

# Memorandum

**To:** Michael Sale, Executive Director, LIHI  
**From:** Jeffrey Cueto, P.E.  
**Date:** April 5, 2016  
**Re:** West Dudley Hydroelectric Project – LIHI Certificate #76  
Recertification Request

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This memorandum contains my recommendation for recertification of the West Dudley Hydroelectric Project (Project), located on the Quinebaug River in the Commonwealth of Massachusetts and owned by West Dudley Hydro, LLC (Owner). LIHI publicly noticed the application for recertification on December 4, 2015, with comments due by February 8, 2016; no comments were received.

The facility was originally certified in September 2011, effective April 7, 2011. I did the original review for certification of the project, recommending that the facility be certified subject to three special conditions addressing maintenance of flow records for compliance purposes, satisfactory completion of a water quality study, and provision of downstream passage for American eel. As part of the recertification application process, the Owner solicited and received comments from the Massachusetts Department of Environmental Protection (MassDEP)(October 29, 2015), the Massachusetts Division of Fish and Wildlife (MassDFW)(October 22, 2015), and the U.S. Fish and Wildlife Service (USFWS)(November 17, 2015).

## **I. Recertification Standards.**

Sections 2.5, 2.24 and 2.25 of LIHI's Certification Handbook (Updated April 2014)<sup>1</sup> address the process for recertification applications. The first step in the process, after receipt of an application and assignment to an Application Reviewer, provides for an intake review by the Application Reviewer to make an initial determination as to whether there has been either 1) a material change at the facility that would affect the certification or 2) a material revision in the LIHI criteria subsequent to the original certification action. With a determination of no material change, renewal of the certification is granted. Should a determination be made that there has been a material change, the application is subject to a full review following a process similar to the initial application.

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<sup>1</sup> The cited handbook has recently been replaced and the application processes substantially modified, but the older handbook and process is being used for all applications received in 2015.

**II. No further application review is recommended.**

I reviewed the materials submitted by the Owner in support of the application. I also reviewed files contained in FERC eLibrary subsequent to the last recertification review in order to determine what project changes have occurred, if any, and what the recent compliance track record has been. Based on this information and my understanding that no relevant material changes in the LIHI criteria, or criteria interpretations, have been made since the last recertification review, I concluded that a recertification decision can be made based on this Intake Review, that a Full Review is unwarranted, and that recertification should be granted for a five-year term.

**III. There have been no “material changes” at the facility that would affect the certification.**

With respect to material changes at the facility, I reviewed the record for instances of non-compliance related either to the federal exemption or the special conditions contained in the LIHI grant of certification and/or new or renewed issues of concern that are relevant to LIHI’s criteria. I find that there are neither instances of significant non-compliance nor new or renewed issues of concern. Note that I did identify compliance issues related to fish passage; however, as detailed below, I suggest that the problems are not significant enough to merit denying recertification of the facility.

Two annual compliance statements have been filed with LIHI covering the periods April 7, 2011 – April 7, 2012 and April 7, 2011 – February 7, 2014. The Owner indicates full compliance in both statements and no changes in conditions material to the criteria.

**Flows**

***Background***

The Project is operated as a run-of-river facility with no storage manipulation and is responsible for maintaining a continuous minimum flow of 76 cfs or the inflow to the reservoir, whichever is less, for the protection and enhancement of aquatic resources in the Quinebaug River. FERC considers run-of-river operation to be an exemption requirement and not just the 76 cfs minimum flow. There is no spillage requirement; based on my prior review, MassDFW had indicated that there is no bypass habitat for which flow protection would otherwise be necessary.

As the Owner was operating the facility without a flow management and record keeping plan, LIHI conditioned certification with the following requirement:

Condition 1. West Dudley, LLC shall develop a system for maintaining records sufficient to demonstrate compliance with the headpond elevation and flow management limitations set forth under the terms of the FERC exemption and the MassDEP letter of July 8, 2011. Within three months of the date of issuance of the certification, West Dudley, LLC shall provide LIHI with a written flow management plan that outlines the systems in place to

properly manage flows and headpond levels and to produce compliance records. Prior to filing the plan, West Dudley, LLC shall obtain plan approval from U.S. Fish and Wildlife Service and MassDEP (agencies); written confirmation of the approvals will be filed with the plan.

***Status since Certification in 2011***

By email dated March 27, 2012, Stephen Hickey, representing the Owner, filed the flow management plan with LIHI, indicating that it had been approved by the state and federal agencies. By email dated April 13, 2012, Mr. Hickey also provided some supplemental information responding to a query I had made.

There is no information indicating that either FERC or one of the resource agencies has reviewed compliance records kept since the flow management plan was implemented.

In its email comments for the recertification application, the USFWS recommended that any recertification contain a condition requiring the Owner to file the flow management plan with FERC for “incorporation into the exemption.” The Owner, however, objects (see attached email, March 18, 2015). I did not pursue the specific reason for the objection. In my opinion, it is reasonable for FERC to have a copy of the plan for its own compliance monitoring purposes, and I do not believe the USFWS was asking that the exemption be formally amended. I do not, however, recommend conditioning the LIHI recertification. In the alternative, I would be glad to communicate with the USFWS and suggest that they simply file the plan themselves.

The Owner has complied with the related special condition, although technically not within the prescribed three month timeframe.

**Water Quality**

***Background***

At the time the facility was being reviewed for certification, a water quality study was being completed to demonstrate compliance. Since MassDEP indicated that it was reasonably assured that the facility was compliant with water quality standards, the purpose of the study was to only verify compliance after the certification was granted. Consequently, the certification was made subject to the following condition:

Condition 2. West Dudley, LLC shall complete its Summer 2011 water quality sampling and provide the data to MassDEP for a determination as to whether the Facility complies with dissolved oxygen standards. The data report and MassDEP’s determination shall be filed with LIHI no later than December 31, 2011.

***Status since Certification in 2011***

Unfortunately, the sampling was flawed, and it was necessary to extend the study into 2012. LIHI granted a one-year extension in the deadline. The main issue was the lack of pre-dawn samples, which is important in evaluating how the lack of spillage at the dam may affect dissolved oxygen levels. The related emails from 2011 are appended.

Additional sampling was completed in 2012 and filed with MassDEP, which reviewed the data and responded that it was sufficient to demonstrate compliance (email of July 1, 2013, appended).

The river reaches above and below the dam continue to be 303(d) listed as impaired waters, the same status as existed when the facility was reviewed in 2011. The current EPA-approved list is the 2014 list. (Massachusetts Year 2014 Integrated List of Waters, June 2014)

**Table 1. 2014 303(d) listing.**

<b>Segment ID</b>	<b>Description</b>	<b>Impairment Cause</b>
MA41-03_2008	Southbridge WWTP, Southbridge to West Dudley Impoundment, Dudley.  2.2 miles.	Dissolved Oxygen  (Physical substrate habitat alterations)  Fecal Coliform  Taste and Odor  (Debris/Floatables/Trash)  Other
MA41-04_2008	West Dudley Impoundment to Connecticut state line, Dudley. 2.2 miles.	Fecal Coliform

The Owner has complied with the related special condition.

## **Fish Passage**

### ***Background***

The need to accommodate downstream passage by American eel was identified as an issue during the 2011 review and addressed through the following condition, which provided for 1) interim passage measures; 2) a written agreement with the resource agencies on permanent passage implementation by August 1, 2012; 3) maintenance of logs related to interim passage, and filing of those logs annually with the resource agencies; and 4) design and construction of permanent passage by August 1, 2015:

Condition 3. By August 1, 2012, West Dudley, LLC shall enter into, and provide LIHI with a copy of, an agreement reached between the U.S. Fish and Wildlife Service, the Massachusetts Division of Fisheries and Wildlife, and West Dudley, LLC for providing both interim and permanent safe, timely, and effective downstream passage for American eel, including a description of the planned passage and protection measures and the implementation schedule for design, installation, and operations. Said permanent facilities shall be in place and operational by August 1, 2015, and West Dudley, LLC shall notify LIHI within two weeks of completion. In the interim, effective immediately, West Dudley, LLC shall institute interim downstream passage which shall consist of nightly shutdowns (dusk to dawn) during rainy nights from August 15 to November 15. West Dudley shall keep a log during this period, showing precipitation and generation information, and provide it to the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife by December 31 annually until permanent measures are in place. This interim passage provision shall be included in the aforementioned agreement. In the event that the U.S. Fish and Wildlife Service or the Massachusetts Division of Fisheries and Wildlife determine prior to the installation of permanent downstream passage that the above-described interim downstream passage measure is not providing safe, timely and effective interim passage for out-migrating eels, West Dudley LLC shall implement other reasonable interim measures as requested by these agencies. During the term of this certification, should a resource agency request implementation of upstream passage at the Facility, West Dudley, LLC shall so notify LIHI within 14 days and provide LIHI with a copy of the request and its response.

### ***Status since Certification in 2011***

The Owner has been providing interim passage; however, the Owner apparently failed to enter into an agreement with the resource agencies and file that agreement with LIHI by August 1, 2012.<sup>2</sup> Further, permanent passage measures have not been implemented even though the measures were to be in place by last August. In an email of March 8, 2016 (appended), the Owner's representative, Scott Benoit, stated, "Due to the fact that the price of power per kilowatt hour has dropped downwards significantly since West

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<sup>2</sup> The LIHI records contain a letter from Steve Hickey to the resource agency, August 30, 2012, providing a proposed eel passage plan. The USFWS email of November 17, 2015 commenting on the recertification application mentions the final plan having been filed with the USFWS on October 1, 2012.

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Dudley Hydro originally received LIHI status back in 2012, it is no longer economically feasible for Mr. Rawson to implement the final passage measures in the foreseeable future.” Clearly, this situation should have been communicated to LIHI when they first became aware of the problem. The Owner has also not been filing the passage logs annually with the resource agencies.

I contacted the agencies to determine whether permanent passage is a critical need at this time. Both the USFWS and MassDFW indicated that they would support deferral of permanent passage if the following condition is met for interim passage:

During the period August 15 through November 15, West Dudley shall cease generating from dusk to dawn whenever a rain event of 0.25 inches or more in a 24 hr. period or a 50% increase in flow over the previous 3-day average (e.g., if a lake, Corps project, etc. releases water) occurs. The shut downs shall continue for 72 hours (i.e., 3 nights).

The Owner concurs with this recommendation (email from Scott Benoit, March 15, 2016).

Based on this recommendation, I suggest that Condition 3 be replaced with the following condition:

The Owner shall continue to provide interim safe, timely, and effective downstream passage for American eel annual during the period August 15 through November 15, but modified to comply with the following: The Owner shall cease generating from dusk to dawn whenever a rain event of 0.25 inch or more in a 24 hour period or a 50% increase in flow over the previous 3-day average (e.g., if a lake, Corps project, etc. releases water) occurs. The shut downs shall continue for 72 hours (i.e., 3 nights).

The Owner shall keep a log during this period, showing hourly precipitation and generation information, and provide it to the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife by December 31 annually until permanent measures are in place.

In the event that the U.S. Fish and Wildlife Service or the Massachusetts Division of Fisheries and Wildlife determine prior to the installation of permanent downstream passage that the above-described interim downstream passage measure is not providing safe, timely and effective interim passage for out-migrating eels, the Owner shall implement other reasonable interim measures as requested by these agencies. During the term of this certification, should a resource agency request implementation of permanent downstream passage or upstream passage at the Facility, the Owner shall so notify LIHI within 14 days and provide LIHI with a copy of the request and its response.

Note that I did request and received a copy of the 2015 log from the Owner (email of March 11, 2016). While the generation data is hourly, the rainfall data is the total for the calendar day. Since the timing of the rainfall relative to the nighttime migration is important, I specified hourly data for both generation and rainfall in the suggested condition. The Owner apparently uses the NOAA weather station at the Worcester

Regional Airport as a data source; records are available for both daily and hourly precipitation.

The lack of compliance on eel passage is concerning; however, I think it is reasonable to give them a pass at this time and monitor compliance more closely over the next certification period.

### **Compliance**

FERC eLibrary did not contain any documentation of significant compliance issues over the last four years. The library did not include any documentation of environmental reviews by the FERC regional office. Generally exempt projects have limited oversight, except for dam safety.

#### **IV. LIHI's certification criteria have not been revised since the completion of the last recertification review in 2011.**

Facilities for which recertification applications have been filed on or before December 31, 2015, are evaluated using the April 2014 version of LIHI's Certification Handbook.

It is my understanding that LIHI's criteria, or the Board's interpretation of one or more criterion, that are applicable to the circumstances the Project have not changed in meaningful ways since the completion of the last recertification review in September 2011.

#### **V. Conclusion.**

In light of the above, I recommend recertification of the West Dudley Hydroelectric Project for the standard five years. Since the Owner has satisfactorily addressed the special conditions related to flow compliance and water quality, eel passage is the only issue for which there is a continued need for a special condition. Therefore, I am recommending only one special condition for the next certification period:

The Owner shall continue to provide interim safe, timely, and effective downstream passage for American eel annual during the period August 15 through November 15, but modified to comply with the following: The Owner shall cease generating from dusk to dawn whenever a rain event of 0.25 inch or more in a 24 hour period or a 50% increase in flow over the previous 3-day average (e.g., if a lake, Corps project, etc. releases water) occurs. The shut downs shall continue for 72 hours (i.e., 3 nights).

The Owner shall keep a log during this period, showing hourly precipitation and generation information, and provide it to the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife by December 31 annually until permanent measures are in place.

In the event that the U.S. Fish and Wildlife Service or the Massachusetts Division of Fisheries and Wildlife determine prior to the installation of permanent downstream

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passage that the above-described interim downstream passage measure is not providing safe, timely and effective interim passage for out-migrating eels, the Owner shall implement other reasonable interim measures as requested by these agencies. During the term of this certification, should a resource agency request implementation of permanent downstream passage or upstream passage at the Facility, the Owner shall so notify LIHI within 14 days and provide LIHI with a copy of the request and its response.

I will also notify the resource agencies of LIHI's final decision, provide them with this new condition, and suggest to the USFWS that it file the flow management plan with FERC.

The current certification is effective through April 7, 2016.



**From:** Scott Benoit [mailto:sbenoit@rawsonscreens.com]  
**Sent:** Friday, March 18, 2016 12:14 PM  
**To:** Jeffrey Cueto  
**Cc:** Ben Rawson; Patricia B. McIlvaine  
**Subject:** RE: West Dudley/Essex

Good afternoon Jeff,

1. We object to filing the flow management plan with FERC and request operating under the same conditions as our original agreement.
2. We are not sure what you are requesting. I've attached MA DEP response to 2012 Water quality study which states "After review of the submitted water quality data collected during the 2012 field season, the MA Department of Environmental Protection believes the West Dudley Hydroelectric Project (FERC # 7254) does not cause or contribute to violations of Massachusetts state water quality standards.

Flow conditions during 2012 were sufficiently representative of low flow conditions. "Bob"

Please advise if there is additional information you are looking for.

3. Please see the attached log for 2015. Mr. Rawson was not aware that he had to send an e-mail of the log book to each agency and listed in the plan below that the log books can be made available for review by the agencies upon their request.

*Interim Downstream Eel Passage Plan*

Starting August 15, 2012 West Dudley Hydro LLC began shutting down all of the project's turbines on rainy nights and will continue to do so until the earlier of November 15<sup>th</sup> 2012 or the successful installation of safe, timely and effective permanent downstream passage facilities. West Dudley Hydro LLC maintains a log book of precipitation events as well as generation records which are stored at the project powerhouse and can be made available for review by the agencies upon their request. The project is not manned 24 hours a day so West Dudley Hydro LLC would request at least 24 hours notice prior to any agency review of the log book. West Dudley Hydro LLC will continue to implement these interim downstream passage measures until permanent passage is in place or alterations to the interim plan are requested by the agencies.

During high water events, defined as inflow causing pond level to exceed 2' over the top of the dam, the project will be allowed to operate the turbines to prevent plant damage. Records will be kept showing Headpond level (feet NGVD) and turbine output.

4. Please see the attached Appendix 2 List of Agency Contacts and Appendix D Project Contact signed form.

Note: If it is not already noted Mr. Rawson has requested that if the flow from Westville exceeds 600 CFS that he would need to turn on to prevent catastrophic damage to the dam due to water levels being too high.

Thank you,

Scott

**From:** Jeffrey Cueto [<mailto:ompompanoo@aol.com>]  
**Sent:** Thursday, March 17, 2016 8:31 PM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>; Patricia B. McIlvaine <[pbmwork@maine.rr.com](mailto:pbmwork@maine.rr.com)>  
**Subject:** Re: West Dudley/Essex

Thanks, Scott. I'm glad you could dig up that documentation. I think the only outstanding items from my emails on 2/15 are 1) the question of whether there are any objections to filing the flow management plan with FERC; 2) the status of the response to Mass DEP's water quality recommendations contained in its 7/8/11 email; 3) the eel operation log from the last passage season and the resource agency transmittal documentation; and 4) the updated contact list.

Jeff

On Mar 17, 2016, at 10:55 AM, Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)> wrote:

Hi Jeff,

Please see the attached.

Thanks,

**From:** Sheila Burge [<mailto:sburge@essexhydro.com>]  
**Sent:** Thursday, March 17, 2016 10:14 AM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>  
**Subject:** RE: West Dudley/Essex

Attached is a copy of an email from MA DEP regarding the 2012 Water quality study results and the information which was sent to MADEP.

Thank you.

Sheila Burge

**From:** Scott Benoit [mailto:[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)]

**Sent:** Thursday, March 17, 2016 7:06 AM

**To:** [sburge@essexhydro.com](mailto:sburge@essexhydro.com)

**Cc:** Ben Rawson; Scott Benoit

**Subject:** FW: West Dudley/Essex

Good morning Sheila,

Please review the below. Is there any additional more recent information regarding the follow up?

Thank you,

Scott

**From:** Jeffrey Cueto [mailto:[ompompanoo@aol.com](mailto:ompompanoo@aol.com)]

**Sent:** Thursday, March 17, 2016 6:47 AM

**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>

**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>; 'Pat McIlvaine' <[pbmwork@maine.rr.com](mailto:pbmwork@maine.rr.com)>

**Subject:** RE: West Dudley

Scott – Thanks for the information. I don't think that LIHI had received a copy of the 2011 water quality study previously; however, that study had deficiencies as described here:

The holder had already initiated a water quality study in summer 2011 under a plan approved by MassDEP. MassDEP requested D.O./temperature sampling under predawn conditions during the low flow season of July – September, including reservoir profiles. Unfortunately, the study contractor failed to sample under pre-dawn conditions even though, due to algal respiration and lack of photosynthetic oxygen production, pre-dawn is normally the critical time for the lowest D.O. level. The study report was provided to MassDEP and LIHI on October 31. While the study did not disclose any substandard conditions last summer, the failure to collect the samples at the right time of day makes it inconclusive. MassDEP (email of November 4) requested continuing the

sampling next summer. Several other study refinements were also recommended (including spillage and operating conditions in the dataset, providing D.O. saturation values, consideration of continuous monitoring versus grab samples).

So the study was to have been extended into Summer 2012.

If Essex Hydro doesn't have more recent information regarding the follow up, you might want to contact Mass DEP or Steve Hickey.

Regards,

Jeff

**From:** Scott Benoit [<mailto:sbenoit@rawsonscreens.com>]

**Sent:** Wednesday, March 16, 2016 1:55 PM

**To:** Jeffrey Cueto

**Cc:** Ben Rawson

**Subject:** FW: West Dudley

Good afternoon Jeff,

Please see the attached.

Thank you,

Scott

**From:** Sheila Burge [<mailto:sburge@essexhydro.com>]

**Sent:** Wednesday, March 16, 2016 11:30 AM

**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>

**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>; Elise Anderson <[eanderson@essexhydro.com](mailto:eanderson@essexhydro.com)>; Andrew Locke <[alocke@essexhydro.com](mailto:alocke@essexhydro.com)>

**Subject:** West Dudley

Hi Scott,

Tom Tarpey forwarded your email regarding LIHI Certification documents for the West Dudley project. I have attached requested documents. I hope these answer your questions.

Thank you .

Sheila Burge

<MA DEP reponse to 2012 Water Quality Sampling.docx><West Dudley 2012 LIHI DO Readings.xls>

<YSI 600 XLM Sampling Program - West Dudley Hydro, Quinebaug River -

Dudley, MA - 2012.doc

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On 7/1/2013 2:58 PM, Kubit, Robert (DEP) wrote:

Good afternoon Steve,

After review of the submitted water quality data collected during the 2012 field season, the MA Department of Environmental Protection believes the West Dudley Hydroelectric Project (FERC # 7254) does not cause or contribute to violations of Massachusetts state water quality standards.

Flow conditions during 2012 were sufficiently representative of low flow conditions.

Bob

Robert Kubit, P.E.

MassDEP

Division of Watershed Management

627 Main Street

Worcester MA 01608

Telephone: (508) 767-2854

Email: [robert.kubit@state.ma.us](mailto:robert.kubit@state.ma.us)

Fax: (508) 791-4131

**From:** Stephen Hickey [<mailto:sjh@essexhydro.com>]

**Sent:** Thursday, June 27, 2013 10:00 AM

**To:** Kubit, Robert (DEP)

**Subject:** Fwd: Re: West Dudley Hydro Proposed 2012 Water Quality Sampling Plan for LIHI Certification

Bob,

I wanted to follow up with you to see if you have any thoughts regarding the below email and attached water quality data for the West Dudley hydroelectric project.

Thank you and please feel free to contact me with any questions.

Steve

----- Original Message -----

**Subject:**Re: West Dudley Hydro Proposed 2012 Water Quality Sampling Plan for LIHI Certification

**Date:**Fri, 07 Jun 2013 12:52:48 -0400

**From:**Stephen Hickey <[sjh@essexhydro.com](mailto:sjh@essexhydro.com)>

**To:**Kubit, Robert (DEP) <[robert.kubit@state.ma.us](mailto:robert.kubit@state.ma.us)>

Bob,

Please find attached the dissolved oxygen measurements collected during 2012 at West Dudley Hydro LLC's West Dudley hydroelectric project located on the Quinebaug River in Dudley Massachusetts. The project was certified by the Low Impact Hydropower Institute ("LIHI") effective April 7, 2011. Condition 2 of the LIHI certification requires concurrence from your agency that *the project does not cause or contribute to violations of Massachusetts state water quality standards* based on the results of the water quality sampling plan (the "plan") agreed to and conducted by myself with the assistance of Dr. Mauri Pelto of Nicols College between June 22nd and August 30, 2012. As required by the plan, the YSI equipment used at each site during the testing was successfully calibrated in accordance with the requirements of Appendix A of the plan prior to each of the three separate deployments.

Please review the data and let me know if you need any additional information in order to confirm that the West Dudley hydroelectric project *does not cause or contribute to violations of Massachusetts state water quality standards*.

Thank you,  
Steve

Stephen Hickey  
Hydro Management Group  
as agent for West Dudley Hydro, LLC  
c/o Essex Hydro Associates, L.L.C.  
55 Union Street, 4th Floor  
Boston, MA 02108  
tel: 617-367-0032  
fax: 617-367-3796

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From: Jeffrey Cueto [mailto:ompompanoo@aol.com]  
Sent: Friday, November 04, 2011 3:29 PM  
To: 'Kubit, Robert (DEP)'  
Cc: Ronald Kreisman  
Subject: RE: West Dudley Hydroelectric Project FERC #7254 WQ Report Approval

Thanks, Bob. I was going to give you a call to discuss this, but the direction you are taking makes sense to me. I also had noted in the report that there may have been a lack of representative low flows during the sampling period. I didn't spend a lot of time looking at the report, however. It would have been nice if the flow graph had been scaled so that the lower flows were readable. It a pain when the graphs are scaled to the high flows, and the low-to-moderate flows get squashed into the x axis! I am suggesting that LIHI give them a one-year extension so the additional data can be collected.

Jeff

-----Original Message-----

From: Kubit, Robert (DEP) [mailto:robert.kubit@state.ma.us]  
Sent: Friday, November 04, 2011 3:07 PM  
To: 'Stephen Hickey'  
Cc: 'Jeffrey Cueto'; Judge, Michael (ENE); Andrews, Natalie (ENE)  
Subject: West Dudley Hydroelectric Project FERC #7254 WQ Report Approval

Steve,

Based on the water quality data report submitted, the MassDEP believes the West Dudley Project does not cause nor contribute to a violation of water quality standards for the river. However, all samples for the report were collected between 9 a.m. and 10 a.m. and is an important issue because a significant rise in dissolved oxygen can occur 4 hours after sunrise. I note several samples of dissolved oxygen at depth were at or near the dissolved oxygen water quality standard of 5 mg/l.

I ask the water quality study to be conducted again sometime during this initial period of certification with water samples collected during predawn hours. Whoever conducts the next study must submit a Standard Operating Procedure/Quality Assurance Project Plan for water quality monitoring to MassDEP for approval before conducting any field work. (Guidance for preparing SOP/QAPP is found below.) We much prefer to see results from continuous monitoring rather than manual grabs. The results of this study will be used for recertification in 5 years time.

The questions Jeff Cueto had earlier need to be answered as well.  
Are turbines operating during sampling?  
What are the dissolved oxygen saturation values of each sample?

If there are any questions, please let me know.

Bob

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**From:** Scott Benoit [mailto:sbenoit@rawsonscreens.com]  
**Sent:** Tuesday, March 15, 2016 7:49 AM  
**To:** Jeffrey Cueto  
**Cc:** Ben Rawson; Scott Benoit  
**Subject:** RE: Eel Passage

Good morning Jeff,

This solution is agreeable with Mr. Rawson. I am still in the process of gathering the requested data. Steven Hickey is no longer at Essex. I will contact them for the information.

Thank you,

Scott

**From:** Jeffrey Cueto [mailto:ompompanoo@aol.com]  
**Sent:** Friday, March 11, 2016 7:37 AM  
**To:** Scott Benoit <sbenoit@rawsonscreens.com>  
**Cc:** Ben Rawson <brawson@rawsonscreens.com>  
**Subject:** Eel Passage

Scott — I checked with the resource agencies, and both suggested the following interim passage provision. Please let me know your thoughts.

During the period August 15 through November 15, West Dudley shall cease generating from dusk to dawn whenever a rain event of 0.25 inches or more in a 24 hr. period or a 50% increase in flow over the previous 3-day average (e.g., if a lake, Corps project, etc. releases water) occurs. The shut downs shall continue for 72 hours (i.e., 3 nights).

Jeff

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**From:** Slater, Caleb (MISC) [mailto:caleb.slater@state.ma.us]  
**Sent:** Thursday, March 10, 2016 1:40 PM  
**To:** Jeffrey Cueto; 'Melissa Grader'  
**Subject:** RE: West Dudley Hydro - LIHI review

As a "long-term" interim eel passage and protection measure at the West Dudley Project, the Division would accept the following revised protocol:

During the period August 15 through November 15, West Dudley shall cease generating from dusk to dawn whenever a rain event of 0.25 inches or more in a 24 hr. period or a 50% increase in flow over the previous 3-day average (e.g., if a lake, Corps project, etc. releases water) occurs. The shut downs shall continue for 72 hours (i.e., 3 nights).

Caleb



Caleb Slater, PhD

Anadromous Fish Project Leader

Massachusetts Division of Fisheries and Wildlife

1 Rabbit Hill Road

Westborough, MA 01581

508-389-6331

[www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)

**From:** Jeffrey Cueto [mailto:[ompompanoo@aol.com](mailto:ompompanoo@aol.com)]  
**Sent:** Thursday, March 10, 2016 7:11 AM  
**To:** Slater, Caleb (FWE); 'Melissa Grader'  
**Subject:** FW: West Dudley Hydro - LIHI review

Melissa and Caleb:

Please see the note below. Apparently, permanent downstream passage for eel was not implemented by last August per Condition 3 of the 2012 LIHI certification:

By August 1, 2012, West Dudley, LLC shall enter into, and provide LIHI with a copy of, an agreement reached between the U.S. Fish and Wildlife Service, the Massachusetts Division of Fisheries and Wildlife, and West Dudley, LLC for providing both interim and permanent safe, timely, and effective downstream passage for American eel, including a description of the planned passage and protection measures and the implementation schedule for design, installation, and operations. Said permanent facilities shall be in place and operational by August 1, 2015, and West Dudley, LLC shall notify LIHI within two weeks of completion. In the interim, effective immediately, West Dudley, LLC shall institute interim downstream passage which shall consist of nightly shutdowns (dusk to dawn) during rainy nights from August 15 to November 15. West Dudley shall keep a log during this period, showing precipitation and generation information, and provide it to the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife by December 31 annually until permanent measures are in place. This interim passage provision shall be included in the aforementioned agreement. In the event that the U.S. Fish and Wildlife Service or the Massachusetts Division of Fisheries and Wildlife determine prior to the installation of permanent downstream passage that the above-described interim downstream passage measure is not providing safe, timely and effective interim passage for out-migrating eels, West Dudley LLC shall implement other reasonable interim measures as requested by these agencies. During the term of this certification, should a resource agency request implementation of upstream passage at the Facility, West Dudley, LLC shall so notify LIHI within 14 days and provide LIHI with a copy of the request and its response.

The condition also provides for 1) interim passage measures, 2) a written agreement on permanent passage implementation by August 1, 2012, and 3) maintenance of logs related to interim passage, and filing of those logs annually with your offices. I have asked for documentation regarding compliance with those provisions.

The owner would like an extension in the deadline with continued use of the existing interim passage protocol, which consists of rainy-night shutdowns. As Scott Benoit notes, the owner would consider a complete shutdown during the passage period if needed for effective downstream passage. Please let me know whether you think this request is reasonable and whether extending the shutdowns to cover more than rainy nights would be more protective and appropriate under the circumstances. If you

support an extension, I can ask the owner by when he thinks he can have the permanent improvements completed.

Thanks for your help on this.

Jeff

**From:** Scott Benoit [<mailto:sbenoit@rawsonscreens.com>]  
**Sent:** Tuesday, March 08, 2016 10:48 AM  
**To:** Jeffrey Cueto  
**Cc:** Ben Rawson; Scott Benoit  
**Subject:** RE: West Dudley Hydro - LIHI review

Good morning Jeff,

I had the opportunity to speak with Ben Rawson this morning in reference to the below. Condition 3 is going to be sticking point. Due to the fact that the price of power per kilowatt hour has dropped downwards significantly since West Dudley Hydro originally received LIHI status back in 2012, it is no longer economically feasible for Mr. Rawson to implement the final passage measures in the foreseeable future. We also understand that that the final passage measures were to be implemented on or before August 1, 2015.

What would be your suggestion for proceeding with our renewal application? Should I contact Fish and Wildlife and discuss a possible extension with the current interim plan? Mr. Rawson might also be open to the possibility of a complete shutdown during the eel migration season.

Thank you,

Scott

**From:** Jeffrey Cueto [<mailto:ompompanoo@aol.com>]  
**Sent:** Monday, March 07, 2016 4:42 PM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Subject:** Re: West Dudley Hydro - LIHI review

Thanks, Scott. If you have any questions, let me know.

Jeff

On Mar 7, 2016, at 3:43 PM, Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)> wrote:

Good afternoon Jeff,

Our apologies for not getting back to you sooner. Ben Rawson has been unavailable for the last few weeks. The job he is at is ending in a few days. I will touch base with him and try to provide you with some of our responses for tomorrow.

Thank you,

Scott

**From:** Jeffrey Cueto [<mailto:ompompanoo@aol.com>]  
**Sent:** Sunday, March 06, 2016 4:24 PM  
**To:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>  
**Cc:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Subject:** RE: West Dudley Hydro - LIHI review  
**Importance:** High

Mr. Rawson – If you wouldn't mind letting me know when I might hear back from you, I'd appreciate it so I can plan completion of the review for your project.

Thanks.

Jeff Cueto

**From:** Jeffrey Cueto [<mailto:ompompanoo@aol.com>]  
**Sent:** Tuesday, February 23, 2016 10:33 AM  
**To:** '[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)'  
**Cc:** '[pbmwork@maine.rr.com](mailto:pbmwork@maine.rr.com)'; '[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)'  
**Subject:** RE: West Dudley Hydro - LIHI review

Mr. Rawson – LIHI checked its paper files and couldn't find any of the information that I had requested from you. So if you wouldn't mind providing the information, I would appreciate it.

Jeff Cueto

**From:** Dana Hall [<mailto:dhall@lowimpacthydro.org>]  
**Sent:** Monday, February 15, 2016 3:55 PM  
**To:** Jeffrey Cueto  
**Cc:** [pbmwork@maine.rr.com](mailto:pbmwork@maine.rr.com); Slater, Caleb (MISC); Kubit, Robert (DEP); [sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com); [brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com); [julianne\\_rosset@fws.gov](mailto:julianne_rosset@fws.gov); Melissa Grader  
**Subject:** RE: West Dudley Hydro - LIHI review

Jeff, I have an update on all of these and the file is noted. I will call you when I am back from vacation.

On Feb 15, 2016 2:56 PM, "Jeffrey Cueto" <[ompompanoo@aol.com](mailto:ompompanoo@aol.com)> wrote:

Mr. Rawson – When LIHI certified the facility in 2011, it imposed three special conditions. I am trying to better understand when and how each were resolved.

Condition 1 relates to development of a flow management plan with compliance records. Steve Hickey filed the plan, approved by the resource agencies, by email to LIHI dated March 27, 2012. In its recent email of November 17, 2015, the Fish and Wildlife Service suggested that recertification be conditioned on the management plan being filed with FERC for “incorporation into the exemption.” I assume, by this, the Service is not asking that the exemption be reopened but instead that the plan be used by FERC for the purposes of compliance monitoring. *Do you have any objections to such a condition?*

Condition 2 relates to the water quality study, which originally was to have been completed in 2011 but was extended to 2012. I believe that LIHI granted an extension in December 2011, although I cannot find a copy of the final letter. Neither can I find a copy of the final water quality study report and documentation from MassDEP that, based on the study, the project is compliant with state water quality standards. I further note that MassDEP in its October 29, 2015 email to you attached a July 8, 2011 letter outlining certain measures for water quality compliance. *Please provide a copy of the 2012 study report, MassDEP’s comments on the report, and an indication of the status with respect to the measures contained in MassDEP’s 2011 letter.*

Condition 3 relates to eel passage. The Service’s recent email mentions a final passage plan filed with the Service on October 1, 2012; however, the facility appears to be continuing to operate using the interim passage measures. The condition required implementation of final passage measures by August

2015, with notification of LIHI within 2 weeks of completion. The condition also required maintenance of a log for interim passage and filing a copy of the log annually with the resource agencies. *Please provide a copy of the resource agency agreement and passage plan, and confirm whether or not permanent passage measures are in place, and, if so, when they were completed. Also please provide a copy of the annual log for the last year that interim passage was being used, and copies of the transmittal correspondence with the resource agencies.*

Please feel free to contact me if you have any questions.

Sincerely,

Jeffrey Cueto

**From:** Jeffrey Cueto [mailto:[ompompanoo@aol.com](mailto:ompompanoo@aol.com)]  
**Sent:** Monday, February 15, 2016 1:08 PM  
**To:** '[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)'  
**Cc:** '[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)'  
**Subject:** West Dudley Hydro - LIHI review

Mr. Rawson – As you may be aware, I am reviewing your West Dudley facility for recertification by the Low Impact Hydropower Institute. I have a both a question and a request. First the question: Is it correct that the only new or updated recertification application documents are the Questionnaire and the three emails from the resource agencies from October/November 2015? The appendices appear to be the same as filed with the original application in 2011. Now the request: The Appendix 2 list of agency contacts is not up to date. A newer one is in the reviewer report from 2011, a link for which is on the project webpage at the LIHI website. <http://lowimpacthydro.org/lihi-certificate-76-west-dudleys-hydroelectric-project-ferc-no-7254/http://lowimpacthydro.org/lihi-certificate-76-west-dudleys-hydroelectric-project-ferc-no-7254/>

If you wouldn't mind, would you send up an updated Appendix 2, and I'll replace the one in LIHI's records.

Thanks for the help.

><{{{> **Jeffrey R. Cueto, P.E.**

><{{{> [\(802\) 223-5175](tel:8022235175)

><{{{> [ompompanoo@aol.com](mailto:ompompanoo@aol.com)

\*\*\*\*\*

**From:** Scott Benoit [mailto:sbenoit@rawsonscreens.com]  
**Sent:** Thursday, March 24, 2016 4:49 PM  
**To:** Jeffrey Cueto  
**Cc:** Ben Rawson; 'Patricia B. McIlvaine'; Scott Benoit  
**Subject:** RE: West Dudley/Essex

Jeff,

Please see the below comments. Thank you, Scott

**From:** Jeffrey Cueto [mailto:ompompanoo@aol.com]  
**Sent:** Friday, March 18, 2016 5:41 PM  
**To:** Scott Benoit <sbenoit@rawsonscreens.com>  
**Cc:** Ben Rawson <brawson@rawsonscreens.com>; 'Patricia B. McIlvaine' <pbmwork@maine.rr.com>  
**Subject:** RE: West Dudley/Essex

Scott – Regarding #2, I am referring to Bob Kubit’s email to you of 10/29/15 where he referred to compliance with certain terms contained in Mass DEP’s letter of 7/8/11. Those terms are not necessarily LIHI certification requirements, but it would be helpful if you would respond as to project consistency with those terms. \*\*I responded and also copied you on the e-mail.\*\*

The eel passage condition does require filing of the logs annually with the resource agencies. So the language you pasted below from the proposed passage plan (8/30/12) is inconsistent. Further, the passage plan was never finalized and filed with LIHI as I understand it, and now the permanent passage is being deferred. \*\*It was Mr. Rawson’s interpretation on the eel passage plan that we would receive notification for review of the log books. We apologize for any misunderstanding but he was not aware that West Dudley Hydro had a responsibility to send a copy annually to each agency and could not find any passage that stated so in any documents we have here. At the time the eel passage plan was drafted by Stephen Hickey who was acting as the authorized agent for West Dudley Hydro. Mr. Rawson thought that the eel passage plan had been finalized. We were also under the assumption that the permanent passage plan being deferred was already addressed. See below correspondence:

Good morning Jeff,

This solution is agreeable with Mr. Rawson. I am still in the process of gathering the requested data. Steven Hickey is no longer at Essex. I will contact them for the information.

Thank you,

Scott



**From:** Jeffrey Cueto [<mailto:ompompanoo@aol.com>]  
**Sent:** Friday, March 11, 2016 7:37 AM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>  
**Subject:** Eel Passage

Scott — I checked with the resource agencies, and both suggested the following interim passage provision. Please let me know your thoughts.

During the period August 15 through November 15, West Dudley shall cease generating from dusk to dawn whenever a rain event of 0.25 inches or more in a 24 hr. period or a 50% increase in flow over the previous 3-day average (e.g., if a lake, Corps project, etc. releases water) occurs. The shut downs shall continue for 72 hours (i.e., 3 nights).

I looked at the log from 2015. On September 30 and October 1, it rained but the station operated overnight. Was that because it was considered a highwater event? If so, the log does not show the spillage depth over the dam. The log would probably be more useful if the rainfall data were hourly instead of 24 hour values. \*\*How are we supposed to chart hourly recordings of rainfall? This was not asked of us when the program began.

Regarding the 600 cfs or 2 feet of spillage trigger for operating during the passage period, that should be worked out with the agencies. Your Appendix A says this about flows:

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)

The numbers don't look correct. The maximum discharge of 259 cfs is way less than 600 cfs, and the lowest flow of record is that same as the project minimum flow. Perhaps this relates to the flood control dam reregulation of flows. \*\*Mr. Rawson has said the 259cfs contained in the above must be an error. He has seen it to 1800 cfs.

Thanks for the updated contacts list.

Jeff

**From:** Scott Benoit [<mailto:sbenoit@rawsonscreens.com>]

**Sent:** Friday, March 18, 2016 12:14 PM

**To:** Jeffrey Cueto

**Cc:** Ben Rawson; Patricia B. McIlvaine

**Subject:** RE: West Dudley/Essex

Good afternoon Jeff,

1. We object to filing the flow management plan with FERC and request operating under the same conditions as our original agreement.
2. We are not sure what you are requesting. I've attached MA DEP response to 2012 Water quality study which states "After review of the submitted water quality data collected during the 2012 field season, the MA Department of Environmental Protection believes the West Dudley Hydroelectric Project (FERC # 7254) does not cause or contribute to violations of Massachusetts state water quality standards.

Flow conditions during 2012 were sufficiently representative of low flow conditions. "Bob"

Please advise if there is additional information you are looking for.

3. Please see the attached log for 2015. Mr. Rawson was not aware that he had to send an e-mail of the log book to each agency and listed in the plan below that the log books can be made available for review by the agencies upon their request.

*Interim Downstream Eel Passage Plan*

Starting August 15, 2012 West Dudley Hydro LLC began shutting down all of the project's turbines on rainy nights and will continue to do so until the earlier of November 15<sup>th</sup> 2012 or the successful installation of safe, timely and effective permanent downstream passage facilities. West Dudley Hydro LLC maintains a log book of precipitation events as well as generation records which are stored at the project powerhouse and can be made available for review by the agencies upon their request. The project is not manned 24 hours a day so West Dudley Hydro LLC would request at least 24 hours notice prior to any agency review of the log book. West Dudley Hydro LLC will continue to implement these interim downstream passage measures until permanent passage is in place or alterations to the interim plan are requested by the agencies.

During high water events, defined as inflow causing pond level to exceed 2' over the top of the dam, the project will be allowed to operate the turbines to prevent plant damage. Records will be kept showing Headpond level (feet NGVD) and turbine output.

4. Please see the attached Appendix 2 List of Agency Contacts and Appendix D Project Contact signed form.

Note: If it is not already noted Mr. Rawson has requested that if the flow from Westville exceeds 600 CFS that he would need to turn on to prevent catastrophic damage to the dam due to water levels being too high.

Thank you,

Scott

**From:** Jeffrey Cueto [<mailto:ompompanoo@aol.com>]  
**Sent:** Thursday, March 17, 2016 8:31 PM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>; Patricia B. McIlvaine <[pbmwork@maine.rr.com](mailto:pbmwork@maine.rr.com)>  
**Subject:** Re: West Dudley/Essex

Thanks, Scott. I'm glad you could dig up that documentation. I think the only outstanding items from my emails on 2/15 are 1) the question of whether there are any objections to filing the flow management plan with FERC; 2) the status of the response to Mass DEP's water quality recommendations contained in its 7/8/11 email; 3) the eel operation log from the last passage season and the resource agency transmittal documentation; and 4) the updated contact list.

Jeff

On Mar 17, 2016, at 10:55 AM, Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)> wrote:

Hi Jeff,

Please see the attached.

Thanks,

**From:** Sheila Burge [<mailto:sburge@essexhydro.com>]  
**Sent:** Thursday, March 17, 2016 10:14 AM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>

**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>

**Subject:** RE: West Dudley/Essex

Attached is a copy of an email from MA DEP regarding the 2012 Water quality study results and the information which was sent to MADEP.

Thank you.

Sheila Burge

**From:** Scott Benoit [mailto:[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)]

**Sent:** Thursday, March 17, 2016 7:06 AM

**To:** [sburge@essexhydro.com](mailto:sburge@essexhydro.com)

**Cc:** Ben Rawson; Scott Benoit

**Subject:** FW: West Dudley/Essex

Good morning Sheila,

Please review the below. Is there any additional more recent information regarding the follow up?

Thank you,

Scott

**From:** Jeffrey Cueto [mailto:[ompompanoo@aol.com](mailto:ompompanoo@aol.com)]

**Sent:** Thursday, March 17, 2016 6:47 AM

**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>

**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>; 'Pat McIlvaine' <[pbmwork@maine.rr.com](mailto:pbmwork@maine.rr.com)>

**Subject:** RE: West Dudley

Scott – Thanks for the information. I don't think that LIHI had received a copy of the 2011 water quality study previously; however, that study had deficiencies as described here:

The holder had already initiated a water quality study in summer 2011 under a plan approved by MassDEP. MassDEP requested D.O./temperature sampling under predawn conditions during the low flow season of July – September, including reservoir profiles. Unfortunately, the study contractor failed to sample under pre-dawn conditions even though, due to algal respiration and lack of photosynthetic oxygen production,

pre-dawn is normally the critical time for the lowest D.O. level. The study report was provided to MassDEP and LIHI on October 31. While the study did not disclose any substandard conditions last summer, the failure to collect the samples at the right time of day makes it inconclusive. MassDEP (email of November 4) requested continuing the sampling next summer. Several other study refinements were also recommended (including spillage and operating conditions in the dataset, providing D.O. saturation values, consideration of continuous monitoring versus grab samples).

So the study was to have been extended into Summer 2012.

If Essex Hydro doesn't have more recent information regarding the follow up, you might want to contact Mass DEP or Steve Hickey.

Regards,

Jeff

**From:** Scott Benoit [<mailto:sbenoit@rawsonscreens.com>]

**Sent:** Wednesday, March 16, 2016 1:55 PM

**To:** Jeffrey Cueto

**Cc:** Ben Rawson

**Subject:** FW: West Dudley

Good afternoon Jeff,

Please see the attached.

Thank you,

Scott

**From:** Sheila Burge [<mailto:sburge@essexhydro.com>]  
**Sent:** Wednesday, March 16, 2016 11:30 AM  
**To:** Scott Benoit <[sbenoit@rawsonscreens.com](mailto:sbenoit@rawsonscreens.com)>  
**Cc:** Ben Rawson <[brawson@rawsonscreens.com](mailto:brawson@rawsonscreens.com)>; Elise Anderson <[eanderson@essexhydro.com](mailto:eanderson@essexhydro.com)>;  
Andrew Locke <[alocke@essexhydro.com](mailto:alocke@essexhydro.com)>  
**Subject:** West Dudley

Hi Scott,

Tom Tarpey forwarded your email regarding LIHI Certification documents for the West Dudley project. I have attached requested documents. I hope these answer your questions.

Thank you .

Sheila Burge

<MA DEP reponse to 2012 Water Quality Sampling.docx><West Dudley 2012 LIHI DO Readings.xls>

<YSI 600 XLM Sampling Program - West Dudley Hydro, Quinebaug River -  
Dudley, MA - 2012.doc>