

# LOW IMPACT HYDROPOWER INSTITUTE

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## LOW IMPACT HYDROPOWER QUESTIONNAIRE

[Excerpted from Part VI, Section E of the Low Impact Hydropower Certification Program. Words in italics are defined in Part VI, Section C, and line-by-line instructions are available in Section D of the program, available on-line in PDF format at <http://www.lowimpacthydro.org>.

### E. LOW IMPACT HYDROPOWER QUESTIONNAIRE

<b>Background Information</b>	
1) Name of the <i>Facility</i> .	Pioneer Hydro Electric Co. Inc.
2) Applicant's name, contact information and relationship to the Facility. If the Applicant is not the Facility owner/operator, also provide the name and contact information for the Facility owner and operator.	Lucas W. Wright, DBA Ware River Power Inc. Operations and Maintenance Company  Lucas W. Wright, Owner Pioneer Hydro Electric Co. In
3) Location of Facility by river and state.	Ware Industries Dam locates in Eastern Hampshire County in Ware, Mass. Dam is shown on the USGS quadrangle W72 14' N42 15' 30"
4) Installed capacity.	1300 kW/h
5) Average annual generation.	5,000,000 kWh
6) Regulatory status.	FERC ownership exemption

7) Reservoir volume and surface area measured at the high water mark in an average water year.	Maximum storage area 746 acre feet, Storage capacity of 320,000 square feet Surface area 39.5 acres 2.5 acres
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).	42 acres
9) Number of acres inundated by the Facility.	48.48 acres
10) Number of acres contained in a 200-foot zone extending around entire impoundment.	See attached A 11
11) Please attach a list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in Recommending conditions for your Facility.	See attached A 12+Maps
12) Please attach a description of the Facility, its mode of operation (i.e., peaking/run of river) and a map of the Facility.	
<b>Questions for For "New" Facilities Only:</b>	
If the Facility you are applying for is "new" i.e., an existing dam that added or increased power generation capacity after August of 1998 please answer the following questions to determine eligibility for the program	
13) When was the dam associated with the Facility completed?	
14) When did the added or increased generation first generate electricity? If the added or increased generation is not yet operational, please answer question 18 as well.	
15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?	
16) Did the added or increased capacity include or require a change in water flow through the facility that worsened conditions for fish, wildlife, or water quality, (for example, did operations change from run-of-river to peaking)?	

	<p>17 (a) Was the existing dam recommended for removal or decommissioning by resource agencies, or recommended for removal or decommissioning by a broad representation of interested persons and organizations in the local and/or regional community prior to the added or increased capacity?</p> <p>(b) If you answered "yes" to question 17(a), the Facility is not eligible for certification, unless you can show that the added or increased capacity resulted in specific measures to improve fish, wildlife, or water quality protection at the existing dam. If such measures were a result, please explain.</p>		
	<p>18 (a) If the increased or added generation is not yet operational, has the increased or added generation received regulatory authorization (e.g., approval by the Federal Energy Regulatory Commission)? If not, the facility is not eligible for consideration; and</p> <p>(b) Are there any pending appeals or litigation regarding that authorization? If so, the facility is not eligible for consideration.</p>		
<p><b>A. Flows</b></p> <p>1) Is the Facility in Compliance with <i>Resource Agency Recommendations</i> issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?</p> <p>2) 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, is the Facility 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?</p> <p>3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming</p>	<p>PASS  YES = Pass, Go to B  N/A = Go to A2  Yes, minimum stream flow in reach area</p> <p>YES = Pass, go to B  NO = Go to A3  Yes, In accordance with the stakeholders upon ordering the license. See explanation A.B.E</p> <p>YES = Pass, go to B</p>		<p>FAIL  NO = Fail</p>

<p>that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?</p>			
<p><b>B. Water Quality</b></p>	<p>1) Is the Facility either:</p>	<p>PASS</p>	<p>FAIL</p>
<p>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?</p>	<p>Or</p>	<p>YES = Go to B2 Yes, see A, B.E.</p>	<p>NO = Fail</p>
<p>b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?</p>			
<p>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?</p>		<p>YES = Go to B3 NO = Pass No</p>	
<p>3) If the answer to question B.2 is yes, has there been a determination that the Facility is not a cause of that violation?</p>		<p>YES = Pass</p>	<p>NO = Fail</p>
<p><b>C. Fish Passage and Protection</b></p>		<p>PASS</p>	<p>FAIL</p>
<p>1) Is the Facility in Compliance with <i>Mandatory Fish Passage Prescriptions</i> for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?</p>		<p>YES = Go to C5 N/A = Go to C2 N/A</p>	<p>NO = Fail</p>
<p>2) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish run is extinct)?</p>		<p>YES = Go to C2a NO = Go to C3 No, see attached C</p>	

<p>a) If the fish are extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extirpation or extirpation was not due in whole or part to the Facility?</p> <p>b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?</p>	<p>YES = Go to C2b N/A = Go to C2b Yes see attached C</p> <p>YES = Go to C5 N/A = Go to C3</p> <p>See attached response from the USF&amp;W + attached C</p>	<p>NO = Fail</p> <p>NO = Fail</p>
<p>3) If, since December 31, 1986:</p> <p>a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C2a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p> <p>c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?</p>	<p>NO = Go to C5 N/A = Go to C4</p> <p>See attached response form the USF&amp;W + attached C</p>	<p>YES = Fail</p>
<p>4) If C3 was not applicable:</p> <p>a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or</p>	<p>YES = Go to C5</p>	<p>NO = Fail</p>

<p>b) If the Facility is unable to meet the fish passage standards in 4.a., has the Applicant demonstrated, and obtained a letter from the US Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource?</p>			
<p>5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of <i>Riverine</i> fish?</p>	<p>YES = Go to C6 N/A = Go to C6 N/A</p>	<p>NO = Fail</p>	
<p>6) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?</p>	<p>YES = Pass, go to D N/A = Pass, go to D N/A</p>	<p>NO = Fail</p>	
<p><b>D. Watershed Protection</b></p>			
<p>1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the high water mark in an average water year around 50 - 100% of the impoundment, and for all of the undeveloped shoreline</p>	<p>PASS</p>	<p>FAIL</p>	
<p>2) Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1., and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?</p>	<p>YES = Pass, go to E and receive 3 extra years of certification Yes, Greenville Park</p>	<p>NO = go to D2</p>	
<p>3) Has the facility owner/operator established through a settlement agreement with appropriate stakeholders and that has state and federal resource agencies agreement an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)</p>	<p>YES = Pass, go to E and receive 3 extra years of certification</p>	<p>NO = go to D3</p>	
<p>4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.</p>	<p>YES = Pass, go to E</p>	<p>NO = go to D4</p>	
<p>4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.</p>	<p>YES = Pass, go to E</p>	<p>NO = Fail</p>	

E. Threatened and Endangered Species Protection	PASS	FAIL
1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?	YES = Go to E2 NO = Pass, go to F NO, See explanation E.	
2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?	YES = Go to E3 N/A = Go to E3	NO = Fail
3) If the Facility has received authority to incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?	YES = Go to E4 N/A = Go to E5	NO = Fail
4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that: a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or d) The recovery plan under active development will have no material effect on the Facility's operations?	YES = Pass, go to F	NO = Fail
5) If E.2. and E.3. are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?	YES = Pass, go to F	NO = Fail

<b>F. Cultural Resource Protection</b>																
1) If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?																
2) If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or <i>Native American Tribe</i> , or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?																
<b>G. Recreation</b>																
1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?																
2) If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?																
3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?																
<b>H. Facilities Recommended for Removal</b>																
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?																
PASS																
YES = Pass, go to G N/A = Go to F2 Yes																
YES = Pass, go to G																
FAIL																
NO = Fail																
PASS																
YES = Go to G3 N/A = Go to G2 Yes, Grenville park above project. N/A below project																
YES = Go to G3																
FAIL																
NO = Fail																
Yes, where applicable YES = Pass, go to H																
PASS																
NO = Pass, Facility is Low Impact																
No resource agency or stakeholder has ever suggested or recommended dam removal																
FAIL																
YES = Fail																



LOW IMPACT HYDROPOWER QUESTIONNAIRE COMMENTS  
ATTACHMENTS

Pioneer Hydro Electric Co. Inc  
Owned and operated by Lucas Wright, Ware River Power Inc.

**History of Ware, Pioneer and Ware River**

Ware River Power, Inc. (WRP) was incorporated in 1980 by David Wright for the purpose of rehabilitating existing mill type hydroelectric generating plants with capacities smaller than 5 megawatts. The WRP approach, which is to restore, not replace, existing structures and equipment, is one of restoration and conservation. South Barre Hydro, located roughly 13 miles upstream of the Pioneer Plant, in Barre, Massachusetts, was the first hydroelectric generating plant rehabbed by Ware River Power. South Barre was the first plant to be put on line under the Public Utility Regulatory Power Authority. It also received one of the first Ownership License Exemptions awarded by the Federal Energy Regulatory Commission. Since that time, Ware River Power has rehabbed many projects and has nearly three decades of experience owning and operating projects under 5 megawatts.

Pioneer Hydro Electric Company was purchased, rehabbed and developed by a competitor of Ware River Power Inc. in 1981. The site filed and received a FERC exemption on February 12, 1982. The Project consists of two dams within a ¼ mile of each other. These dams are known as the Ware Upper dam and the Ware Lower dam. The upper dam and falls are 34 feet high and the lower dam and falls are 16 feet high.

**How management and operations helped Pioneer become Low Impact**

In 1995, Lucas, David and Sarah Wright (Ware River Power, Inc.) purchased Pioneer Hydro out of bankruptcy. The plant is located six miles from their family residence. Pioneer Hydropower, by design, was a difficult site to operate. Here are some of the examples of how WRP, through hours of hard work, dedicated maintenance, and vast amounts of capital, made Pioneer low impact on its surroundings.

The largest concern of any dam owner should be public safety. The Town of Ware and the prior owners of Pioneer Hydropower had a very tumultuous relationship. By 1994, that relationship had come to head. Pioneer owed the town back taxes of over \$250K. The prior owners used siphons to meet minimum stream flow in the reach area, which meant little or no concern was paid to the upper pond surrounding Grenville Park in Ware. All four of the turbines at the upper plant were run manually and this combined with the siphon system made instances of low pond level rampant. The power culvert that went under Main Street, Rte 9, the main thoroughfare through town, was bubbling water onto the roadway, creating slippery conditions all year, but especially in the winter. The power canal walls before the culvert entrance were leaking water into properties of abutters, one of which was the Town Fire Dept and the other, the

residence of the town tax collector. Fences and catwalks were in disrepair and the flood head gates at the entrance of the power canal were rotting. However, by far the worst situation was the death of an inexperienced diver, also a town fire fighter, at the lower dam's head gates, two years prior. Ware River Power's first thought, upon considering purchase of Pioneer, how would it be possible, in the eyes of the surrounding community to make Pioneer go away?

Ware River Power took over management of Pioneer in April of 1995 and immediate changes were made. The delinquent property tax bill of \$250,000 was paid in full to the town of Ware. A weir was created in the upper flashboards to obtain minimum stream flow without use of siphons. Pond leveling controls, automation, and pager alarm systems were put into use to make the plant "run of river" at all times, thus protecting the aquatic life surrounding Greenville Park. The culvert bubbling water onto Main Street, after three years of experimental repairs, was fixed permanently in 1998. Demolition of an entire side of the canal and construction of a new wall stopped leakage into the tax collectors basement. Pointing and reconstruction of the opposite wall stopped leakage of water into the fire station. Fences were painted and repaired and a new catwalk was built. Flood gates were repaired as well. The head gates that took the life of the diver were completely redesigned and rebuilt with fill gates at the center to avoid a repeating scenario. All five turbines and two generators at the plant were rebuilt and turbines were epoxy coated for higher efficiency. Here are a few bullets of the results of sound operations, repairs and capital improvements:

- Increased production, by 51% using the same amount of water through the same turbines.
- Stability of a bankrupt business that could have continued to be a menace on its surroundings for years to come.
- Increased and reliable tax basis for the town of Ware.
- Public safety through construction and maintenance of civil works.
- Improvements to fish and wildlife habitat as a result of "run of river operations" and a conscious effort to help the environment and surrounding ecosystems around Greenville Park.
- An impeccable FERC and stakeholder compliance record.

A11.

Please attach a list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in recommending conditions for your Facility.

Since WRP's purchase of the site the following agencies have been involved with the project.

Ware Board Of Selectman  
Conservation Commission  
Parks and Recreation Department  
Town Of Ware  
126 Main Street  
Ware MA 01082

US Fish and Wildlife Services  
P.O. box 1518  
Concord NH 03301  
Contact: John Warner

Massachusetts Division of Fisheries and Wildlife  
Field Headquarters  
Commonwealth Of Massachusetts  
Westboro, MA 01581

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 1001  
Contact: Chung Yao Hsu, P.E.

A12

Pioneer hydropower is managed and owned by Lucas Wright who has well over 20 years experience in hydropower. He resides 5.6 miles from the plant. Assistance is provided by the staff (two employees) of Ware River Power Inc. The plant consists of two dams, Ware Upper and Lower. Ware Upper houses turbines 1,2,4 and 5, Ware Lower houses turbine-3 (see the attached Equipment Spec sheet). T-4 and 5 on the upper dam and T-3 on the lower dam are controlled automatically with direct pond leveling controls. Minimum stream flow is met at the upper dam by a 10'x12" opening in the upper flashboards that is monitored by pond leveling sensors that controls turbine actuation. In case of low pond level an automatic dialer notifies operators via cell and pager communications of a low pond level scenario. If response is not delivered manually, the site trips offline before a violation of minimum stream flow occurs. Minimum stream flow in the upper project reach area is 20cfs. The lower dam has no minimum stream flow, as its discharge is directly at the foot of the dam and it has no reach area. The lower dam is "run of river" at all times and has shutdown protection if water gets below dam crest.

C.

If you search the internet on the Town of Ware, Wikipedia gives this explanation of the naming of the town:

“The actual origin of the name, Ware, is thought to be derived from a translation of the Native American word "Nenameseck," meaning fishing weir (pronounced Ware). The weirs were used to capture salmon that were once abundant in New England waterways.”

As the owner of the dams in Ware, I agree with this explanation. However, I would argue that there is no evidence that Salmon, or any migratory fish species, made it beyond the natural falls in Ware. On the contrary, I think it could be argued that the fishing in Ware was abundant for the Native Americans because species could no longer pursue migration and were trapped by the natural lay of the river. In the book, **History of Ware, Massachusetts**, 1911, by Arthur Chase, Chase describes the river dropping seventy feet in less than a quarter mile with the first grist mill on record established soon after 1729 by Jabez Omstead. Furthermore this book goes on to speak of several different mills and dams being built up to 1824, which is when the two dams that are present were constructed. This poem, signed “Templeton, Ware”, and titled “Ware River”, ran in the first edition of the Ware River News in October, 1887.

“ ‘Tis not as deep as the Mississippi, nor as broad as the Amazon; yet it has a bright and business look as it sparkles and hurries on As it fusses and fidgets along the banks as if it fain would say ‘ I’ve a troop of busy wheels to turn and must hasten along my way’ Then it tumbles headlong over the dams with rollicking rush and roar And dances like a wizard elf along the sanded floor ‘Tis a good stream that the laurels brave of enterprise shall bear As it sings its song of peace and wrath to our busy town of Ware.

There are currently at least nine functioning hydropower plants from the Pioneer project to the Connecticut River. None of these plants have upstream migratory fish passage. This number does not include dams that are not producing hydropower. In the license exemption, Fish and Wildlife agencies reserve the right to enforce fish passage at anytime that it makes sense to do so. In gaining “LIHI” status we hope to increase revenues, so that when and if that time comes it may be possible.

A,B,E.

The Ware Upper Dam is located in the gently rolling hills of the Pioneer Valley. In the immediate project area, the banks of the river are covered with mixed hardwoods, including oaks, maples and ash, as well as a variety of grasses. The banks are extremely steep with ledge outcroppings, retaining walls, and bridge abutments in many areas. In no place would the river banks be considered a wetland.

Since the project is located in the Center of the Town of Ware, terrestrial wildlife resources are limited. A site survey by the Massachusetts Energy Office reported no large mammals and some populations of small mammals consisting of rabbits, muskrats, and mice. There are a variety of game and songbirds in the project area. In the pond above the Upper Dam resident fish populations include largemouth bass, chain pickerel, sunfish, yellow perch, brown bullhead, white sucker, common shiner, tissued darter and eel. The stretch between the upper and lower dams is divided into two parts: the top half falling through a series of small pools in the rocky rapids and the lower half running through the lower dam. The fish population is primarily eels and suckers due to historic industrial discharge from Ware Industries. There is no active fish management program in the project area.

The project, per the stipulation of the U.S. Fish and Wildlife Service and the Massachusetts Department of Fish and Game, maintains an instantaneous release of 20 cfs at the dam.

There are no anadromous fish in this stretch of the river, and U.S. Fish and Wildlife has indicated there are no plans for anadromous fish restoration in the Ware River.

Catadromous fish in the project area are restricted to the eel, however, this is speculative as none have been recorded or seen by staff. There are no federally listed or proposed threatened endangered species within the impact area of the project.

Although the pond above the Upper Dam may be used for fishing and boating, the project area, in general has limited recreational value. The stretch of the river immediately below the dam is too shallow and rocky to be used for boating or canoeing. The pond in the Ware Industries Mill Yard is of limited access and inappropriate for recreational use because of the land use pattern in the area, the Ware River has not been designated as a Wild and Scenic River according to the Heritage Conservation and Recreation Service.

The water quality is rated as Class B above the Upper Dam and Class C below the Upper Dam. There have been historically three industrial discharges across the river below the powerhouse site. Water quality is not affected by operation of the hydro project as each of these discharges was located below the outfall of the powerhouse. There are no detrimental discharges from the project.

There are no archeological sites or sites of historic value in the area, according to the Massachusetts Historical Commission. Land use, within one mile of the facility include industrial, commercial, and residential use, the largest abutter being Greenville Park.

The project displaced an equivalent of 11,666 barrels of oil, based on an equivalent of 600 kW per barrel of oil, last year.



*The Commonwealth of Massachusetts*  
*Division of Fisheries and Wildlife*  
*Field Headquarters, Westboro 01581*

March 20, 1981

MAR 25 1981

Mr. Kevin Shea  
Pioneer Hydro Power, Inc.  
148 State Street  
Boston, Mass. 02109

Dear Mr. Shea:

In response to your request for information pertaining to our anadromous fish restoration program and your Ware River Hydro Development Project in Ware, Massachusetts (F.E.R.C. Number 3127).

The Policy and Technical Committees for Fisheries Management of the Connecticut River (a multi-state and federal agency body) are presently restoring American shad and Atlantic salmon to the Connecticut River Basin. This program was initiated in 1967 and has met with steadily increasing success. An Atlantic salmon Strategic and Operational Plan has been written for the Connecticut River program. These committees are presently preparing an Anadromous Fish Passage Action Plan. This plan presents projected timetables for fish passage facility construction and delineates critical river reaches throughout the basin.

The Chicopee River system, of which the Ware River is a tributary, has not been designated for anadromous fish restoration; at least not during the next twenty-five years. Being as realistic as possible, our plans indicate that it is not economically justifiable at this time to restore anadromous fish to the Chicopee River Basin. This is not to say we are forever excluding restoration of this river system. If, at some point in the future, restoration does become feasible then this river system will be incorporated into our plans.

In summary, currently we do not have plans to restore anadromous fish to the Chicopee River Basin. If restoration does become feasible then fishways will have to be constructed according to our plans. Although restoration is not expected in the next twenty-five years, we do reserve the right to request the construction of fish passage facilities if and when anadromous fish restoration does occur.

Sincerely,

*Stephen M. Henry*  
Stephen M. Henry  
Assistant Aquatic Biologist

SMH:dd

-50-

Pioneer Hydropower Incorporated



## TOWN OF WARE

Department of Public Works  
4½ Church Street  
Ware, Massachusetts 01082-0089

Tel. 413-967-9620 Fax 413-967-9622  
Email: [gsorel@townofware.com](mailto:gsorel@townofware.com)

March 19, 2009

Ware River Power, Inc.  
Box 512  
Allen Drive  
Barre, MA 01005

Gentlemen:

Since Ware River Power acquired the Pioneer Hydropower operation in 1995, there has been a noticeable improvement in the daily operation and management of the facility.

The area around the upper canal is maintained and leaves and other materials trapped on the trash rack are quickly removed from the site. The sidewalks along East Street are cleared of snow well within the requirements of Ware's by-laws. The fence around the upper canal has been repaired to prevent unauthorized access and a large segment of the granite-block retaining wall along Canal Street has been stabilized to eliminate settlement near the wall, as well as seepage into the basements of the residential properties along Canal Street.

Additionally, the staff at Ware River Power, Inc. frequently inspects the walls around the upper canal, as well as the large concrete culvert under East Street, to identify and eliminate any sources of seepage onto East Street.

Additionally, Luke Wright is extremely dedicated and anticipates potential problems, such as unusually heavy rainfall, in advance.

Should you have any questions, do not hesitate to contact the undersigned.

Yours truly,

Gilbert St. George-Sorel, Superintendent

gss/gss

phpcor09