

Application of A & D Hydro, Inc. for Certification as a Class IV Facility
pursuant to RSA 362-F:11, I

ATTACHMENT 2

Letter from the Commonwealth of Massachusetts, Executive Office of
Environmental Affairs, Department of Environmental Protection, dated
August 12, 2005, concerning Water Quality Certification



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Watershed Management, 627 Main Street 2nd Floor, Worcester, MA 01608

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

STEPHEN R. PRITCHARD
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner

Fred Ayer, Executive Director
Low Impact Hydropower Institute
34 Providence Street
Portland Maine 04103

August 12, 2005

Re: West Springfield Hydro Project, FERC #2608

Dear Mr. Ayer,

The Massachusetts Department of Environmental Protection (the Department) is the state agency that issues section 401 Water Quality Certificates. Our records show a reapplication for a Water Quality Certificate was submitted on December 2, 1992 for this project. However, since the Department did not act on the application within one year, the certification was deemed waived by the Federal Energy Regulatory Commission (FERC).

It is the opinion of this agency and our sister agency, the Massachusetts Division of Fisheries and Wildlife, that all of the conditions that would have appeared in a Water Quality Certificate are part of the FERC license for this project. We believe those conditions are protective of aquatic resources and meet water quality standards.

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

Sincerely,

Robert Kubit, P.E.
Environmental Engineer

Cc: Caleb Slater/MADFW

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.
<http://www.state.ma.us/dep> • Phone (508) 792-7470 • Fax (508) 791-4131

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ATTACHMENT 3

Fish Passage Facilities - "Job Performance Report" dated February 28, 2008,
by the Massachusetts Division of Fish and Game

JOB PERFORMANCE REPORT

State: Massachusetts Project Number: F-45-R-26

Period Covered: March 1, 2007 through February 28, 2008

Project Type: Research and Survey of Anadromous Fish

Project Title: Anadromous Fish Investigations

Project Objective: Restore anadromous fish populations to Massachusetts waters. Shad and salmon runs can be restored and enhanced in the Connecticut and Merrimack River Watersheds through proper management as outlined in the study and job narratives.

Study No. & Title: Study 1 - Connecticut River Anadromous Fish Investigations

Study Objectives: Enhance the run of American shad so that the estimated mouth of the river population averages 1,000,000. Restore the adult sea-run Atlantic salmon population to the Connecticut River and tributaries.

Job No. & Title: Job 2W - Westfield Fish Passage

Job Objective: Monitor anadromous fish migration at Westfield River fish passage facility. Evaluate general performance and efficiency of the fish way.

Activity: The Westfield River fish passage facility was operated during the periods of upriver anadromous fish movements (April 3 through July 6, 2007). Anadromous fish species were identified and counted. Operational fish passage concerns and problems were recorded and reviewed by resource agencies and utility company personnel.

Target Date for Achievement: February 28, 2008.

Status of Progress: Up to date.

Significant Deviations: None

Cost: \$

Recommendations: Continue to monitor anadromous fish utilizing the Westfield River passage facilities. Continue to evaluate both structural and operational performance.

Remarks:

Operations

In 2007 a fish ladder was operated for the 11th year at the A&D Hydroelectric dam in West Springfield, MA. The fishway and associated downstream bypass facilities were constructed in the fall of 1995.

The West Springfield fishway was operated for upriver passage during spring/summer (April 3 through July 6). Closures due to high water occurred on April 5, April 7-22 and April 28. Five species of anadromous fish and six species of resident fish were identified and enumerated during the spring/summer fish passage season (Table 1).

An eelway for upstream passage of juvenile American eel was constructed in the lower section of the fishway in August of 2001. The eelway was operated for upstream elver passage from June 10 through September 30, 2007.

Anadromous fish

The West Springfield fish passage facility operated for 77 days in the spring of 2007. The number of days that passage was greater than 1% of the seasonal total was considerably less than 77. The number of days that passage is greater than 1% of the seasonal total, and the percentage of the total run that these days comprise, is a measure the temporal distribution of the run. The "over-1%-daily-passage" totals were: American shad, 93 % of 4,497 in 25 days; sea lamprey, 92% of 1,797 in 23 days; Atlantic salmon, 100% of 21 in 15 days (Table 1).

During the spring/summer season, 21 Atlantic salmon were trapped. All salmon were transported by personnel of the United States Fish & Wildlife Service to the Richard Cronin National Salmon Station, Sunderland, MA.

A total of 4,497 American shad; 1,797 sea lamprey; 0 striped bass; 0 Blueback herring; 245 American eel (Table 1 and Table 4); and 0 gizzard shad were passed upstream in spring/summer 2007 (Table 1). The shad passage represents 95% of the record high of 4,720 in 2001 (Table 2).

Non-anadromous fish

White sucker, brook trout, brown trout, rainbow trout, tiger trout, and smallmouth bass were documented passing upstream through the West Springfield fish passage facility in 2007 (Table 1).

Massachusetts Division of Fisheries and Wildlife
Field Headquarters
1 Rabbit Hill Road
Westborough, MA
01581

A handwritten signature in black ink, appearing to read "Caleb Slater", is centered within a light gray rectangular box.

Prepared By:

Caleb Slater, Anadromous Fish Project Leader

Date: Feb. 28, 2008

Table 1.

Daily fish counts, West Springfield fish passage facility, Massachusetts, 2007.

Date	American Shad	Blueback Herring	Sea Lamprey	Striped Bass	Atlantic Salmon	Gizzard Shad	White Sucker	Small-mouth	Brown Trout	Rainbow Trout	Brook Trout	Tiger Trout	American eel	All fish species
04/03	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/04	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/05	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/06	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/07	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/08	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/09	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/11	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/12	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/13	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/14	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/15	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/16	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/17	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/18	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/19	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/20	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/21	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/22	0	0	0	0	0	0	0	0	0	0	0	0	0	
04/23	0	0	0	0	0	0	5	0	0	0	0	0	0	
04/24	0	0	0	0	0	0	6	0	0	0	0	0	0	
04/25	0	0	0	0	0	0	2	0	0	0	0	0	0	

04/26	0	0	0	0	0	0	2	0	0	0	0	0	0	0
04/27	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04/28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/29	0	0	0	0	0	0	58	0	1	0	0	0	0	0
04/30	0	0	0	0	0	0	13	0	0	0	0	0	0	0
05/01	0	0	0	0	0	0	13	0	0	0	0	0	0	0
05/02	0	0	0	0	0	0	128	0	0	0	0	0	0	1
05/03	4	0	0	0	0	0	265	0	0	0	0	0	0	2
05/04	18	0	0	0	0	0	125	0	0	0	0	0	0	1
05/05	2	0	0	0	0	0	39	0	0	0	0	1	0	0
05/06	1	0	3	0	0	0	19	0	0	0	0	2	0	0
05/07	1	0	5	0	0	0	20	0	0	1	0	0	0	0
05/08	17	0	13	0	0	0	334	2	1	0	0	1	0	3
05/09	27	0	91	0	0	0	433	13	2	1	0	0	0	5
05/10	479	0	343	0	0	0	570	21	4	0	3	1	0	14
05/11	229	0	353	0	0	0	125	22	2	1	1	0	0	7
05/12	134	0	111	0	2	0	18	5	3	0	3	2	0	2
05/13	75	0	16	0	1	0	9	3	0	0	0	1	0	1
05/14	178	0	18	0	0	0	5	2	0	0	0	0	0	2
05/15	117	0	50	0	0	0	8	1	0	0	0	1	0	1
05/16	285	0	58	0	0	0	12	4	1	0	2	3	0	3
05/17	64	0	115	0	0	0	12	1	1	0	1	1	0	1
05/18	198	0	15	0	0	0	1	2	3	0	0	2	0	2
05/19	38	0	0	0	0	0	0	0	1	0	0	0	0	0
05/20	1	0	0	0	0	0	0	0	1	0	0	1	0	0
05/21	48	0	1	0	0	0	0	1	0	0	0	0	0	0
05/22	226	0	7	0	3	0	0	1	2	0	1	1	0	2
05/23	337	0	20	0	0	0	5	4	0	0	0	0	0	3

Table 2. Temporal characteristics of American shad passage at the West Springfield fish passage facility, 2007

Cumulative Percentage of Total American Shad Passage

Percent Passage	25%	50%	75%	90%	Day of Highest Daily Passage
Day*	12	21	27	33	8
Date	5/12	5/21	5/27	6/2	5/8

*Day one is May 1, the first day of shad passage.

Table 3. Historic yearly passage totals, Westfield River fish passage facility, West Springfield, Massachusetts, 1992-2007.

Date	American Shad	Blueback Herring	Sea Lamprey	Striped Bass	Atlantic Salmon	Gizzard Shad	White Sucker	Small-mouth	Brown Trout	Rainbow Trout	Brook Trout	Tiger Trout
*1992					2							
*1993					10							
*1994					7							
*1995					6							
1996	1,413	1	4,699	-	19	-	4,699	110	12	91	7	-
1997	1,012	-	2,255	-	37	-	2,255	64	77	8	12	-
1998	2,292	2	1,756	5	47	1	5,515	149	210	18	42	44
1999	2,668	-	643	-	17	1	1,227	109	162	3	23	103
2000	3,558	-	2,040	-	11	122	3,158	207	77	9	9	44
2001	4,720	2	2,345	2	8	-	3,735	129	116	18	8	34
2002	2,762	4	3,638	2	5	1	2,242	146	160	9	14	90
2003	1,957	5	404	-	6	-	1,832	155	90	2	4	29
2004	913	1	1,171	-	12	-	2,789	148	77	8	6	75
2005	1,237	0	818	0	27	0	1,161	201	58	29	5	28
2006	1,534	0	1,276	1	34	0	3,447	188	39	10	7	69
2007	4,497	0	1,797	0	21	0	2,280	133	44	11	15	21

*1992-1995 Adult salmon were netted at the base of the dam.

Table 4. Eel passage

Date	Small 0-8"	Medium 8-12"	Large 12"+	Daily total	Season total
6/1-6/9					54
10-Jun	24	0	0	24	78
11-Jun	5	2	1	8	86
12-Jun	2	1	2	5	91
13-Jun	2	0	1	3	94
14-Jun	0	0	0	0	94
15-Jun	0	1	0	1	95
16-Jun	3	0	0	3	98
17-Jun	1	0	2	3	101
18-Jun	2	1	2	5	106
19-Jun	0	1	1	2	108
20-Jun	5	0	1	6	114
21-Jun	1	0	0	1	115
22-Jun	3	1	0	4	119
23-Jun	0	0	0	0	119
24-Jun	0	1	0	1	120
25-Jun	0	0	1	1	121
26-Jun	0	0	0	0	121
27-Jun	0	0	1	1	122
28-Jun	1	0	0	1	123
29-Jun	1	0	2	3	126
30-Jun	0	0	1	1	127
1-Jul	0	0	0	0	127
2-Jul	0	0	0	0	127
3-Jul	0	0	0	0	127
4-Jul	0	1	0	1	128
5-Jul	0	0	1	1	129
6-Jul	2	0	0	2	131
			TEMP-F	COUNT	TOTAL
7/9/2007	Leon Pothier	2:00 PM	89	3	134
7/11/2007	Henry Warchol	1:15 PM		9	143
7/13/2007	Henry & Ted Z	2:15 PM		0	143
7/15/2007	Leon Pothier	11:00AM		1	144
					COMMENT
					1-6" 1-11" 1-21"
					1-12" 1-9' 7-2"
					Siphon Lost
					12" Siphon Lost

7/16/2007	Henry	2:30 PM		1	145	12" Restarted Siphon
7/18/2007	Henry	2:00 PM		0	145	fixed outlet screen
7/20/2007	Henry	3:00 PM		8	153	2 Large 6 small
7/23/1997	Leon Pothier	2:00 PM	66	5	158	1 Large 4 Small
7/24/2007	Henry	12:00		6	164	1 Large 5 Small
7/24/2007	Trap placed in	ladder		0	164	
7/27/2007	Ted Z & Henry			0	164	siphon cleaned
7/31/2007	Leon Pothier	3:00 PM	70	42	206	All sizes
8/1/2007	Bill Rose	12:30PM		1	207	small eel in fishway trap
8/1/2007	8shiners	1.5"long			207	in fishway trap
8/3/2007	Ted Z	1:30 PM	75	10	217	Different sizes
8/6/2007	Leon & Henry	12:30PM	76	3	220	1-4" 1-12" 1-15"
8/8/2007	Bill Rose	12:30PM		0	220	
8/11/2007	Ted Z	2:00pm	76	8	228	1-8" 7-small
8/14/2007	Henry	9:40am		1	229	4" no siphon - restarted
8/15/2007	Bill Rose	12:30PM		1	230	12" took pump to repair
8/17/2007	Ted Z	12:00	77	1	231	12"
8/20/2007	Leon Pothier	2:00PM	76	2	233	1-7" 1 -16"
8/22/2007	Bill Rose	12:00	76	0	233	warm & humid
8/26/2007	Ted Z	16:00	78	0	233	Kids swimming below
8/28/2007	Leon Pothier	14:00	77	2	235	1 7" 1- 10"
8/29/2007	Bill Rose	12:00	76	0	235	
8/31/2007	Henry	3:00 PM	76	1	236	1 - 12 "
9/4/2007	Leon Pothier	11:00AM	79	1	237	1 - 20" No siphon
9/5/2007	Henry Warchol	restarted	siphon		237	mounted angle support in
9/7/2007	Ted Z	11:30AM	68	1	238	12"
9/10/2007	Leon Pothier	12:00	71	0	238	
9/12/2007	Bill Rose	12:00	71	0	238	no siphon
9/12/2007	H W	restarted	siphon	3	241	1 -12" 2-8"
9/17/2007	Leon Pothier	11:30		3	244	1-8" 1-11" 1-17"
9/18/2007	Henry Warchol	2:00 PM	61	0	244	Cleaned intake
9/19/2007	Bill Rose	12:00	58	0	244	
9/24/2007	Leon Pothier	2:00 PM	68	2	246	2-10'
9/26/2007	Bill Rose	12:00	65	0	246	
9/27/2007	Henry	3:30 PM	68	0	246	
9/30/2007	Leon Pothier	10:30	60	1	247	1-8"

9/31/2007	Henry Warchol	62	0	247	removed siphon Rodent escape ramp in tank
2007 total					
				247	