

APPENIDX B

“1) Is the Facility either: a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986?”

The Facility received its FERC Exemption on 2/19/1985 and its most recent Amendment on 8/22/13. There is no Water Quality Criterion (WQC) issued for the facility during any of the FERC reviews and comment periods.

“2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?”

The Project submits applicable portions of the Massachusetts Year 2012 Integrated List of Waters (see Appendix B-2-1). This report designates seven (7) uses as follows: Aquatic Life (including cold and warm water fisheries), Fish Consumption, Drinking Water, Primary Contact Recreation, Secondary Contact Recreation, Shellfish Harvesting and Aesthetics. This report also prescribes the 7Q10 lowest mean flow condition as the minimum water quality criteria for flow (see Appendix A for discussion on Flow).

The report provides data for this river segment and then categorizes this segment as “Massachusetts Category 5 Waters (impaired, and requiring one or more TMDLs).”

Millers River

MA35-01

Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon.

3.303 MILES

Ambient Bioassays -- Chronic Aquatic Toxicity

Fecal Coliform

PCB in Fish Tissue

Phosphorus (Total)Coliform

PCB in Fish Tissue

Phosphorus (Total)

Whitney Pond MA35101 Winchendon 96.839 ACRES

Impairment Cause:

Aquatic Plants (Macrophytes) EPA TMLD No. 4145

Mercury in Fish Tissue

Turbidity EPA TMLD No. 4145

Millers River MA35-01 Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon. 3.303 MILES Category: 5

LIHI Certification Application

Hunts Pond Dam

Submitted by Owner: Winchendon Hydroelectric LLC

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3/11/2014

“3) If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation?”

Robert Kubit from the MA DEP provided the following comment (see Appendix B-1-b-1) in his review dated April 26, 2013, “The Department has reviewed available information regarding water quality in the river segment where this facility is located and believes this facility does not cause nor contribute to water quality violations.”

Melissa Grader from the USF&W provided the following comment (see Appendix B-1-b-2) in her review dated March 28, 2013, “We are aware of no data documenting that Class B Cold Water Fishery (BCWF) water quality standards are being maintained (or violated) within the project area.”

Water Quality related responses are identified in the attached supporting documentation by box or tag.

Appendix Water Quality - Index to Supporting Documents

<u>B-2-1</u>	<u>Massachusetts year 2012 Integrated List of Waters</u>
<u>B-3-1</u>	<u>MADEP Letter dated 4/26/2013</u>
<u>B-3-2</u>	<u>USF&W Email dated 3/28/2013</u>

B-2-1 Massachusetts year 2012 Integrated List of Waters

Massachusetts Year 2012 Integrated List of Waters

Proposed Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act

Featuring new water quality assessments for the Blackstone, Boston Harbor (including Mystic, Neponset and Weymouth/Weir), Merrimack and Parker watersheds and the Cape Cod coastal drainage areas



Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Richard K. Sullivan, Jr., Secretary
Massachusetts Department of Environmental Protection
Kenneth L. Kimmell, Commissioner
Bureau of Resource Protection
Bethany A. Card, Assistant Commissioner

Section 314 of the CWA provided for cooperative agreements between federal, state and local entities to restore publicly owned freshwater lakes and ponds and protect them against degradation. During the late 1970s through the early 1990s diagnostic and feasibility (D&F) studies were completed for several lakes and ponds throughout Massachusetts and these were used in earlier 305(b) assessments and 303(d) listing decisions. Information from these studies continues to carry over into new assessment and listing cycles unless new monitoring information results in a change in their assessment and listing status. Likewise, information contained in the nonpoint source assessment report prepared in 1989 in accordance with the requirements of Section 319 is also reflected in 305(b) and 303(d) reporting elements unless more recent information has resulted in a modification of the original assessment.

The following generic list provides sources that are typically consulted when making watershed assessments. Note, however, that this list is not complete and individual watershed assessment documentation should be consulted for specific sources of data and related information.

State Agencies

Massachusetts Division of Marine Fisheries
Massachusetts Division of Fisheries and Wildlife
MassDEP, Drinking Water Program
MassDEP, Wetlands and Waterways programs
MassDEP, Watershed Planning and Permitting programs
MassDEP, Wastewater Management Program
Massachusetts Office of Coastal Zone Management (CZM)
Massachusetts Department of Conservation and Recreation (DCR)
Massachusetts Department of Public Health (DPH)
Massachusetts Water Resources Authority (MWRA)

Federal Agencies

U.S. Geological Survey
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
National Oceanographic and Atmospheric Administration

Other Sources

Massachusetts Water Resources Research Center
Colleges, Universities and associated academic institutions
Watershed and lake associations
Citizen monitoring programs
Municipal Conservation Commissions (nonpoint source assessment)
NPDES Permit Monitoring Requirements
Municipal Facilities Plans
Environmental consultants

Assessment Procedure

The CWA Section 305(b) water quality reporting process, embodied in the MassDEP watershed assessments and Integrated List of Waters, is an essential aspect of the Nation's water pollution control effort. It is the principal means by which the EPA, Congress, and the public evaluate existing water quality, assess progress made in maintaining and restoring water quality, and determine the extent of remaining problems. In so doing, the States report on waterbodies within the context of supporting their designated uses. These uses include: *Aquatic Life, Fish Consumption, Drinking Water, Primary Contact Recreation, Secondary Contact Recreation, Shellfish Harvesting and Aesthetics*. Two subclasses of Aquatic Life that are also designated in the standards are Cold Water Fishery (capable of sustaining a

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year-round population of cold water stenothermal aquatic life, such as trout), and Warm Water Fishery (waters that are not capable of sustaining a year-round population of cold water stenothermal aquatic life).

As explained earlier, the SWQS prescribe minimum water quality criteria to sustain the designated uses. Furthermore, these standards describe the hydrological conditions at which water quality criteria must be applied: *"For rivers and streams, the lowest flow condition at and above which aquatic life criteria must be applied is the lowest mean flow for seven consecutive days to be expected once in ten years (7Q10)...In waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the Department and the federal, state or private entity controlling the flow...In coastal and marine waters and for lakes and ponds, the Department will establish extreme hydrologic conditions at which aquatic life criteria must be applied on a case-by-case basis."* [314CMR 4.03(3)].

The determination of whether or not a waterbody supports each of its designated uses is a function of the type(s), quality and quantity of available current information. Although data/information older than five years are usually considered "historical" and used for descriptive purposes, they can be utilized in the use attainment determination provided they are known to reflect the current conditions. While the water quality standards prescribe minimum water quality criteria to sustain the designated uses, numerical criteria are not available for every indicator of pollution. Best available guidance in the literature may be applied in lieu of actual numerical criteria. Excursions from criteria due solely to "naturally occurring" conditions do not constitute violations of the SWQS and are not causes of use impairment.

Each use, within a given segment, is individually assessed as **support** or **impaired**. When too little current data/information exists, or no reliable data are available, the use is **not assessed**. However, if there is some indication of water quality impairment, which is not "naturally-occurring", the use is identified with an "Alert Status". It is important to note that not all waters are assessed. Many small and/or unnamed rivers, lakes, and estuarine areas have never been assessed; the status of their designated uses has never been reported to the EPA in the Commonwealth's Summary of Water Quality Report (305(b) Report) nor is information on these waters maintained in the Assessment Database (ADB). These are considered **not assessed other waters**.

Detailed assessment methodologies for individual designated uses are not presented here. Rather, they can be found in MassDEP's watershed assessment summaries (see below).

Assessment Documentation

MassDEP typically provides details pertaining to the assessment process and its application to specific waterbodies in individual watershed summary reports that are completed on a continuous rotating schedule and can be viewed at <http://www.mass.gov/dep/water/resources/wqassess.htm>. Although the format of these reports continues to undergo revision, their purpose is to present, for each segment or "assessment unit" (AU) in the watershed, a determination with regard to whether or not individual designated uses are supported. These assessment summaries are a useful means for conveying what is known about the status of the water resources in each watershed and to make the assessment and listing process more transparent to the EPA and the public. As such, the assessment documentation is also considered a fundamental element of Massachusetts' submittal to the EPA under Section 305(b) of the CWA. Irrespective of how states choose to report on the status of their waters, however, the EPA encourages states to also store assessment decisions in an electronic database designed for that purpose. For earlier listing cycles, up to and including 2002, MassDEP stored assessments in EPA's Water Body System (WBS). For each segment in the WBS a use-support determination was made and, whenever possible, causes and sources of impairment were specified. In doing so, MassDEP analysts could select from a list of approximately 30 pre-existing "causes" available from the WBS program.

The EPA discontinued its support of the WBS after the 2002 listing cycle. Instead, the newly developed "Assessment Database" (ADB) was introduced as the preferred database application for tracking water quality assessment data, including use attainment, and causes and sources of impairment. The ADB was

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designed to improve the quality and consistency of water quality reporting, improve water quality data analysis, and reduce the burden of preparing reports under sections 305(b), 303(d), 314 and 319 of the Clean Water Act. With the submittal to the EPA of the Final 2010 Integrated List, MassDEP completed its transition from the use of the WBS to full implementation of the ADB.

It should be noted that the ADB and its precursor databases never contained a file for every surface water or segment thereof in Massachusetts. Rather, waters represented are only those for which assessments of one or more designated uses were actually completed at one time in the past. As assessments are carried out in new waters, these will be added to the ADB resulting in greater representation of Massachusetts' surface waters in future versions of the Integrated List. MassDEP acknowledges that with the new multi-part listing format, all surface waters could be categorized whether or not they have ever been assessed. However, the time and resources are currently not available to add all of the surface waters in Massachusetts to the ADB. Therefore, it is acknowledged that many of Massachusetts' surface waters that have never been assessed are missing from the 2012 Integrated List. By definition, however, they are all Category 3 waters.

DEVELOPMENT OF THE 2012 INTEGRATED LIST

The EPA's guidance for the development of the 2012 Integrated List was outlined in a memorandum, dated March 21, 2011, from Denise Keehner, Director of the EPA's Office of Wetlands, Oceans and Watersheds to the EPA regional Water Division directors. This guidance recommends that states prepare their 2012 Integrated List submissions consistent with previous EPA guidance such as that for 2006, 2008 and 2010. A summary of all EPA Section 303(d) program guidance can be found on-line at <http://www.epa.gov/owow/tmdl/guidance.html>.

The Final *Massachusetts Year 2010 Integrated List of Waters* was submitted to the EPA on December 30, 2010 and the 303(d) List was approved on November 16, 2011. The 2010 submittal, along with the EPA guidance described above, served as the basis for the development of the 2012 Integrated List. The MassDEP watershed assessments are continuously performed according to a rotating watershed schedule and existing and readily available data and information pertaining to each watershed are solicited from all potential sources at the outset of this process. Since the time the 2010 Integrated List was prepared, new assessments have been completed for the Blackstone, Boston Harbor (including Mystic, Neponset and Weymouth/Weir), Merrimack and Parker watersheds and the Cape Cod coastal drainage areas, and these assessments furnished the majority of new information in support of the 2012 listing decisions. A complete list of the MassDEP watershed assessment reports embodied in the 2012 categorization of waters can be found in the Bibliography.

List Categories 1 - 4

Integrated List categories 1-3 include those waters that are either unimpaired or not assessed with respect to their attainment of designated uses. Often insufficient data and information exist to assess all designated uses of any particular waterbody or segment. Furthermore, no Massachusetts waters are listed in Category 1 because a statewide Department of Public Health advisory pertaining to the consumption of fish precludes any waters from being in full support of the fish consumption use (see Fish Consumption Advisories later in this section). Waters listed in Category 2 were found to support the uses for which they were assessed, but other designated uses were not assessed. Furthermore, list Category 2 does not contain every waterbody or segment (i.e., assessment unit) for which one or more uses are supported. Many waters appearing in categories 4 and 5, while impaired for some uses (see below), are supporting other uses. Due to space constraints, however, supported uses are not presented for those impaired waters. Rather, individual watershed assessments should be consulted for a complete report on the support status of each designated use for every assessment unit.

Category 3 contains those waters for which insufficient or no information was available to assess any uses. Waters for which assessments were determined to be insufficient for 303(d) listing were also included in Category 3.

Waters exhibiting impairment for one or more uses are placed in either Category 4 (impaired, but not requiring TMDLs) or Category 5 (impaired, and requiring one or more TMDLs) according to the EPA guidance. Category 4 is further divided into three sub-categories – 4a, 4b and 4c – depending upon the reason that TMDLs are not needed. Category 4a includes waters for which the required TMDL(s) have already been completed and approved by the EPA. However, since MassDEP chooses to list each segment in only one category, waters that have an approved TMDL for some pollutants, but not others, remain in Category 5 until TMDLs are approved for all of the pollutants impairing those waters. The EPA tracks the states' progress with completing TMDLs in its Assessment and Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) which can be accessed at <http://www.epa.gov/waters/lr>. This system assigns a unique identification number to each approved TMDL which is included for reference in categories 4a and 5 of the 2012 List. All of the TMDLs approved by the EPA for Massachusetts' waters to date (i.e., January, 2012) are presented in the table below, and the individual TMDL documents can be found at <http://www.mass.gov/dep/water/resources/tmdls.htm>.

List of TMDLs Approved by the EPA for Massachusetts' Waters

EPA TMDL Number	TMDL Report Title	Approval Date
5, 6	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes (CN 112.0)	April 12, 2002
175, 360, 361, 379	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes (CN 70.1)	May 2, 2002
444	Total Maximum Daily Loads of Phosphorus for Lake Quinsigamond and Flint Pond (CN 115.0)	June 28, 2002
488, 550	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes (CN 70.1)	May 2, 2002
644	Total Maximum Daily Loads of Phosphorus for Lake Quinsigamond and Flint Pond (CN 115.0)	June 28, 2002
651, 653	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes (CN 112.0)	April 12, 2002
671	Total Maximum Daily Load of Phosphorus for Leesville Pond (CN 117.0)	June 28, 2002
675	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes (CN 112.0)	April 12, 2002
722	Total Maximum Daily Loads of Phosphorus for Selected Chicopee Basin Lakes (CN 118.0)	April 12, 2002
726	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes (CN 112.0)	April 12, 2002
804, 862, 938	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes (CN 70.1)	May 2, 2002
1332	Total Maximum Daily Loads of Phosphorus for Selected Chicopee Basin Lakes (CN 118.0)	April 12, 2002
2319	Total Maximum Daily Loads of Phosphorus for Salisbury Pond (CN 114.0)	June 28, 2002
2323	Total Maximum Daily Loads of Phosphorus for Indian Lake (CN 116.0)	June 28, 2002
2353	Total Maximum Daily Loads of Phosphorus for Lake Boon (CN 119.0)	June 28, 2002
2354-2371, 2373-2375	Total Maximum Daily Loads of Phosphorus for Selected French Basin Lakes (CN 110.0)	July 12, 2002
2377, 2382, 2385, 2389-2392	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes (CN 70.1)	May 2, 2002
2586	Total Maximum Daily Loads of Bacteria for Little Harbor (CN 120.0)	September 12, 2002
2587	Total Maximum Daily Loads of Bacteria for the Shawsheen River Basin (CN 122.0)	September 12, 2002
2592	Total Maximum Daily Loads of Bacteria for Neponset River Basin (CN 121.0)	June 21, 2002
2615	Bare Hill Pond, Harvard, MA. (MA81007) TMDL (CN 14.0)	November 2, 1999
3626, 3629-3631, 3633	Total Maximum Daily Loads of Phosphorus for Selected Chicopee Basin Lakes (CN 118.0)	April 12, 2002
4115, 4117, 4118, 4123-4125, 4127, 4128, 4133, 4134, 4136, 4137, 4140, 4141, 4144, 4145	Total Maximum Daily Loads of Phosphorus for Selected Millers Basin Lakes (CN 123.2)	February 5, 2003

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22512	Bacteria TMDL for Muddy Creek, Chatham and Harwich, Massachusetts. (CN 208.0)	April 28, 2005
22513	Bacteria Total Maximum Daily Load for Frost Fish Creek, Chatham, Massachusetts. (CN 207.0)	April 28, 2005
30341	Pleasant Bay System Total Maximum Daily Loads for Total Nitrogen (CN 244.0)	October 24, 2007
30702	Bacteria TMDL for Kickamuit River. (CN 285.0)	September 29, 2006
32364-32366, 32370-32374, 32376, 32377, 32379-32383	Total Maximum Daily Loads for Pathogens within the Charles River Watershed (CN 156.0)	May 22, 2007
32532, 32534, 32535, 32537, 32638	Great, Green and Bourne Pond Embayment Systems Total Maximum Daily Loads for Total Nitrogen (CN 181.0)	July 18, 2007
33780, 33781, 33786-33799	Pleasant Bay System Total Maximum Daily Loads for Total Nitrogen (CN 244.0)	October 24, 2007
33811-33815	Nitrogen TMDL Report for the Quashnet River, Hamblin Pond, Little River, Jehu Pond, and Great River in the Waquoit Bay System (CN 218.0)	November 7, 2007
33826	Total Maximum Daily Load for Nutrients in the Lower Charles River Basin, Massachusetts (CN 301.0)	October 17, 2007
33846	Total Maximum Daily Loads of Total Phosphorus for Quabog & Quicumquasit Ponds (CN216.1)	November 26, 2007
33858	Centerville River – East Bay System Total Maximum Daily Loads for Total Nitrogen (CN248.0)	December 18, 2007
33880	Northeast Regional Mercury Total Maximum Daily Load (unnumbered)	December 20, 2007
33965-33969	Popponesset Bay Total Maximum Daily Loads for Total Nitrogen (CN 217.0)	January 22, 2008
33988-33993	Three Bays System Total Maximum Daily Loads for Total Nitrogen (CN 242.0)	February 13, 2008
34009	Little Pond Embayment System Total Maximum Daily Loads for Total Nitrogen (CN 246.0)	March 3, 2008
34284, 34328, 34331, 34332	West Falmouth Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen (CN 243.0)	May 5, 2008
34345	Oyster Pond Embayment System Total Maximum Daily Loads for Total Nitrogen (CN 245.0)	May 5, 2008
34917, 34918	West Falmouth Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen (CN 243.0)	May 5, 2008
35089	Phinneys Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen (CN 247.0)	February 5, 2008
35085-35088, 35096, 35097	Bacteria TMDL for the Palmer River Basin (CN 182.0)	September 22, 2004
35103-35109	Assabet River Total Maximum Daily Load for Total Phosphorus (CN 201.0)	September 23, 2004
36011, 36012	Nantucket Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen (CN 249.0)	May 12, 2009
36170-36172	Pathogen Total Maximum Daily Load for the Buzzards Bay Watershed (CN 251.1)	May 15, 2009
36219-36222, 36228-36231	Slagle Harbor/Oyster Pond, Sulphur Springs/Bucks Creek, Taylors Pond/Mill Creek Total Maximum Daily Load Re-evaluations for Total Nitrogen (CN 206.1)	June 22, 2009
36582-36585	Pathogen Total Maximum Daily Load for the Three Bays Watershed, Barnstable, MA (CN 309.0)	August 28, 2009
36771-36772	Pathogen Total Maximum Daily Load for the Cape Cod Watershed (CN 252.0)	August 28, 2009
38912, 38914	Final Total Maximum Daily Load for Phosphorus for White Island Pond, Plymouth/Wareham, MA. (CN 330.2)	July 20, 2010
38903-38909	Final Pathogen TMDL for the Nantansett/Mt. Hope Bay Watershed (CN 351.0)	July 21, 2010
40307-40310	Final Pathogen TMDL for the Taunton River Watershed (CN 256.0)	June 16, 2011
40317-40319	Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River, Massachusetts. (CN 272.0)	June 10, 2011

Category 4b was proposed by the EPA to list waters for which other pollution control requirements are expected to attain all designated uses through pollution control measures other than TMDLs. Massachusetts' attempt to use this category in 2004 to list lakes and ponds impaired solely by mercury

**Massachusetts Category 5 Waters
"Waters requiring a TMDL"**

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Stony Brook	MA84B-03	Outlet Forge Pond, Westford to Brookside Road, Westford.	6.5	MILES	Aquatic Macroinvertebrate Bioassessments Fecal Coliform	
Stony Brook	MA84B-04	Brookside Road, Westford to confluence with Merrimack River, Chelmsford.	3.4	MILES	Turbidity Aquatic Macroinvertebrate Bioassessments	
Tadmuck Brook	MA84B-07	Headwaters south of Main Street, Westford to confluence with Stony Brook, Westford.	1.4	MILES	Escherichia coli	
Trout Brook	MA84A-13	Headwaters, Dressat to confluence with Richardson Brook, Dracut.	2.6	MILES	Escherichia coli	
Trull Brook	MA84A-14	Source, Tewksbury (excluding intermittent portion) to confluence with Merrimack River, Tewksbury.	2.1	MILES	Escherichia coli	
Unnamed Tributary	MA84A-30	Unnamed tributary to Powwow River locally considered portion of Back River from outlet of Clarks Pond, Amesbury to confluence with Powwow River, Amesbury (formerly portion of segment MA84A-15).	0.003	SQUARE MILES	Escherichia coli	
Unnamed Tributary	MA84B-01	(Locally known as Reedy Meadow Brook) Headwaters, outlet of small unnamed impoundment upstream of Bruce Street, Littleton to inlet Mill Pond, Littleton.	1.5	MILES	Fecal Coliform	
Ward Pond	MA84096	FALLS id changed from 33094 to 84096 on October 10, 1997. (WBID from MA35094 to MA84096) Ashburnham	54	ACRES	Oxygen, Dissolved	
Millers						
Beaver Brook	MA35-09	Fernald School discharge, Templeton to confluence with Millers River, Royalston.	3.4263	MILES	Fecal Coliform	
Boyce Brook	MA35-17	NH State Line, Royalston to confluence with East Branch Tully River, Royalston.	3.227	MILES	PCB in Fish Tissue	
East Branch Tully River	MA35-12	Confluence of Tully Brook and Falls Brook in Royalston State Forest, Royalston through Long Pond and Tully Lake to confluence with the West Branch Tully River forming headwaters Tully River, Orange/Athol.	10.013	MILES	PCB in Fish Tissue	
Gales Pond	MA35024	Warwick	11.732	ACRES	Mercury in Fish Tissue	33860
Keyup Brook	MA35-16	Headwaters Great Swamp Northfield State Forest, Northfield, to confluence with Millers River, Erving.	4.968	MILES	Turbidity PCB in Fish Tissue	
Lake Monomonic	MA35047	Massachusetts portion only, Winchendon/Rindge, N.H.	165.507	ACRES	(Non-Native Aquatic Plants*) Aquatic Plants (Macrophytes)	4133
Lake Royhunta	MA35079	(Middle Basin) Amol/Orange/New Salem	208.954	ACRES	Mercury in Fish Tissue (Non-Native Aquatic Plants*) Aquatic Plants (Macrophytes)	33860

* TMDL not required (Non-Pollutant)

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**Massachusetts Category 5 Waters
"Waters requiring a TMDL"**

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Lake Rotunts	MA35-107	(South Basin) New Salem	41.83	ACRES	(Non-Native Aquatic Plants*) Aquatic Plants (Macrophytes) Mercury in Fish Tissue	33880
Laurel Lake	MA35-035	Erving/Warwick	44,426	ACRES	Oxygen Depleted	
Lawrence Brook	MA35-13	New Hampshire state line, Royalston through Doane Falls to confluence with East Branch Tully River, Royalston.	7,124	MILES	PCB in Fish Tissue	
Lyons Brook	MA35-19	Outlet of Ruggles Pond, Wendell to confluence with Millers River, Montague/Wendell	2,119	MILES	PCB in Fish Tissue	
Millers River	MA35-01	Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon.	3,303	MILES	Ambient Bioassays -- Chronic Aquatic Toxicity Fecal Coliform PCB in Fish Tissue Phosphorus (Total) PCB in Fish Tissue	
Millers River	MA35-02	Winchendon WWTP, Winchendon to confluence with Otter River, Winchendon.	5,609	MILES	PCB in Fish Tissue	
Millers River	MA35-03	Confluence with Otter River, Winchendon to South Royalston USGS Gage, Royalston.	3,51603	MILES	Phosphorus (Total) Fecal Coliform	
Millers River	MA35-04	South Royalston USGS Gage, Royalston to Erving Center WWTP (formerly known as Erving Paper Company), Erving.	18,462	MILES	PCB in Fish Tissue Phosphorus (Total) PCB in Fish Tissue	
Millers River	MA35-05	Erving Center WWTP (formerly known as Erving Paper Company), Erving to confluence with Connecticut River, Erving.	9,21	MILES	PCB in Fish Tissue	
Moorns Pond	MA35-049	Warwick	39,114	ACRES	Mercury in Fish Tissue	
Merrion Hollow Brook	MA35-15	Headwaters just north of Montague Road, Wendell to confluence with Millers River, Wendell.	3,825	MILES	PCB in Fish Tissue	
North Branch Millers River	MA35-21	Outlet of Lake Monomac, Winchendon to inlet of Whitney Pond, Winchendon	2,006	MILES	Mercury in Fish Tissue	
Otter River	MA35-07	Gardner WWTP, Gardner/Templeton to Seaman Paper Dam, Templeton.	4,379	MILES	Aquatic Macroinvertebrate Bioassessments Fishes Bioassessments Nutrient/Eutrophication Biological Indicators Turbidity	
Otter River	MA35-08	Seaman Paper Dam, Templeton to confluence with Millers River, Winchendon.	5,546	MILES	(Total Dissolved Solids*) Aquatic Macroinvertebrate Bioassessments Fecal Coliform	
Tully River	MA35-14	Confluence East and West Branches Tully River, Orange/Attol to confluence with Millers River, Attol.	1,345	MILES	Fishes Bioassessments Nutrient/Eutrophication Biological Indicators PCB in Fish Tissue Taste and Odor Turbidity PCB in Fish Tissue	

* TMDL not required (Non-Pollutant)

**Massachusetts Category 5 Waters
"Waters requiring a TMDL"**

NAME	SEGMENT ID	DESCRIPTION	SIZE MILES	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
West Branch Tully River	MA35-11	Outlet Sheemmet Lake, Warwick to confluence with East Branch Tully River forming headwaters Tully River, Orange/Attol.	6.619	MILES	PCB in Fish Tissue	
Whetstone Brook	MA35-18	Headwaters northeast of Orcutt Hill near New Salem Rd, Wendell to confluence with Millers River, Wendell.	4.685	MILES	PCB in Fish Tissue	
Whites Mill Pond	MA35069	Winchendon	42.426	ACRES	Aquatic Plants (Macrophytes)	4144
Whitney Pond	MA35101	Winchendon	96.839	ACRES	Mercury in Fish Tissue	4145
					Turbidity	4145
Mount Hope Bay						
Cole River	MA61-04	Route 6, Swansea to the mouth at Mount Hope Bay at old railway grade, Swansea	0.31	SQUARE MILES	Chlorophyll-a Fecal Coliform Nitrogen (Total)	38907
Lee River	MA61-01	From confluence with Lewin Brook, Swansea to Route 6, Swansea/Somerset	0.02	SQUARE MILES	Oxygen, Dissolved Fecal Coliform	38905
Lee River	MA61-02	Route 6, Swansea/Somerset to mouth at Mount Hope Bay, Swansea/Somerset	0.51	SQUARE MILES	Nutrient/Eutrophication Biological Indicators (Detritus/Plankton/Fresh)	
					Chlorophyll-a Fecal Coliform	38906
					Nitrogen (Total) Oxygen, Dissolved	
Mount Hope Bay	MA61-05	the Massachusetts portion from the Braga Bridge, Fall River/Somerset to the state border Fall River, MA/Tiverton, RI to the line from Bratton Point, Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI	2.29	SQUARE MILES	Taste and Odor	
					Chlorophyll-a Fecal Coliform Fishes Bioassessments Nitrogen (Total) Temperature, water	38908
Mount Hope Bay	MA61-07	the Massachusetts portion from mouth of Cole River (at old railway grade), Swansea to state border Swansea, MA/Warren, RI to the line from Brayton Point, Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI to the line between Bay Point, Swansea and Brayton Point, Somerset (the mouth of the Lee River)	1.84	SQUARE MILES		
					Chlorophyll-a Fecal Coliform Fishes Bioassessments Nitrogen (Total) Oxygen, Dissolved Temperature, water	38909
Sawdy Pond	MA61-005	Westport/Fall River	368	ACRES	Mercury in Fish Tissue	

* TMDL not required (Non-Pollutant)

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Appendix 1 Assessment Units and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Boyce Brook	MA-35-17	NH State Line, Royalston to confluence with East Branch Tully River, Royalston.	3.227	MILES	5
Braceell Pond	MA-35010	Templeton	14.669	ACRES	4A
Conese Pond	MA-35013	Gardner	18.263	ACRES	3
Crystal Lake	MA-35014	Gardner	142.259	ACRES	3
Davenport Pond	MA-35015	Petersham/Athol	30.42	ACRES	3
Depot Pond	MA-35018	(Railroad Pond), Templeton	15.208	ACRES	4A
Dunn Pond	MA-35021	Gardner	17.997	ACRES	2
East Branch Tully River	MA-35-12	Confluence of Tully Brook and Falls Brook in Royalston State Forest. Royalston through Lung Pond and Tully Lake to confluence with the West Branch Tully River forming headwaters. Tully River, Orange/Athol.	10.013	MILES	5
East Templeton Pond	MA-35022	Templeton	8.891	ACRES	3
Ellis Pond	MA-35023	Athol	87.539	ACRES	4A
Gales Pond	MA-35024	Warwick	11.732	ACRES	5
Greenwood Pond	MA-35025	Westminster	26.984	ACRES	3
Greenwood Pond	MA-35026	Templeton	12.451	ACRES	4A
Hastings Pond	MA-35028	Warwick	18.311	ACRES	3
Hilchey Pond	MA-35029	Gardner	7.61	ACRES	4A
Kendall Pond	MA-35034	Gardner	21.907	ACRES	3
Key-10 Brook	MA-35-16	Headwaters: Great Swamp Northfield State Forest, Northfield, to confluence with Millers River, Erving.	4.969	MILES	5
Lake Dentison	MA-35017	Winchendon	53.492	ACRES	4A
Lake Mattiawa	MA-35112	(PALIS ID Changed on 10/6/97 from 36092 to 35112 - Concurrently changed WSID to reflect this change - See PALIS for details) Orange	111.982	ACRES	2
Lake Monomonic	MA-35047	Massachusetts portion only. Winchendon/Rindge, N.H.	185.507	ACRES	5
Lake Rohunta	MA-35070	(Middle Basin) Athol/Orange/New Salem	208.954	ACRES	5
Lake Rohunta	MA-35106	(North Basin) Athol/Orange	34.359	ACRES	4A
Lake Rohunta	MA-35107	(South Basin) New Salem	41.63	ACRES	5
Lake Wabatic	MA-35095	Ashburnham	133.102	ACRES	3
Laurel Lake	MA-35035	Erving/Warwick	44.426	ACRES	5
Lawrence Brook	MA-35-13	New Hampshire state line, Royalston through Doane Falls to confluence with East Branch Tully River, Royalston.	7.124	MILES	5
Little Pond	MA-35037	Royalston	9.977	ACRES	3
Lower Naukesag Lake	MA-35041	Ashburnham	295.481	ACRES	3
Lyons Brook	MA-35-19	Outlet of Ruggles Pond, Wierdell to confluence with Millers River, Montague/Wendell	2.119	MILES	5
Millers River	MA-35-01	Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon.	3.303	MILES	5
Millers River	MA-35-02	Winchendon WWTP, Winchendon to confluence with Other River, Winchendon.	5.609	MILES	5
Millers River	MA-35-03	Confluence with Other River, Winchendon to South Royalston USGS Gage, Royalston.	3.516031	MILES	5
Millers River	MA-35-04	South Royalston USGS Gage, Royalston to Erving Center WWTP (formerly known as Erving Paper Company), Erving.	18.482	MILES	5
Millers River	MA-35-05	Erving Center WWTP (formerly known as Erving Paper Company), Erving to confluence with Connecticut River, Erving.	9.21	MILES	5
Millers River	MA-35-20	Outlet of Sunset Lake, Ashburnham to inlet of Whitney Pond, Winchendon.	6.362	MILES	3

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B-3-1 MADEP Letter dated 4/26/2013



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 627 Main Street, Worcester MA 01608 • 508-792-7650

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMEL
Commissioner

Stephen J. Fisk, General Manager
O'Connell Energy Group
57 Suffolk Street, Suite 200
Holyoke MA 01040

April 26, 2013

Re: Application of Hunts Pond Project (FERC # P-8012) for Certification by the Low Impact Hydropower Institute 35-01

Dear Mr. Fisk,

In response to your request that the MA Department of Environmental Protection (the Department) provide you with a letter confirming that:

If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, the Facility is in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or "good" habitat flow standards calculated using the Montana-Tennant method.

The Hunts Pond exemption was issued in 1985 with no associated water quality certificate. Instantaneous run of river flow is an exemption condition, however, the Department has never required nor ever received flow records from the facility to verify that this condition has been met. As noted in the Millers River Watershed 2000 Water Quality Assessment Report, pulsing flows have been recorded at the USGS gauge for this river segment. Possible causes include reservoir operations at Lake Monomac and Whitney Pond or operations at Hunts Pond and Tannery Pond hydroelectric facilities. We recommend that to ensure run-of-river operations, all dam operators install, calibrate and maintain a continuous streamflow monitoring gauge or determine some other method to ensure compliance with run-of-river operations.

Note the Department relies on our sister agency, the MA Division of Fish & Wildlife, to determine adequate minimum flows from hydroelectric facilities.

This information is available in alternate format. Call Michelle Waters-Eksten, Diversity Director, at 617-292-5751. TDD# 1-888-639-7622 or 1-617-674-6868
MassDEP Website: www.mass.gov/dep
Printed on Recycled Paper

The Department has reviewed available information regarding water quality in the river segment where this facility is located and believes this facility does not cause nor contribute to water quality violations.

Please let me know if any additional information is needed. My phone number is 508-767-2854.

Sincerely,



Robert Kubit, P.E.

Water
Quality
Related
Comment

B-3-2 USF&W Email dated 3/28/2013

Fisk, Steve

From: Grader, Melissa <melissa_grader@fws.gov>
Sent: Thursday, March 28, 2013 1:35 PM
To: Fisk, Steve
Cc: William P. Short (w.shortiii@verizon.net); Berry, Steve; Caleb Slater; Robert Kubit
Subject: Re: Winchendon Hydroelectric Improvements LIHI

Hi Steve,

I've had a chance to go through the Hunts Pond Project file and can offer the following comments regarding the LIHI consultation criteria you have requested our input on:

Project Details

Project features include an existing 16-foot-high dam comprised of a concrete weir topped with stoplogs, a slide gate leading to a powerhouse containing two turbines with an installed capacity of 120 kW (operating at flows from 8 cfs up to 172 cfs), and a 13 acre headpond. The project operates in a true run-of-river mode. There is a short 50-foot bypass reach with no flow requirement.

Project History

The project was issued an exemption on 2/19/85. By letter dated August 24, 1984, the U.S. Fish and Wildlife Service issued seven mandatory terms and conditions (T&Cs) for the proposed project. On February 4, 1985 the Department of the Interior added an eighth condition. Service conditions include: providing fish passage when prescribed by the Service and/or the Massachusetts Division of Fisheries and Wildlife; providing an instantaneous minimum discharge below the project of at least 25 cfs, or inflow, whichever is less; and requiring the Exemptee to submit a compliance monitoring plan to the Service within six months from the date of issuance of an exemption.

In 1991 the exemption was amended to increase capacity to 320 kW, however that upgrade never took place. In August of 1996 Behrens Energy Systems, Inc. sold the project to O'Connell Engineering & Financial Inc. (O'Connell). Upon acquiring the project, O'Connell automated the control system, including remote control capabilities. On March 12, 2013 O'Connell notified the FWS of its intent to undergo turbine replacement and dam maintenance/repair activities at the project. O'Connell proposes to replace the two crossflow turbines with one double regulated Kaplan unit. The new turbine/generator would have a nameplate rating of 100 kW and operate at flows from 10 cfs to 110 cfs. The Service is in the process of responding to this request.

A review of the project file and recent submittals on FERC Online indicates that there have been no documented compliance issues with the project (other than the below-noted flow monitoring plan).

LIHI Consultation Criteria

1. Endangered Species

There are no federally listed endangered species within the project area.

2. Exemption terms and conditions

Bypass flow

The project has a short 50-foot-long bypass reach. Due to the short length of the reach and backwatering from the tailrace, no dedicated flow is required to be spilled over the dam.

Impoundment Fluctuations

According to O'Connell, the project operates run-of-river, which means the headpond is not drawn down for the purposes of generation. The normal water surface elevation is at the top of the stoplogs. This mode of operation should minimize impoundment fluctuations.

Flow Monitoring Plan

The terms and conditions submitted by the FWS for the project (per letter of 2/4/1985) required the Exemptee to present a Flow Monitoring Plan to the Service for approval within six months from issuance of an exemption. Based on our file review as part of the LIHI consultation process for the Hunts Pond Project, we find no documentation that this flow plan was ever developed or approved by our office.

Fish Passage

The FWS terms and conditions require that the Exemptee provide fish passage facilities when prescribed by the FWS and/or MA DFW. To date, neither agency has triggered this fish passage requirement through the FERC process. As O'Connell is well aware, efforts are underway to implement passage for American eels at the first project on the river (O'Connell's New Home Project). However, we do not expect to trigger eel passage at the Hunts Pond Project (which is well upstream of New Home with a number of dams in between) within the term of any initial LIHI certification.

Water Quality

We are aware of no data documenting that Class B Cold Water Fishery (BCWF) water quality standards are being maintained (or violated) within the project area.

Shoreland Management Plan

The Service, to date, has not required a Shoreland Management Plan pursuant to our statutory authority under Section 30(c) of the Federal Power Act.

Comments

Based on our review of the project file, it appears that the only outstanding issue regarding terms and conditions prescribed by this office for the project relate to developing a flow monitoring plan. Our files indicate that this requirement has not yet been fulfilled. Therefore, the Service recommends that LIHI certification only be granted if it contains a condition requiring the Exemptee to fulfill this obligation. O'Connell should provide a draft Operations and Flow Monitoring Plan for Service review and approval within three months of receiving LIHI certification.

We hope these comments have been responsive to your requests regarding Low Impact Hydropower Certification criteria. If you have any questions or require additional information please feel free to contact me.

Regards,
Melissa

On Wed, Mar 20, 2013 at 9:16 AM, Fisk, Steve <SFISK@oconnells.com> wrote:

Hello Melissa,

Attached are letters requesting comments for LIHI Application Appendices, A Minimum Flows; C Fish Passage; D Watershed Protection; and E Endangered Species. Please call me if you should have any question regarding the attached information.

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