

Appendix 1

West Dudley Hydro

Ownership/Regulatory Status

The West Dudley hydroelectric project (the West Dudley project”) presently is owned and operated by West Dudley Hydro, LLC (“WDHLLC”), a Massachusetts limited liability company. The history of development, ownership and operation of the West Dudley project is described below.

Construction of the Quinebaug River Pond Dam (also called the Rhode Island Cardboard Company Dam) was completed in 1919. The West Dudley Power Company filed a notice of exemption from licensing of a small hydroelectric project, known as West Dudley, project No. 7254, on May 2, 1983. No agency comments were received in opposition to the exemption and on June 10, 1983 the Federal Energy Regulatory Commission (“FERC”) issued an exemption to the West Dudley Power Company authorizing the operation and maintenance of the West Dudley hydroelectric project (FERC 7254) (see Appendix 1-1). Project works consisted of the dam, including existing flashboards 2 feet in height, and a brick and masonry powerhouse containing three turbine generators with a total installed capacity of 310 kw.

A&D Hydro, Inc. purchased the West Dudley project from The West Dudley Power Company in the early 1990’s. On January 21, 1994 A&D Hydro, Inc. filed an Application for Amendment of Exemption with the FERC to request that paragraph (4)(i) of the Notice of Exemption for the project number 7254-MA be amended to reflect the fact that: (1) the existing flashboards were and are 4 feet in height (not 2 feet), (2) the impoundment surface elevation was and is 381.8 feet NGVD, and; (3) the minimum (i.e. low flow) tail water is 369 feet NGVD.

A&D Hydro, Inc stated that, to the best of its knowledge and belief, since the project’s inception, no change had been made to increase the impoundment elevation or to alter the capacity or hydraulic discharge of the projects turbines. The maximum gross head is demonstrably less than 13 feet.

Ownership of the project was transferred from A&D Hydro, Inc. to West Dudley Hydro, LLC in 2004.

Appendix 2

West Dudley Hydro

Listing of Authorities/Agencies Contacted

Federal

Melissa Grader
Fish and Wildlife Service
United States Department of the Interior
c/o Connecticut River Coordinator's Office
103 East Plumtree Road
Sunderland, MA 01375

Mr. Thomas C. McMahon
Director
Department of Environmental Quality Engineering
Division of Water Pollution Control
One Winter Street
Boston, MA 02108

Mr. Gordon E. Beckett
Fish and Wildlife Service
United States Department of the Interior
P.O. Box 1518
Concord, NH 03301

Ms. Ruth Rehfus
National Oceanic and Atmospheric Administration
United States Department of Commerce
7 Pleasant Street
Gloucester, ME 01903

State

Mr. Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125
Telephone: (617) 727-5128

Mr. Peter H. Oatis
Assistant Director
Division of Fisheries and Wildlife
Field Headquarters
Westborough, MA 01591

Mr. Robert Kubit, P.E.
Mass DEP
Division of Watershed Management
627 Main Street
Worcester, MA 01608
Telephone: (508) 767-2854
Email: Robert.kubit@state.ma.us

Appendix 3

West Dudley Hydro

Project Location and Operations

The West Dudley Hydroelectric Project (“the project”) is located on the Quinebaug River in the town of Dudley, Massachusetts. Industrial, residential and undeveloped lands are all found in the project area. Some of the undeveloped land primarily on the west side of the river, close as it is to intensive industrial and commercial use, provides some wildlife habitat. Undeveloped lands include a number of wooded areas some of which are seasonally flooded. The remainder of the area consists of low-density residential and small industrial development. The project area, as outlined in the attached Project Boundary Map, Appendix 3-1, is located in the Thames River Basin. The approximate latitude and longitude of the project area are 42° 3'1.64"N and 71°58'53.05"W.

The project is operated as a run-of-river facility. The project is required to maintain a continuous minimum flow of 76 cubic feet per second (ABF .5 cfs) or the inflow to the reservoir, whichever is less. Project works consist of: (a) a reservoir with an 31-acre surface area, and a useable storage capacity of 201 acre-feet; (b) a 55 foot spillway; (c) a dam consisting of two sections 55 feet in length and 144 feet in length, at the junction of which is located an existing 60 foot stone and masonry powerhouse; (d) 4 foot high flashboards; (e) transmission equipment and electrical facilities; and (f) appurtenant equipment.

The powerhouse contains three turbine generators. Unit 1 consists of a modified Medsker brand turbine with a belt driven induction motor. It is a fixed blade Kaplan style which develops 95 kw of power. Unit 2 is also a modified Medsker brand turbine with a belt driven induction motor. It is a fixed blade Kaplan style which develops 120 kw of power. Unit 3 is a Flygt brand submersible unit with a direct-coupled planetary gearbox and induction generator. It is an adjustable blade Kaplan style with output of 95 kw. The total water flow through the project at full operation is approximately 500 cfs.

The project utilizes a previously existing impoundment and the plant is unmanned, but operation is monitored on a 24/7 basis.

APPENDIX 3-1
Project Location

Appendix 3-1
West Dudley Hydro
Project Location



Appendix A

West Dudley Hydro

Description of Project flows

River flow History

The Quinebaug River is a river in south-central Massachusetts and eastern Connecticut, with watershed extending into western Rhode Island. The river is about 80 miles in length. It originates from an unnamed pond near Mashapaug Pond in Union, Connecticut, and ponds northwest of Sturbridge, Massachusetts, flows generally southeast and south through Connecticut and joins Aspinook pond which begins in Canterbury and ends in Jewett City. The river then continues to the Shetucket River northeast of Norwich. That river flows from there into the Thames River and drains into the Long Island Sound. The Quinebaug River is dammed in its upper reaches at East Brimfield Dam, Westville Dam, and West Thompson Dam all for flood control, as well as numerous mill dams, including the Quinebaug River Pond Dam which provided power to mills along the river's course.

The Quinebaug River watershed covers 850 square miles and extends into western Rhode Island. It is heavily forested with 29 named streams including six major tributaries (the French, Moosup, Five Mile Rivers, and the Wales, Mill and Cady brooks). The watershed also contains 54 lakes and ponds, 31 of which with an area of 10 acres or more, for a total of about 3,000 acres; the largest is East Brimfield Reservoir in Brimfield and Sturbridge. The watershed is home to fish species including trout, smallmouth bass, largemouth bass, northern pike, and panfish. Elevations range from 1,264 feet above sea level on Mount Pisgah in Wales, Massachusetts, to about 25 ft in Norwich, Connecticut.

A gauge, located seven miles upstream from the West Dudley project, was maintained in the Quinebaug from 1963 to 1990 and 2003 to 2009. The average flow over the 35 years of record was 184 cfs. The maximum discharge of record, 259 cfs (estimated), occurred in 1984; the minimum, 76.9 cfs, occurred in 1965. In accordance with its FERC License (project No. 7245) the project is operated as a run of river facility and is responsible for maintaining a continuous minimum flow of 76 cubic feet per second or the inflow to the reservoir, whichever is less, for the protection and enhancement of aquatic resources in the Quinebaug River. (see Appendix 1-1)

Appendix B

West Dudley Hydro

Water Quality

The West Dudley hydroelectric project has operated without a 401 water quality certificate since its construction in 1919 and the Federal Energy Regulatory Commission's issuance of its exemption (FERC Project No. 7254) in 1983. West Dudley Hydro, LLC is currently working with Mr. Robert Kubit, Massachusetts Department of Environment Protection (Mass DEP), Division of Watershed Management, to develop and implement a testing program to confirm that the West Dudley project is not causing or contributing to violations of state water quality standards.(see Appendix B-1)

Dr. Mauri Peltó of Nichols College has developed a sampling plan which has been approved by Mass DEP. (see appendix B-2) Testing is scheduled to begin in July 2011 and all required testing is expected to be completed by September 30, 2011. The results from the testing will be sent to Robert Kubit at Mass DEP for his analysis and comment. Test results and comments from Mass DEP will be forwarded to the Low Impact Hydropower Institute upon receipt.

Appendix C

West Dudley Hydro

Fish Passage and Protection

The West Dudley hydroelectric project is not currently required by any state or federal agency to maintain upstream or downstream fish passage facilities.

Dr. Caleb Slater at the Massachusetts Division of Fisheries and Wildlife confirmed via letter dated March 16, 2011 that there are no anadromous fish species present in the vicinity of the Project and thus upstream and downstream fish passage at the project is not required until such time as migratory fish are restored to the project area. (see Appendix C-1). A request was submitted to Melissa Grader at the U.S. Fish and Wildlife Service (see Appendix C-2) for confirmation that the Project is operating within the terms of its Exemption.

APPENDIX C-1

Letter from Dr. Caleb Slater of the Massachusetts Division of Fish & Wildlife regarding the
West Dudley Hydroelectric Project application to the Low Impact Hydropower Institute
dated March 16, 2011



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

March 16, 2011

Mr. Fred Ayer, Executive Director
Low Impact Hydropower Institute
34 Providence Street
Portland, ME
04103

RE: West Dudley Hydroelectric Project
FERC No. P-7254

Dear Mr. Ayer:

The Massachusetts Division of Fisheries and Wildlife (Division) is the agency responsible for the protection and management of the fish and wildlife resources of the Commonwealth. As such we monitor operations at hydroelectric projects within the Commonwealth. The Division hereby submits the following comments on the Low Impact Hydropower Institute's ("LIHI") Pending Application for the proposed LIHI certification of the West Dudley Hydroelectric Project on the Quinebaug River, in Dudley, Massachusetts.

PROJECT DESCRIPTION

The project consists of the existing Quinebaug River Pond Dam (aka Rhode Island Cardboard Co. Dam). The dam has two sections; one 55 feet in length and one 144 feet in length with the powerhouse at the junction. The dam is topped with 4 foot high flashboards, and impounds a 201 acre-feet. The powerhouse contains three turbines with an installed capacity of 350 kW. The project is licensed to operate run-of-river, with outflow equaling inflow on instantaneous basis. The project has no bypass reach.

COMMENTS

River Flows

The project is licensed by the Federal Energy Regulatory Commission (FERC) to operate in an instantaneous run of river mode and when operated in this manner does not have adverse effects on the flows of the Quinebaug River.

However, data from the USGS gauge (01124000) downstream of the Project has documented rapid streamflow fluctuations indicative of peaking operations at a

www.masswildlife.org

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7890

An Agency of the Department of Fish and Game

hydropower facility. The Division understands that some of these fluctuations may have been caused by the operation of another hydroelectric project further upstream and some may have been caused by the operation of this project. The Massachusetts Department of Environmental Protection (MA DEP) has requested documentation to verify compliance with the FERC exemption requirement of an instantaneous minimum flow release of 76 cfs or inflow, whichever is less, and operation as a run of river facility in order to determine if the Project is causing or contributing to violations of state water quality standards. The Division agrees with this request.

Water Quality

If operated in accordance with its FERC license the project will not adversely affect the water quality of the Quinebaug River (see "River Flow" above).

Fish Passage and Protection

Currently there are no anadromous fish species present in the vicinity of the Project. However, there is an active migratory fish restoration program on the Quinebaug and Shetucket rivers in Connecticut. According to the Connecticut Department of Environmental Protection's (CT DEP) The Plan to Restore Diadromous Fishes to the Shetucket River Watershed (December, 2009), the Quinebaug River from its confluence with the Shetucket River in Taftville, upstream to the base of the Cargill Falls Dam in the Town of Putnam, has been targeted for anadromous fish restoration. The catadromous American eel is to be restored throughout the Quinebaug River, extending to and beyond the Massachusetts border.

Presently there are eel passage facilities at the first dam on the Quinebaug River (Tunnel Project, FERC non-jurisdictional). Upstream of Tunnel, there are six more dams (two are active hydropower projects and one is under development) on the mainstem in Connecticut. All of these dams would need eel passage before it would be required at the Project (presently there are no plans to restore anadromous fish to the Massachusetts portion of the Quinebaug River). However, since FERC exemptions are issued in perpetuity it is probable that eel passage will be required at some future date at the project.

Given the configuration of the project, with the turbines discharging at the base of the dam, there is no bypass reach and no need for minimum bypass flows.

Watershed Protection

The project as currently operated does not adversely affect the watershed.

Threatened and Endangered Species Protection

Provisions of the project's FERC exemption provide adequate protection for threatened and endangered species found within the project area.

Cultural Resource Protection

The project does not adversely affect the cultural resources of the Quinebaug River.

Recreation

We encourage the project owner to allow public access to project lands, where appropriate, for fishing and boating. The applicant should provide a canoe take out above the dam as well as a portage route and put in below the dam to enhance recreational opportunities along the Quinebaug River.

Facilities Recommended For Removal

This facility is not currently recommended for removal by the Division.

CONCLUSION

The Division does not object to the West Dudley Hydroelectric project receiving Low Impact Hydropower Institute Certification so long as the applicant can demonstrate to the Division and the MA DEP that its operations are not responsible for rapid flow fluctuations in the Quinebaug River that are causing or contributing to violations of state water quality standards.

Thank you for this opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Caleb Slater". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Caleb Slater, Ph.D.
Anadromous Fish Project Leader

APPENDIX C-2

Email to US Fish and Wildlife requesting comments

Subject: West Dudley Hydro, Quinebaug River LIHI Review
From: Stephen Hickey <sjh@essexhydro.com>
Date: Thu, 24 Feb 2011 09:28:30 -0500
To: melissa_grader@fws.gov
CC: John_Warner@fws.gov, "Tarpey@massgravity.com" <Tarpey@massgravity.com>

Dear Ms. Grader,

Essex Power Services, Inc. (EPSI) has been hired by Mr. Ben Rawson of Rawson Manufacturing, the owner, operator and exemptee of the West Dudley Hydroelectric Power Project (the Project) located on the Quinebaug River in the town of Dudley, County of Worcester, MA to write an application to the Low Impact Hydropower Institute ("LIHI") for the low impact certification of the Project. As a requirement of the LIHI application, applicants are required to seek comment from the relevant hydroelectric agencies regarding the Project's compliance with the requirements of its FERC license or exemption. As such, EPSI, would appreciate any comments you have regarding the Project's compliance with the upstream and downstream fish passage requirements of its exemption (FERC Project No. 7254). At the time the exemption was issued in June of 1983, the U.S. Fish and Wildlife Service (USFWS) certified that there was not a significant existing population of migratory fish at the project dam. However, USFWS did prescribe migratory fish restoration measures as a condition of the exemption, in the event that migratory fish are ever restored to the subject area of the Quinebaug River in the near future. No state or federal agency has recommended fish passage be installed at the Project to date.

Attached for your reference is the project FERC notice of exemption (FERC Project No. 7254) issued June 10, 1983 which includes comment letters from the relevant agencies including USFWS, an amendment to the exemption dated January 21, 1994 to correct the project description as well as two project maps.

Thank you in advance for your comments.

Sincerely,

Stephen Hickey
Essex Power Services, Inc.
on behalf of Rawson Manufacturing
55 Union Street, 4th Floor
Boston, MA 02108
tel: 617-367-0032
fax: 617-367-3796

FERC NO 7254 EXEMPTION.pdf

Content-Type: application/pdf
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— Amendment to FERC 7254.pdf —

Amendment to FERC 7254.pdf

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— MAP 1.pdf —

MAP 1.pdf	Content-Type: application/pdf Content-Encoding: base64
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— MAP 2.pdf —

MAP 2.pdf	Content-Type: application/pdf Content-Encoding: base64
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Subject: Re: West Dudley Hydro, Quinebaug River LIHI Review
From: Stephen Hickey <sjh@essexhydro.com>
Date: Tue, 05 Apr 2011 11:09:27 -0400
To: melissa_grader@fws.gov

Dear Ms. Grader,

I wanted to follow up with you for any comments you have regarding West Dudley Hydro's (FERC Project No. 7254) compliance with the fish passage requirements of its FERC Exemption dated May 1, 1983. We have heard back from Dr. Caleb Slater at the Massachusetts Department of Fisheries and Wildlife (Mass DFW) who confirmed that currently there are no anadromous fish species present in the vicinity of the project and thus fish passage is not required until such time as migratory fish are returned to the project area (see attached comment letter from Mass DFW dated March 16, 2011).

Thank you again for taking the time to review and comment on the West Dudley Hydroelectric Project and please let me know if you need any additional information.

Sincerely,

Stephen Hickey
Essex Power Services, Inc.
on behalf of West Dudley Hydro, LLC
55 Union Street, 4th Floor
Boston, MA 02108
tel: 617-367-0032
fax: 617-367-3796

On 2/24/2011 10:42 AM, Stephen Hickey wrote:

Ms. Grader,

In addition to the previous email I sent you requesting your comments regarding the West Dudley Hydro project (FERC Prohect No. 7254) application to the Low Impact Hydropower Institute, attached are the amendment to the exemption dated January 21, 1994 to correct the project description as well as two project maps.

Thank you in advance for your comments.

Sincerely,

Stephen Hickey
Essex Power Services, Inc.
on behalf of Rawson Manufacturing
55 Union Street, 4th Floor
Boston, MA 02108
tel: 617-367-0032
fax: 617-367-3796

Div. Fish & Wildlife_West Dudley LIHI comments_Appendix C-1.doc	Content-Type: application/msword Content-Encoding: base64
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APPENDIX D – PROJECT CONTACT FORM

Project Name: West Dudley Hydroelectric Project

(please provide name used in FERC license if applicable)

Project Owner/Operator:

Name and Title: Ben Rawson (manager) & James Rawson (partner)

Company West Dudley Hydro LLC

Phone 860-928-4458

Email address: brawson@rawsonscreens.com

Mailing Address 99 Canal St, Putnam CT, 06260

Consulting firm that manages LIHI program participation (if applicable):

Name _____

Company _____

Phone _____

Email address _____

Mailing Address _____

Party responsible for compliance with LIHI program requirements:

Name and Title Ben Rawson

Phone Same as above

Email address Same as above

Mailing Address Same as above

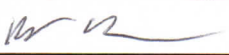
Party responsible for accounts payable:

Name and Title Donna Rawson

Phone 860-428-2995

Email address dawson@rawsonscreens.com

Mailing Address 99 Canal St, Putnam CT, 06260

 8/20/2015

Project Owner/Operator Signature Date

Appendix E

West Dudley Hydro

Description of Threatened and Endangered Species Protection

The West Dudley project is located in a commercial and residential area with very little vegetation present. The following plant species have been reported to be present in the town of Dudley, Massachusetts. However, as some of the observations date back to the 1800's, the presence of these plants is questionable.

It should be noted that at present, none of these species are on the Federal list of endangered plants nor are they being proposed for inclusion on this list.

<u>Taxonomic group</u>	<u>Scientific name</u>	<u>Common name</u>
Amphibian	Ambystoma opacum	Marbled Salamander
Butterfly/Moth	Rhodoecia aurantiago	Orange Sallow Moth
Dragonfly/Damselfly	Anax longipes	Comet Darner
Vascular Plant	Sphenopholis nitida	Shining Wedgegrass
Vascular Plant	Veronicastrum virginicum	Culver's-root

No federally listed threatened or endangered plant species are known to occur within the West Dudley facility area.

As a condition of issuance, the FERC Exemption requires compliance with any terms and conditions that the Federal or State fish and wildlife agencies have determined appropriate to prevent loss of, or damage to, fish and wildlife resources. Based on commitments to comply with both state and federal agency recommendations, the facility operates within FERC and Federal or State Fish and Wildlife Agency guidelines. The project's exemption is subject to termination if the facility is found to be out of compliance. There have been no deficiencies noted by any agency with jurisdiction for the plant.

Dr. Caleb Slater of the Massachusetts Division of Fish and Wildlife confirmed via letter dated March 16, 2011 that "provisions of the project's FERC

exemption provide adequate protection for threatened and endangered species found within the project area. (see Appendix C-1)

Appendix F

West Dudley Hydro

Cultural Resources

A request was submitted on March 11th, 2011 to the Massachusetts Historical Commission for confirmation that there are no known historic properties affected by the project (see Appendix F-1). The Massachusetts Historical Commission confirmed in its response dated March 21st that the West Dudley hydroelectric facility has no potential to cause effects to any known cultural resources (see Appendix F-2).

APPENDIX F-1
Request for Project Review by the Massachusetts Historical Commission
dated March 11, 2011

Sent 3/11/2011

ESSEX POWER SERVICES, INC.

55 UNION STREET, 4TH FLOOR
BOSTON, MASSACHUSETTS 02108 USA

TELEPHONE:
FAX:
E-MAIL:

+617-367-0032
+617-367-3796
essex@essexhydro.com

March 11, 2011

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

Re: West Dudley Hydro, Project Notification Form

Dear Massachusetts Historical Commission,

Please find enclosed a project notification form for the existing West Dudley hydroelectric project ("the Project") in West Dudley, Massachusetts. Essex Power Services, Inc. ("EPSI") has been hired by West Dudley Hydro, LLC to submit an application to the Low Impact Hydropower Institute for the low impact certification of the Project. As part of its application to the Low Impact Hydropower Institute, EPSI is required to obtain certification from the relevant agencies that project operations have no known effect upon significant historic or cultural resources.

A project review was completed by the Massachusetts Historical Commission on February 4, 1982 and a finding was made that the project is unlikely to affect significant historic or archaeological resources (see Appendix 2). The Low Impact Hydropower Institute requires a more recent certification from your agency that the project is still considered to have no known effect upon historic or archaeological resources.

Enclosed for your use is a self-addressed stamped envelope for your response to this request.

Thank you for your consideration of this request and please feel free to contact me with any questions.

Essex Power Services, Inc.

On behalf of West Dudley Hydro, LLC

By: Stephen J. Hickey

Name: Stephen J. Hickey
Title: Environmental Attributes Coordinator
Phone No: 617-367-0032
Fax: 617-367-3796

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: West Dudley Hydroelectric Project

Location / Address: 6 West Dudley Road, Quinebaug River

City / Town: Dudley, MA 01571

Project Proponent

Name: West Dudley Hydro, LLC Attn: Stephen Hickey

Address: c/o Essex Power Services, Inc 55 Union Street, 4th Floor

City/Town/Zip/Telephone: Boston, MA 02108 tel: (617) 367-0032

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Type of License or funding (specify)

Federal Energy Regulatory Commission FERC Project Exemption # 7254 circa 6/10/1983

Project Description (narrative):

See attached Appendix 1

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

No

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

No

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

The West Dudley hydroelectric project has operated in its current location since its commercial date of operation in 1919.

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

What is the total acreage of the project area?

Woodland 2 acres
Wetland 31 acres
Floodplain _____ acres
Open space _____ acres
Developed _____ acres

Productive Resources:
Agriculture _____ acres
Forestry _____ acres
Mining/Extraction _____ acres
Total Project Acreage 33 acres

What is the acreage of the proposed new construction? 0 acres

What is the present land use of the project area? existing project with no proposed new construction

Low density residential and commercial development

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

See attached Appendix 4

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: Stephen J Hickey Date: March 11, 2011

Name: Stephen Hickey

Address: c/o Essex Power Services, Inc 55 Union Street 4th Floor

City/Town/Zip: Boston, MA 02108

Telephone: (617) 367-0032

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

Appendix 1

West Dudley Hydro

The West Dudley hydroelectric project ("the project") is submitting an application to the Low Impact Hydropower institute (LIHI) for certification as a low impact facility. As part of the application, the project is required to obtain confirmation from the relevant agencies that the project has no effect upon known architectural, historical, archaeological, or other cultural resources. A project review was completed on February 4, 1982 by the Massachusetts Historical Commission as part of the project's application for an exemption to the Federal Energy Regulatory Commission. It was determined at that time that the project will have no effect upon known architectural, historical, archaeological, or other cultural resources (see Appendix 2). This request is being submitted in response to LIHI's need for a more recent certification. A brief description of the project is included below.

The West Dudley Hydroelectric Project ("the project") is located on the Quinebaug River in the town of Dudley, Massachusetts. Industrial, residential and undeveloped lands are all found in the project area. Some of the undeveloped land primarily on the west side of the river, close as it is to intensive industrial and commercial use, provides some wildlife habitat. Undeveloped lands include a number of wooded areas some of which are seasonally flooded. The remainder of the area consists of low-density residential and small industrial development. The project area, as outlined in the attached Project Boundary Map, Appendix 3, is located in the Thames River Basin. The approximate latitude and longitude of the project area are 42° 3'1.64"N and 71°58'53.05"W.

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The project utilizes a previously existing impoundment and the plant is unmanned, but operation is monitored on a 24/7 basis.



MASSACHUSETTS
HISTORICAL
COMMISSION

COMMONWEALTH OF MASSACHUSETTS
Office of the Secretary of State

294 Washington Street
Boston, Massachusetts
02108
617-727-8470

MICHAEL JOSEPH CONNOLLY
Secretary of State

RECEIVED

FEB 4 1982

AJA

February 1, 1982

Alex J. Albrecht, Liason Officer
Boise Cascade Specialty Paperboard Division
P.O. Box 498
Brattleboro, VT 05301

RE: West Dudley Hydroelectric Project

Dear Mr. Albrecht:

Thank you for supplying the Massachusetts Historical Commission with information with your letter of January 7. MHC staff have reviewed the proposed West Dudley Hydroelectric Project. MHC feels that this project is unlikely to affect significant historic or archaeological resources. No further review in compliance with Section 106 of the National Historic Preservation Act of 1966 is required.

If you have any further questions, please feel free to call Eric Johnson of MHC staff.

Sincerely,

Patricia L. Weslowski
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

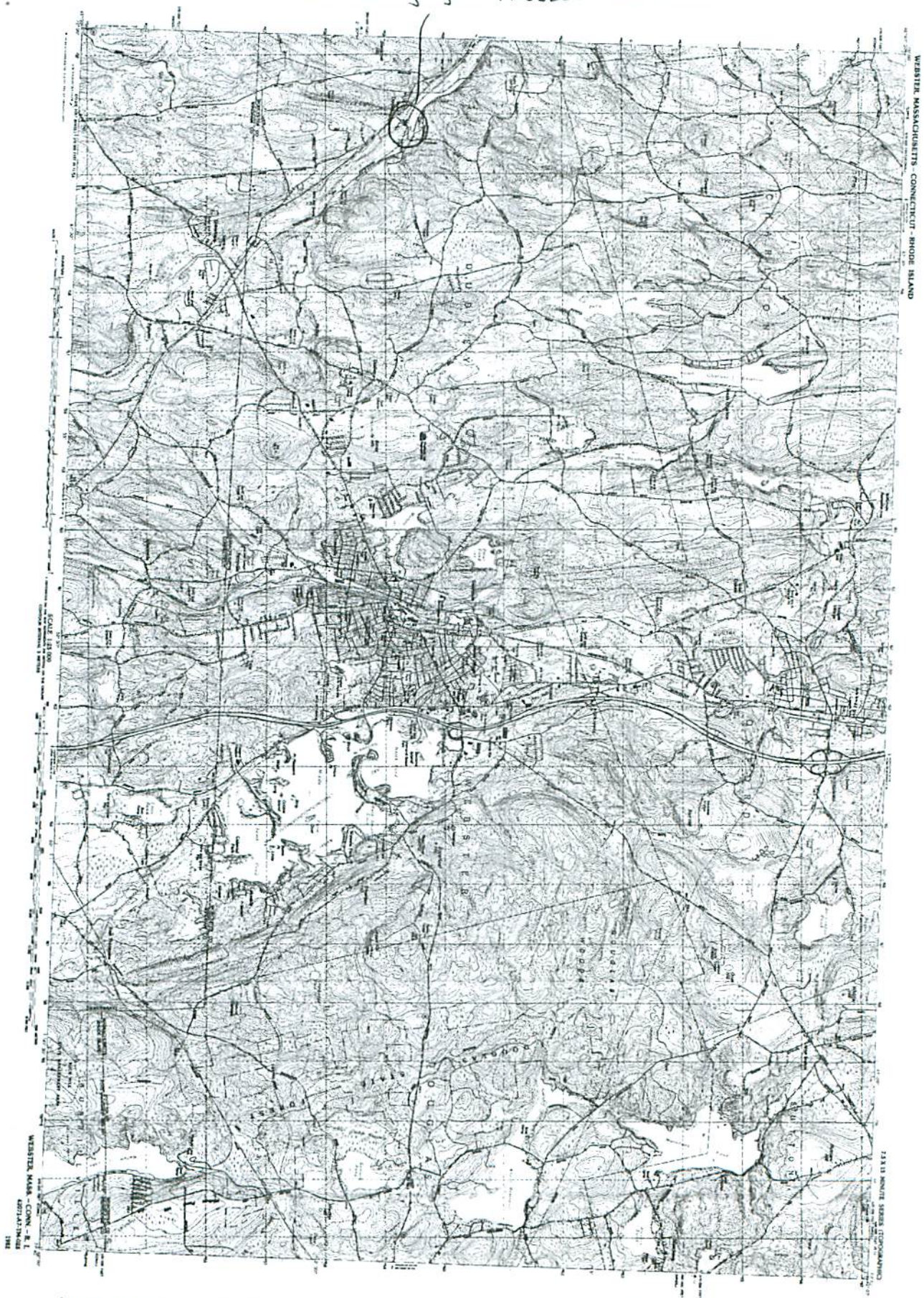
PLW/ny

Appendix 3
West Dudley Hydro
Project Location



West Dudley Hydro Appendix 4

West Dudley Hydro PROJECT LOCATION



Webster
MASS. - CONN. - R.I.
1:25,000 scale metric
topographic map

12.5 MINUTE QUADRANT

- Contours and elevations in meters
- Highway route and other features
- Water features
- Shaded areas
- Geographic names

GENERAL NOTES

This map is a United States Geological Survey product. It is a topographic map of the West Dudley area, Massachusetts, showing the project location. The map is oriented with North at the top. The map is labeled 'WEBSTER, MASSACHUSETTS - CONNECTICUT - RHODE ISLAND' along the top edge and '12.5 MINUTE SERIES (TOPOGRAPHIC)' along the right edge. The map is oriented with North at the top.

Topographic Map Symbols

Symbol	Description
[Symbol]	Contour line
[Symbol]	Highway
[Symbol]	Water feature
[Symbol]	Shaded area
[Symbol]	Geographic name

12.5 MINUTE QUADRANT

This map is a United States Geological Survey product. It is a topographic map of the West Dudley area, Massachusetts, showing the project location. The map is oriented with North at the top. The map is labeled 'WEBSTER, MASSACHUSETTS - CONNECTICUT - RHODE ISLAND' along the top edge and '12.5 MINUTE SERIES (TOPOGRAPHIC)' along the right edge. The map is oriented with North at the top.

APPENDIX F-2

Response from the Massachusetts Historical Commission regarding the March 11, 2011 Request
for Project Review



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

March 21, 2011

Stephen J. Hickey
Essex Power Services Inc.
55 Union Street, 4th Floor
Boston, MA 02108

RE: West Dudley Hydroelectric Project, Dudley, MA. FERC No. 7254. MHC #RC.50356.
Certification Application to the Low Impact Hydropower Institute.

Dear Mr. Hickey:

Staff of the Massachusetts Historical Commission, the office of the State Historic Preservation Officer, have reviewed the information that you submitted for your application to the Low Impact Hydropower Institute.

The information that you submitted indicates that no new construction, demolition or other project modification is proposed.

Because there is no construction, demolition, or other project modification, then the proposed certification would not be an action about which the MHC is required to review and comment to assist a Federal agency in its determinations of whether an action is an "undertaking" and if so, whether the undertaking has the potential to cause effects on historic properties (see 36 CFR 800.3(a)).

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800). Please write me if you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "E. Bell", written over a blue circular stamp.

Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission

xc:
Secretary Kimberly D. Bose,, FERC
Vince Yearick, FERC Hydro East Branch 1
Anton Sidoti, FERC-Hydropower NYC Regional Office
Fred Ayer, Low Impact Hydropower Institute

Appendix G

West Dudley Hydro

Recreation

The West Dudley Hydroelectric Project is not required by any state or federal agency to maintain recreation access facilities within the project vicinity. There have been no changes in the regulatory status of the project since the issuance of the FERC Exemption for the project in 1983, nor have there been any agency comments noting deficiencies in the project's compliance with any conditions contained in the documents related to the FERC Exemption and agency review of the project.

Minimal hiking and boating occurs within a safe distance of the Project. Access to the reservoir and downstream reaches of the project is permitted without fees or charges.

Appendix H

West Dudley Hydro

Description of Watershed Protection

As was previously mentioned, the Quinebaug River Pond dam is located in Dudley, Massachusetts, approximately 130 feet upstream from the crossing of West Dudley Road over the Quinebaug River. The watershed area formed by the dam impoundment extends approximately 31 acres. The gross reservoir volume is 201 acre-feet. The project is operated as a run of river facility with a net storage capacity of zero. A 200-foot boundary zone extending around the impoundment is bordered by residential and commercial real estate (see Exhibit 3-1).

The Quinebaug River basin has a total drainage area of 1,077 square miles. From the central valley of the main stem of the Quinebaug River to the limits of the watershed, the landscape is broad, forested, and rural, with small towns and cities scattered throughout. The bedrock of the Quinebaug River watershed is mostly granite and is covered with a mantle of soils, sand, gravel, and rock.

The land in the immediate vicinity of the West Dudley hydroelectric dam is rural in character, moderately developed and privately owned. The flows below the West Dudley project have minimal effect on shoreline erosion due to the predominantly granite and gravel substrates in the tailrace areas. There has been minimal colonization of exposed shorelines by emergent plants within the 200-foot boundary area due to the commercial and residential landscape. The species that do exist consist of generally old-field primary successional species that are indicative of an area that has previously been cut over and disturbed.

Layout and landscaping of the powerhouse grounds was designed in a manner to minimize visual impact and mitigate the project's impact on the surrounding shoreline. As a condition of issuance, the FERC Exemption requires compliance with any terms and conditions that the Federal or State fish and wildlife agencies have determined appropriate to prevent loss of, or damage to, fish and wildlife resources. There have been no deficiencies noted by any agency with jurisdiction for the plant.