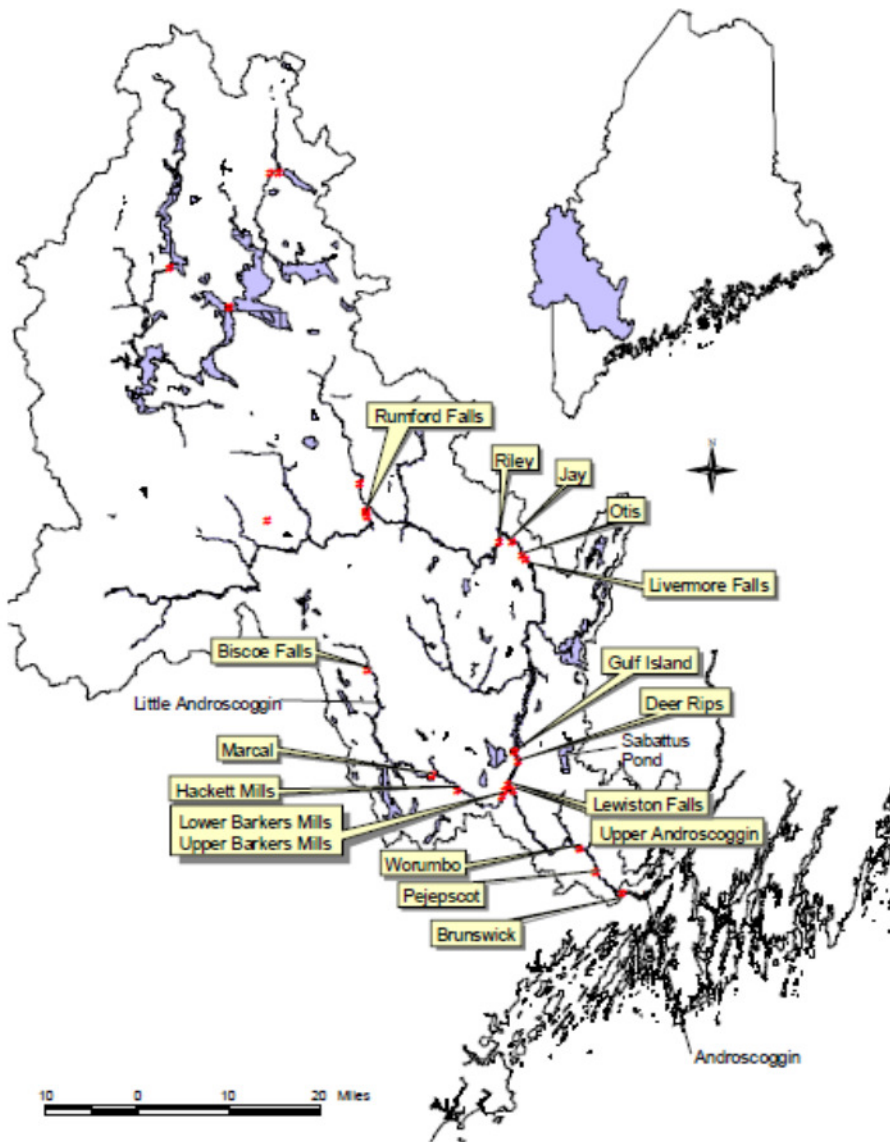


Low Impact Hydropower Questionnaire  
EXHIBITS

**Exhibit 3 – Location of Facility**

The Worumbo Project is located on the Androscoggin River in Lisbon Falls and Durham, Maine. The Worumbo Project is the third dam on the Androscoggin River, upstream from the Brunswick Hydroelectric Project (FERC No.2284) and the Pejepscot Hydroelectric Project (FERC No.4784), as shown in the map below. Miller Hydro Group included Maine Department of Marine Resources' map in our 2012 Biological Assessment submitted with FERC.



Source: MDMR 2008a

FERC Licensed Projects Upstream:

Rumford Falls (FERC No.2333): Rumford, Maine  
Riley-Jay-Livermore (FERC No.2375): Riley/Jay/Livermore, Maine  
Otis (FERC No.8277): Chisholm, Maine  
Gulf Island – Deer Rips (FERC No.2283): Lewiston, Maine  
Lewiston Falls (FERC No.2302): Lewiston, Maine  
Upper Androscoggin (FERC No.11006): Lewiston, Maine

FERC Licensed Projects Downstream:

Pejepscot (FERC No.4784): Topsham, Maine  
Brunswick (FERC No.2284): Brunswick, Maine

**Exhibit 6 - Regulatory Status**

FERC Project No. 3428-ME

“Order Issuing License (Major)” issued December 24, 1985

“Order Amending License and Revising Annual Charges” issued October 3, 1990

“Order Amending License” issued August 13, 1998

License Term: 40 years

## **Exhibit 11 - Resource Agency Contacts**

Miller Hydro Group has annual fish meetings with Mark Lazzari and Maine Department of Marine Resources.

Mark Lazzari  
Maine Dept. of Marine Resources  
21 State House Station  
Augusta, Maine 04333  
(207) 624-6358  
Mark.lazzari@maine.com

Paul Christman is familiar with the Atlantic Salmon studies being by Miller Hydro Group in 2013.

Paul Christman  
Maine Department of Marine Resources  
6 Beech St. Central Building  
Hallowell, ME 04347  
(207) 624-6352  
Paul.Christman@maine.gov

Steven Shepard is familiar with the Atlantic Salmon studies being conducted by Miller Hydro Group in 2013 and was involved in the process of Miller Hydro Group receiving a take permit under the Endangered Species Act.

Steven Shepard  
U. S. Fish & Wildlife Service  
17 Godfrey Drive, Suite 2  
Orono, Maine 04473  
(207) 866-3344  
steven\_shepard@fws.gov

Kathy Howatt is Miller Hydro Group's contact at the Maine Department of Environmental Protection.

Kathy Howatt  
Maine Dept. of Environmental Protection  
17 State House Station  
Augusta, ME 04333  
(207) 446-2642  
kathy.howatt@maine.gov

## **Exhibit 12 – Project Description**

The Worumbo Project consists of a dam/spillway, consisting of a gated flood spillway, a concrete ogee spillway with crest elevation at 97 feet msl with two-foot-high hinged flashboards, a center rock ledge section containing a concrete dike with a crest elevation at 97 feet msl with two-foot-high hinged flashboards, and an approximately 520-foot-long concrete spillway with three independently operable pneumatic flashboard sections of seventeen (17) 2.17 ft panels, eight (8) 1.75 ft. panels, and twenty one (21) 2.25 ft. panels. ; an intake section; and an integral powerhouse equipped with two (2) turbine-generator units having a rated total capacity of 19.4 MW at a net operating head of 30.5 feet. The crest gate/flashboard system is designed to fail when overtopped by two (2) feet of water. The dam creates an impoundment with a surface area of 190 acres at a normal full pond elevation of 98.5 feet msl. The project is currently operated as a run-of-river facility, with outflow approximately equal to inflow on an instantaneous basis, with the exception of power system emergencies when Miller Hydro Group is called upon for maximum output. The project is also operated to provide seasonally-varied minimum flow releases into the 850-foot-long bypassed river reach between the Durham-side dam and the end of the tailrace training wall. Current operation permits the impoundment to be drawn down by a maximum of 1.5 feet to allow the owner to maximize the energy and capacity of the project, to provide short-term reserve capacity to the interstate power grid, and to provide ancillary services (i.e., Automatic Generation Control) to the power grid under deregulated market conditions. Minimum flow releases from the project are maintained at 1,700 cfs or inflow, whichever is less, during impoundment refilling.

## **Exhibit A – Flows**

On December 30, 1991, Miller Hydro Group, following consultation and negotiation with the Resource Agencies, filed with the Federal Energy Regulatory Commission (FERC) the results of an instream flow study and recommendations for a minimum flow plan based on that study. The plan included a seasonal flow schedule, and offsite mitigation in the form of an annual payment to the Maine Department of Inland Fisheries & Wildlife for a fisheries management program in the Lower Androscoggin River Basin. On January 26, 1994, the FERC issued the attached “Order Approving and Modifying Minimum Flow Releases and Amending License”, which contained the joint recommendations of the Licensee and the participating Resource Agencies. Copies of the 1991 comment letters from the U. S. Fish & Wildlife Service, the Maine Department of Marine Resources, the Maine Department of Inland Fisheries & Wildlife, and the Atlantic Sea Run Salmon Commission. Copies of these letters are attached as part of this exhibit.

This plan was again subject to agency review and request for modification in conjunction with the 1998 license amendment request. No modifications were requested at that time and the license amendment was issued upon the same terms as the flow plan approved in 1994. Comments relating to flows were received from the following Resource Agencies:

Maine Department of Inland Fisheries & Wildlife, April 15, 1998  
Maine Department of Environmental Protection, April 16, 1998  
U. S. Fish & Wildlife Service, April 27, 1998  
Maine Department of Marine Resources, April 27, 1998

Copies of these letters are attached as part of this exhibit.

## **Exhibit B – Water Quality**

Copies of the following documents are attached:

Maine Department of Environmental Protection letter of January 18, 2002, confirming that compliance with 401 water quality certification conditions is complete.

Maine Department of Environmental Protection “Maine Waterway Development and Conservation Act and Water Quality Certification” dated July 13, 1998

## **Exhibit E – Threatened and Endangered Species Protection**

Copies of the following documents are attached:

National Marine Fisheries Service Letter to FERC, Endangered Species Act Section  
Formal Consultation for the Worumbo Project (FERC No. 3428).

Miller Hydro Group: Atlantic Salmon Downstream and Upstream Passage Study  
Plans



## **Exhibit F – Cultural Resource Protection**

Copies of the following documents are attached:

Maine Historic Preservation Commission (SHPO) letter of May 5, 1982, finding that the redevelopment of the Worumbo Project would “have no effect upon any structure or site of historic, architectural, or archaeological significance ...”.

Maine Historic Preservation Commission (SHPO) letter of April 17, 1998, finding that the 1998 license amendment would have no effect on properties of historic, architectural, or archaeological significance.

## **Exhibit G – Recreation**

Miller Hydro Group developed a boat launch facility and picnic area at the mouth of the Sabattus River. This provides access for recreational boaters to the project reservoir. This facility was subsequently deeded to the Town of Lisbon. The Town of Lisbon charges no fees for the use of this facility.

Miller Hydro Group developed and maintains a canoe portage around the Worumbo Project.

Seasonal bank fishing from both the Durham and Lisbon shores is permitted and encouraged. Miller Hydro Group provided an easement across project land to the next downstream hydroelectric project to further promote bank fishing and access to the Pejepscot reservoir.

Miller Hydro Group is a sponsor of an annual canoe race event in conjunction with the Town of Lisbon “Moxie Days”.

Miller Hydro Group charges no fees for the use of any of the above facilities.