_\_

**Project Proponent**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town/Zip/Telephone: \_\_\_\_\_

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name T ype of License or funding (specify)

**Project Description (narrative):**

**Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.**

**Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.**

**Does the project include new construction? If so, describe (attach plans and elevations if necessary).**

5/31/96 (Effective 7/1/93) - corrected 950 CMR - 275

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH  
APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

What is the total acreage of the project area?

Woodland \_\_\_\_\_ acres Productive Resources:

Wetland \_\_\_\_\_ acres Agriculture \_\_\_\_\_ acres

Floodplain \_\_\_\_\_ acres Forestry \_\_\_\_\_ acres

Open space \_\_\_\_\_ acres Mining/Extraction \_\_\_\_\_ acres

Developed \_\_\_\_\_ acres Total Project Acreage \_\_\_\_\_ acres

What is the acreage of the proposed new construction? \_\_\_\_\_ acres

What is the present land use of the project area?

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town/Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

7/1/93 950 CMR – 276

131 FERC ¶ 62,084  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Ice House Partners, Inc.

Project No. 12769-003

ORDER APPROVING HISTORIC PROPERTIES MANAGEMENT PLAN

(Issued May 05, 2010)

1. On November 18, 2009, Ice House Partners, Inc. (exemptee) filed an Historic Properties Management Plan (HPMP), pursuant to article 16 of the exemption for the Ice House Power Project, FERC No. 12769.<sup>1</sup> The project is located on the Nashua River, in the town of Ayer, Middlesex County, Massachusetts.

2. Article 16 requires the exemptee to implement the Memorandum of Agreement (MOA) executed on March 11, 2008.<sup>2</sup> The MOA directs the exemptee to file an HPMP for mitigating the project's effects on Historic Properties. The HPMP is to provide for: (1) completion of identification and evaluation of Historic Properties, if necessary, within the project's Area of Potential Effect (APE), and lands or properties outside the project boundaries where project operation, construction, or other project-related effects may cause changes in the character or use of Historic Properties; (2) protection and preservation of Historic Properties threatened by ground-disturbing activities or other potential adverse effects caused by project operations; (3) documentation of project facilities, according the SHPO's standards, prior to beginning construction of the project; (4) consideration and implementation of appropriate treatment that would mitigate any unavoidable adverse effects; (5) consultation with the SHPO regarding identification and evaluation of Historic Properties, determination of effects, and ways to avoid, minimize or mitigate adverse effects; (6) treatment and disposition of any human remains that may be discovered, taking into account applicable state laws; (7) action plan for discovery of previously unidentified properties during construction activities; and (8) coordination with the SHPO during implementation of the HPMP.

3. The proposed HPMP incorporates the stipulations set forth in the MOA, and establishes a process for identifying the nature and significance of Historic Properties, American Indian traditional cultural values, and impacts to archaeological properties that may be affected by project maintenance and operation. The proposed HPMP establishes

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<sup>1</sup> See Order Granting Exemption from Licensing (5 MW or Less), issued on March 31, 2008 (122 FERC ¶ 62,262).

<sup>2</sup> The MOA was executed between the Commission and the Massachusetts State Historic Preservation Officer (SHPO). The exemptee was invited to be a concurring party.

a process for identifying the nature and significance of Historic Properties that may be affected by project maintenance and operation. It establishes guidelines for routine maintenance, operation activities, proposed improvements to project facilities, and/or public access. The HPMP also defines goals for preserving Historic Properties, establishing a decision-making process and outlining procedures for consulting with the SHPO concerning the potential effects of the project on Historic Properties.

4. The exemptee consulted with the SHPO during the development of the HPMP, and sent a copy of the proposed HPMP to the SHPO on November 17, 2009. On December 15, 2009, the SHPO accepted the HPMP, as filed with the Commission.

5. The HPMP takes into account the effects of project activities on historic properties and archaeological sites within the project APE. It ensures that no inadvertent alterations of National Register of Historic Places-qualifying characteristics would take place during routine operation and maintenance of the project or ground-disturbing construction activities. The proposed HPMP is consistent with the requirements of article 16 and the MOA, and should be approved. Upon issuance of this order, the exemptee should implement the HPMP.

The Director orders:

(A) The Historic Properties Management Plan for the Ice House Power Project, filed on November 18, 2009, is approved and made part of the exemption.

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F. R. §385.713.

Robert J. Fletcher  
Chief, Land Resources Branch  
Division of Hydropower  
Administration and Compliance

# Appendix H

**FEDERAL ENERGY REGULATORY COMMISSION**

Office of Energy Projects  
Division of Dam Safety and Inspections – New York Regional Office  
19 West 34<sup>th</sup> Street, Suite 400  
New York, NY 10001

Telephone No. (212) 273-5900

Fax No. (212) 631-8124

**In reply, refer to:**

**P-12769-MA Ice House  
NATDAM ID# MA00809**

**Review of Public Safety  
Plan**

**April 27, 2016**

Liisa Marino, VP/GM  
Ice House Partners, Inc.  
323 West Main Street  
Ayer, MA 01432

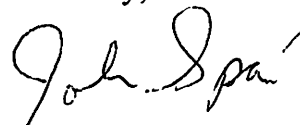
Re: P-12769-MA Ice House Updated Public Safety Plan

Dear Ms. Marino:

By letter dated November 17, 2015, you submitted a public safety plan for the Ice House Project, FERC No. 12769. Based on our review of the plan, we have no comments on the public safety plan. You are reminded that you are required to ensure compliance with all safety requirements applicable to your license. In addition, per requirements of 18 CFR § 12.42, it is your responsibility to take all reasonable measures for maintaining and operating your hydropower project in a manner safe for the public. This requires that you are continually aware of public use at your project and regularly review your project for the adequacy of safety devices, warnings systems, and/or other measures necessary to protect the public in the use of project lands and waters. A copy of your public safety plan should be kept readily available at the project and site staff should be familiar with the plan. While FERC recognizes that a properly prepared public safety plan and well-maintained and implemented safety measures do not guarantee public safety incidents will not occur at a project, lack of due diligence regarding public safety provisions may put the public at greater risk.

Please note that the Commission's regulatory programs are always subject to review and modification. Therefore, future enhancements to your public safety plan may be necessary based on our inspections, revised conditions at the project, or new FERC program policies or guidance. We appreciate your continued cooperation in ensuring public safety at your project. If you have any questions, please contact Noel Aglubat at 212-273-5907 or by email at [noel.aglubat@ferc.gov](mailto:noel.aglubat@ferc.gov).

Sincerely,

A handwritten signature in black ink that reads "John Spain". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke extending to the right.

John Spain, P.E.  
Regional Engineer



## Appendix H

2015 Public Safety Plan  
CEII Privileged Information  
Not for Public Disclosure

# Appendix I

**Appendix I. PHOTOS**

Bypass Reach (Zone 2)



View of Power House, Tail Race and Dam from our Office Building (Zones 1, 2 & 3)



Power House Interior with one of the Generators



View across Dam from Shirley towards Ayer Side of River (Zone 1 & 2)



View Across Tail Race towards Office Building (Zone 3)



View from Below Dam / Bypass Reach (Zone 2)



# Appendix J

**Appendix J. Map of Project and Site**

