

Milford Hydroelectric Project – Black Bear Hydro Partners, LLC (May 2013 – Updated October 2013)

LOW IMPACT HYDROPOWER INSTITUTE

**PO BOX 194
131 Martha Road
Harrington Park, New Jersey 07640
Tel. 865-719-4794
www.lowimpacthydro.org**

LOW IMPACT HYDROPOWER QUESTIONNAIRE

Background Information	
1) Name of the Facility as used in the FERC license/exemption..	Milford Hydroelectric Project
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.	Scott D. Hall VP – Environmental & Business Services Black Bear Hydro Partners, LLC Davenport Street, PO Box 276 Milford, ME 04461 207-827-5364 - p 207-461-3617 - m 207-827-4102 - f shall@blackbearhydro.com
3) Location of Facility including (a) the state in which Facility is located; (b) the river on which Facility is located; (c) the river-mile location of the Facility dam; (d) the river's drainage area in square miles at the Facility intake; (e) the location of other dams on the same river upstream and downstream of the Facility; and (f) the exact latitude and longitude of the Facility dam.	(a) Maine; (b) Penobscot River; (c) river mile 33.25; (d) 5,092 Sq. Miles; (e) see attached; (f) lat 044 deg 56.4526 min N; long 068 deg 38.8585 min W
4) Installed capacity.	6.4 MW existing and 1.4 MW new

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5) Average annual generation.	55,186 MWh
6) Regulatory status.	FERC No. 2534; issued 4/20/1998, expires 3/31/2038
7) Reservoir volume and surface area measured at the normal maximum operating level.	2250 acre-feet; 235 acres
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).	Approximately 1.2 acres
9) Number of acres inundated by the Facility.	n/a
10) Number of acres contained in a 200-foot zone extending around entire impoundment.	Approximately 145.4 acres
11) Contacts for Resource Agencies and non-governmental organizations	See attached (updated October 2013)
12) Description of the Facility, its mode of operation (i.e., peaking/run of river) and photographs, maps and diagrams.	See attached – background information, project-specific data, and photos
<p>Questions for For “New” Facilities Only:</p> <p>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</p>	The Milford Project is both an existing 6.4 MW facility, plus 1.4 MW of generation capacity was added in 2011; therefore we are providing answers for both the existing and the new capacity.
13) When was the dam associated with the Facility completed?	1906
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.	Pursuant to the Lower Penobscot River Multiparty Settlement Agreement and a FERC order dated 18 April 2005 (111 FERC 62,061) the two new units added to the Milford Hydroelectric Project powerhouse commenced commercial operations in November 2011.

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15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?	No	
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)?	No	
<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>	No	
<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>	,	
A. Flows	PASS	FAIL
1) Is the Facility in <i>Compliance</i> 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>YES = Pass, Go to B N/A = Go to A2</p> <p>Please see attached MF Operations and Flow Plan Approval</p>	NO = Fail
2) If there is no flow condition recommended by any Resource Agency for the	YES = Pass, go to B	

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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?	NO = Go to A3	
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 that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?	YES = Pass, go to B	NO = Fail
B. Water Quality	PASS	FAIL
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? Or 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?	YES = Go to B2	NO = Fail
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?	YES = Go to B3 NO = Pass Please see: http://www.maine.gov/de/p/water/monitoring/305b/	
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?	YES = Pass	NO = Fail
C. Fish Passage and Protection	PASS	FAIL

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<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</p> <p>Confirmation to be requested from agencies and will be forwarded upon receipt.</p> <p>Also, please see P-2534 MF Fish Passage Report (August 2013) for most recent construction update.</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 (<i>e.g.</i>, because passage is blocked at a downstream dam or the fish no longer have a migratory run)?</p> <p>a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction 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 C2a NO = Go to C3</p> <p>YES = Go to C2b N/A = Go to C2b</p> <p>YES = Go to C5 N/A = Go to C3</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</p>	<p>NO = Go to C5 N/A = Go to C4</p>	<p>YES = Fail</p>

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<p>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>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>b) If the Facility is unable to meet the fish passage standards in 4.a, has the Applicant either i) demonstrated, and obtained a letter from the U.S. 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, or ii) committed to the provision of fish passage measures in the future and obtained a letter from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service indicating that passage measures are not currently warranted?</p>	<p>YES = Go to C5</p>	<p>NO = Fail</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 Note: no such prescription has been</p>	<p>NO = Fail</p>

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	issued	
6) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?	YES = Pass, go to D N/A = Pass, go to D	NO = Fail
D. Watershed Protection	PASS	FAIL
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 average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?	YES = Pass, go to E and receive 3 extra years of certification	NO = go to D2
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?	YES = Pass, go to E and receive 3 extra years of certification	NO = go to D3
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)	YES = Pass, go to E	NO = go to D4
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?	YES = Pass, go to E	No = Fail
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 Atlantic salmon, Atlantic and shortnose sturgeon	

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<p>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?</p>	<p>YES = Go to E3 N/A = Go to E3</p>	<p>NO = Fail</p>
<p>3) If the Facility has received authorization to incidentally <i>Take</i> 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 authorization pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authorization?</p>	<p>YES = Go to E4 N/A = Go to E5</p> <p>Please see Penobscot BO 8-31-12 which covers all three species listed above.</p>	<p>NO = Fail</p>
<p>4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:</p> <p>a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or</p> <p>b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or</p> <p>c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or</p> <p>d) The recovery plan under active development will have no material effect on the Facility’s operations?</p>	<p>YES = Pass, go to F</p> <p>Please see Milford Fish Passage Approval 10-9-12, which incorporates BO into license.</p>	<p>NO = Fail</p>
<p>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?</p>	<p>YES = Pass, go to F</p>	<p>NO = Fail</p>
<p>F. Cultural Resource Protection</p>	<p>PASS</p>	<p>FAIL</p>

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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?	YES = Pass, go to G N/A = Go to F2 Please see MF CRMP, and MF CRMP Annual Filing 2013	NO = Fail
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?	YES = Pass, go to G	NO = Fail
G. Recreation	PASS	FAIL
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?	YES = Go to G3 N/A = Go to G2 Please see Recreation Report Filing	NO = Fail
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?	YES = Go to G3	NO = Fail
3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?	YES = Pass, go to H	NO = Fail
H. Facilities Recommended for Removal	PASS	FAIL
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?	NO = Pass, Facility is Low Impact	YES = Fail

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The following provides additional information in support of the application for certification of the Milford Hydroelectric Project as a low impact facility. In addition, the Lower Penobscot River Multiparty Settlement Agreement, the Milford Project FERC license, Water Quality Certificate, and the amendments to incorporate the relevant provisions of the Lower Penobscot River Multiparty Settlement Agreement are being provided separately.

A. Flows

The Lower Penobscot River Multiparty Settlement Agreement provided for amendments to the Milford Hydroelectric Project license, primarily incorporating the pertinent fish passage requirements provided for in Attachment A of the Agreement, as well as confirming run-of-river operations. The signatories to the Agreement also filed supportive pleadings and those provisions are now included in the FERC license. In addition, the Project's original license and Water Quality Certificate, as well as the amendments to incorporate the relevant provisions of the Lower Penobscot River Multiparty Settlement Agreement include provisions for water level and flow management. Please see attached MF Operations and Flow Plan Approval.

B. Water Quality

The Milford Hydroelectric Project received its Water Quality Certification from the Maine Department of Environmental Protection on 23 October 1992, and the Certification was amended on 11 March 2005 to incorporate the relevant provisions of the Lower Penobscot River Multiparty Settlement Agreement. Please see: <http://www.maine.gov/dep/water/monitoring/305b/> and FERC license which contains the 401 certificate..

C. Fish Passage and Protection

The Lower Penobscot River Multiparty Settlement Agreement provided for the amendment of the Milford Hydroelectric Project license, incorporating the pertinent fish passage provided for in Attachment A of the Agreement. The license includes an article reserving FERC's authority to require the licensee to construct operate and maintain such fishways as may be prescribed by the Secretary of Interior of the Secretary of Commerce under Section 18 of the Federal Power Act. The signatories to the Agreement also filed

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supportive pleadings and those provisions are now included in the FERC license. Furthermore, we are making significant investments in the new shore-based upstream fish passage facility and upgraded downstream passage facilities that are currently under construction. In addition, the inflatable crest control system designed to enhance upstream passage at the project, as called for under Attachment A and therefore the amended FERC license, has already been installed. Please see attached P-2534 MF Fish Passage Report (August 2013) for most recent construction update.

D. Watershed Protection

Since the FERC Project boundary for the Milford Hydroelectric Project primarily contains the land necessary for operation and maintenance of the project facilities, state and federal resource agencies did not request a formal shoreland management plan. However, in addition to the standard FERC license requirements associated with erosion and sedimentation control the Project is subject to federal, state and local erosion and sedimentation control requirements.

E. Threatened and Endangered Species Protection

The Penobscot River run of Atlantic salmon was added to the Gulf of Maine population of Atlantic salmon that is listed as endangered under the Federal Endangered Species Act. As a result, Black Bear Hydro Partners, LLC worked with the US Fish and Wildlife Service and NOAA Fisheries to develop a Species Protection Plan (which also includes protective provisions for Atlantic and shortnose sturgeon) for its hydroelectric projects and operations. By Order dated 9 October 2012 the Milford Project license the design drawings for the upgraded fish passage facilities were approved and the license was made subject to the incidental take terms and conditions of the Biological Opinion (issued 31 August 2012) as well as the accompanying Species Protection Plan. Please see Penobscot BO 8-31-12 which covers all three species listed above; and Milford Fish Passage Approval 10-9-12, which incorporates BO into license. .

F. Cultural Resource Protection

Cultural resource assessments during the licensing process addressed several specific items associated with the Milford Project. The Project's Cultural Resource Management Plan addresses those items and also includes provisions to address cultural resource issues in the event they arise during the term of the license. Please see MF CRMP, and MF CRMP Annual Filing 2013 for most recent compliance filing.

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G. Recreation

The Milford Hydroelectric Project license and Water Quality Certificate contain recreation-related provisions for the project. Black Bear Hydro Partners, LLC has implemented the recreation plan in accordance with the license requirements. Please see Recreation Report Filing for latest compliance confirmation.

Milford

FERC Number 2534

FERC License Expiration March 31, 2038

River Penobscot

Town Milford and Old Town

Drainage Area 5,092 Sq. Miles (1)

Upstream Fish Passage Type Standard denil and shore-based upstream lift (under construction); inflatable crest control designed to enhance upstream passage; separate upstream eel passage facilities

Downstream Fish Passage Type Surface Weir Bypasses; bottom bypass entrance for eels; one-inch clear spacing trashracks (enhancements to surface and bottom entrances)

Installed Capacity 6.4 MW; plus additional 1.4 MW with additional two new units

Number of Units 4 original; plus 2 additional new units

Type of Units one vertical fixed and three vertical Kaplan; and two new units are vertical fixed

Dam Type Concrete Gravity

FERC Dam Classification Low Hazard

Dam Length 1,159 Ft.

Flashboard Height 4.5 Ft.

Head 20 Ft.

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Surface Area 235 Acres

(1) 67% of 7,600 prorated for flow distribution requirement

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