

July 20, 2012

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

Subject: Recertification Recommendation for the Putnam Hydroelectric Project

Dear Fred:

This letter contains my recommendation for recertification of the Putnam Hydroelectric Project (the "Project").

### **I. Recertification Standards**

Part V of the Low Impact Hydropower Institute (LIHI)'s Certification Handbook (Updated December 2011) regarding Applications for Recertification ("Recertification Standards") provides that a "request for renewal of a previously-issued LIHI certification ("re-certification") will be granted at the conclusion of the term of the existing certification if re-certification is desired by the certificate holder, and so long as (1) there have been no "material changes" at the facility that would affect the certification and (2) LIHI's certification criteria have not been revised since the previous certification was issued by LIHI."

The Recertification review criteria also provide that "[i]f the Application Reviewer can definitively determine from the submitted application materials, a review of the LIHI file containing the past certification decision(s), any public comments received during the application process, and any limited reviewer-initiated questioning by LIHI of the applicant and/or third parties, that the answer to both questions above is "no," the Application Reviewer will recommend re-certification approval to LIHI's Executive Director, and there will be no further application review.

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

The Putnam Hydroelectric Project (the "Project") received a license exemption (P-5645) from the Federal Energy Regulatory Commission on July 6, 1982. The project was initially certified by LIHI as "low impact" in 2002 and was re-certified in May 2007.

I have reviewed the materials submitted for recertification of the Project by Putnam Hydropower (Applicant) in support of its August 2011 application and the LIHI file containing the past certification and recertification decisions and FERC's public information file on the Project. As a result of that review, I requested additional information, which was supplied by the Applicant. I also solicited comments from the individuals listed below who are knowledgeable of the Project, none of which reported any changes in the project or known compliance issues associated with the Project. Interest in providing for American eel passage was identified by both the CTDEEP and USFWS. A copy of their email or a telephone record is attached as Attachment 1. In some cases, the emails were between the agencies and Applicant rather than the Application Reviewer.

- Ms. Melissa Grader - US Fish & Wildlife Service
- Mr. Brian Golembiewski - CTDEEP, Office of Environmental Review



- Mr. Steve Gephard - CTDEEP, Fisheries Division
- Ms. Jean Pillo - Thames River Basin Partnership and Rivers Alliance of Connecticut
- Ms. Lois Bruinooge - The Last Green Valley

This Project was not public noticed.

In my opinion, the materials provided are sufficient to make a recertification recommendation, with a condition as noted below, and no further application review is needed.

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

In accordance with the Recertification Standards, “material changes” mean non-compliance and/or new or renewed issues of concern that are relevant to LIHI’s criteria. Based on my review of materials provided, review of FERC’s public records, and consultation with the noted individuals, I found that there are no instances of non-compliance or new or renewed issues of concern.

**IV. LIHI’s certification criteria have not been revised since the previous certification was issued by LIHI in 2007.**

It is my understanding that LIHI’s criteria, or the Board’s interpretation of one or more criteria, that are applicable to the circumstances of the Putnam Hydroelectric Project have not changed in meaningful ways since the date of the original certification.

**V. Conclusion**

In light of the above, I recommend recertification of the Putnam Hydroelectric Project with the following condition to address current agency interest in providing for American eel passage:

- The Project shall initiate discussions with the USFWS and CTDEEP in 2012 to develop a plan to initiate voluntary nightly (dusk to dawn) shutdown of the units on rainy days between the dates of September 1 and November 15. If necessary to provide safe eel passage, and if consistent with other protection measures required for other facilities on the River, the plan shall also investigate the need for an additional “plus two days” of nightly unit shutdown after the rain event. Annual reports documenting these shutdown periods shall be submitted to the CTDEEP and LIHI.
- Within year three of receiving LIHI recertification, the Project shall enter into discussions with CTDEEP and USFWS to review the potential need for additional eel passage protection measures beyond those already established. This review would take into consideration the existence of downstream passage on dams upstream and downstream of the Putnam Project to ensure that any additional eel passage requirements would be consistent with measures required of other dams on the Quinebaug River. LIHI shall be provided a copy of any final agreements established to either remain with the existing measures or to add additional measures.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Patricia B. McIlvaine".

Patricia B McIlvaine

**Attachment 1**  
**Putnam Agency Communications**

Telephone Conversations

Date: July 11, 2012 - Telephone conversation and emails  
Contact Person: Ms. Melissa Grader  
Agency: US Fish & Wildlife Service  
Contact Information: 413-548-9138; Melissa\_grader@fws.gov  
Area of Expertise: Fisheries

Ms. Grader confirmed that there are still no requirements for riverine or anadromous fish passage at this Project. She supports the implementation of measures to enhance the downstream and upstream passage of American eel as illustrated in the attached emails. She also reaffirmed that as a run-of-river facility, it meets their criteria for ABF or inflow, whichever is less.

Date: July 11 and 19, 2012 - Telephone conversation and emails  
Contact Person: Mr. Brian Golembiewski  
Agency: CTDEEP  
Office of Environmental Review  
Contact Information: 860-424-367; brian.golembiewski@ct.gov  
Area of Expertise: Overall environmental review

Mr. Golembiewski stated he is attempting to coordinate a single response on behalf of CTDEEP regarding all LIHI criteria. To expedite his response he agreed he may send a simple email to me in lieu of a formal letter. He reaffirmed that the Project appears to be in compliance with its license requirements, no new requirements have been issued, no complaints have been received, but that there are concerns about the passage of American eel at the Project, as expressed by Stephen Gephard to Brian. Eel passage is a focus for many CT rivers systems. I informed him that I do have copies of the emails between C. Rosenfield, S. Gephard and M. Grader on this issue. As of the 19<sup>th</sup>, he still had not heard from Eric Thomas of the water quality group, despite the fact that his initial requests to this group occurred over three months ago. Brian stated that in his opinion, he does not see how such a small project that is run-of-river could cause any water quality problems.

Date: July 17, 2012 - Telephone message; emails  
Contact Person: Mr. Steve Gephard  
Agency: CTDEEP  
Fisheries Division  
Contact Information: 860-447-4316; steve.gephard@ct.gov  
Area of Expertise: Fisheries

Mr. Gephard could not be reached by telephone as he was out of the office for several weeks. His concerns regarding eel passage however are noted in attached emails between he, M. Grader and C. Rosenfield.

Date: July 18, 2012 - Telephone conversation  
Contact Person: Ms. Jean Pillo, Watershed Conservation Coordinator  
Organization: Thames River basin Partnership and Rivers Alliance of Connecticut  
Contact Information: 860-928-4948; jean.pillo@conservect.org  
Area of Expertise: Water quality and recreation.

Ms. Pillo confirmed that the river stretch and lands at the Project are not used for paddling or trails due to its urban setting and close proximity to dams immediately upstream and downstream. She is not aware of any new issues or problems at the project. She is pleased that it is a run-of-river facility. She suggested that I contact Lisa Bruinooge as the Project is located within the Quinebaug River National Heritage Corridor.

Date: July 19, 2012 - Telephone conversation  
Contact Person: Ms. Lisa Bruinooge  
Organization: The Last Green Valley  
Contact Information: 860-774-3300; lois@tlgv.org  
Area of Expertise: Water quality and recreation.

Ms. Bruinooge stated that while the Project is within the National Heritage Corridor, which was established in the early 1990's, there are no National Recreational Trail segments located at the Project due to its developed nature. She stated there is no significant interest in trails or paddling in the Project area.



## Patricia B. McIlvaine

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**From:** Golembiewski, Brian <Brian.Golembiewski@ct.gov>  
**Sent:** Tuesday, July 24, 2012 10:00 AM  
**To:** 'Pat.McIlvaine@wright-pierce.com'  
**Cc:** Thomas, Eric; Hannon, Robert; 'Charles Rosenfield'  
**Subject:** Request for review for recertification of the Putnam Hydropower Project

Hey Pat,

At this time, the only comments the CTDEEP have regarding the LIHI recertification of the Putnam Hydropower Project concern the upstream and downstream passage of American eels through the project site and are similar to those detailed in the 6/26/12 USFWS email below.

Thanks,

Brian Golembiewski  
Environmental Analyst 3  
Office of Environmental Review  
Planning & Program Development  
Office of the Commissioner  
Connecticut Department of Energy and Environmental Protection  
79 Elm Street, Hartford, CT 06106-5127  
P: 860.424.3867 | F: 860.424.4053 | E: brian.golembiewski@ct.gov



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Ensuring a clean, affordable, reliable, and sustainable energy supply.*

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**From:** Melissa\_Grader@fws.gov [mailto:Melissa\_Grader@fws.gov]  
**Sent:** Tuesday, June 26, 2012 4:50 PM  
**To:** Thomas, Eric; Golembiewski, Brian; Gephard, Steve  
**Subject:** Fw: Request for review for recertification of the Putnam Hydropower Project

These are the comments I had sent to Charlie Rosenfield a while back when he was asking for feedback on his recertification (I don't believe I ever received a response from him):

Melissa Grader/R5/FWS/DOI	ToCharles Rosenfield
04/02/2012 03:09 PM	ccsteve.gephard@ct.gov

## Patricia B. McIlvaine

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**From:** Charles Rosenfield <putnamhydro@charter.net>  
**Sent:** Tuesday, July 17, 2012 8:20 PM  
**To:** Patricia B. McIlvaine  
**Subject:** Re: Fw: Putnam LIHI certification: eel protection

I was out this afternoon and got your message late; will try to speak with you tomorrow  
Charlie

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

**From:** Patricia B. McIlvaine  
**To:** 'Charles Rosenfield'  
**Sent:** Monday, July 16, 2012 12:17 PM  
**Subject:** RE: Fw: Putnam LIHI certification: eel protection

Ok..got these now.

Pat

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**From:** Charles Rosenfield [mailto:putnamhydro@charter.net]  
**Sent:** Monday, July 16, 2012 12:16 PM  
**To:** [pbm@wright-pierce.com](mailto:pbm@wright-pierce.com)  
**Subject:** Fw: Fw: Putnam LIHI certification: eel protection

Pat-  
Per your phone message, yes, I neglected to send email below with earlier ones  
Charlie Rosenfield

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

**From:** [Melissa Grader@fws.gov](mailto:Melissa_Grader@fws.gov)  
**To:** [putnamhydro@charter.net](mailto:putnamhydro@charter.net)  
**Cc:** [steve.gephard@ct.gov](mailto:steve.gephard@ct.gov)  
**Sent:** Monday, April 02, 2012 3:30 PM  
**Subject:** Re: Fw: Putnam LIHI certification: eel protection

▼Melissa Grader/R5/FWS/DOI

<b>Melissa Grader/R5/FWS/DOI</b>	ToCharles Rosenfield
04/02/2012 03:09 PM	<a href="mailto:ccsteve.gephard@ct.gov">ccsteve.gephard@ct.gov</a>

SubjectFw: Putnam LIHI certification: eel protection

Hi Charlie,

This responds to your email of March 5th.

Steve and I have discussed it, and this is what we understand the situation to be:

1. Putnam Hydro is seeking LIHI certification. As part of that process, you are soliciting agency comments/recommendations on the LIHI environmental criteria.
2. At other hydro sites undergoing a similar process, where eels are known to occur in the watershed, the agencies have been recommending that a condition of LIHI certification be that the project implements



upstream and downstream eel passage. The actual requirements have varied somewhat among states. In CT, projects have been conditioned to require nightly shutdowns (dusk to dawn) from Sept. 1 through Nov. 15. On the Quinebaug drainage, the Mechanicsville Project has agreed to nightly shutdowns, and the recently exempted Cargill Falls Project will install exclusionary screening and a bypass system to move eels safely past the project.

3. You have indicated (email message below) that you would agree to nightly shutdowns on rainy nights (+2) during the eel outmigration season, but would not agree to nightly shutdowns during the entire 9/1-11/15 period or to install exclusionary screening.

4. At projects where the FWS has recommended the rainy night shutdown protocol, it was only as an interim measure, until a formal passage/protection plan could be developed (in consultation with the resource agencies) - for a defined period of time (within the timeframe of the LIHI certification period). In this case, Putnam has indicated that it would not agree to any of our standard permanent passage/protection measures.

5. The agencies do not have enough data to be confident that a rainy-night (+2) only shutdown protocol would be protective to outmigrating silver eels (as a permanent measure). For example, there could be a situation where a rain event occurs in the upper watershed but not the lower watershed. This would trigger shutdowns at upper hydro projects but not at lower ones (because there was no rain event at those sites) - but the increased flows caused by the rains upstream likely would motivate eels downstream to move also. In this case, those eels lower in the system (and in fact, eels from upstream moving downstream past the lower projects) would not be protected from turbine entrainment. Even using a different metric (e.g., rising limb of a hydrograph) may not solve the problem, because we do not know at what point on that rising limb eels initiate movement. Also, using metrics like that would require keen attention to what is going on at the project, which may not be feasible for stations that are remotely operated/unmanned.

Given the above, the FWS recommends that Putnam implement nightly shutdowns (dusk to dawn) from 9/1-11/15 annually, OR offer an alternative that would be equally protective of outmigrating eels (e.g., seasonal overlays on the trashrack with reduced generation from dusk to dawn from 9/1-11/15 in conjunction with a surface bypass; turbine entrainment study showing units do not injure or kill eels; behavioral measures such as lighting the intake in conjunction with a bypass operated during the outmigration season, etc.).

Regards,  
Melissa

"Charles Rosenfield"

<[putnamhydro@charter.net](mailto:putnamhydro@charter.net)>

03/05/2012 08:44 AM

To

"Gephard, Steve"

<[Steve.Gephard@](mailto:Steve.Gephard@)

<[Melissa\\_Grader](mailto:Melissa_Grader)

"Golembiewski, I

<[Brian.Golembie](mailto:Brian.Golembie)

SubjectRe: Putnam

Melissa and Steve-

So, if Putnam (which is a genuinely low impact hydro project and has been LIHI certified twice before) shuts down on rainy fall nights, or the rainy nights themselves and a bit more (two nights? or if the river is rising?) will that be satisfactory for you to support its LIHI recertification? We would be willing to voluntarily do that to meet LIHI criteria but could not install very narrow trash racks or shut down nights for ten weeks. Installing the upstream passage would not be an issue.

Putnam has a very small pond and equilibrium flow restores over the spillway in seconds or minutes depending on river flow, so disruption from stop/start cycles would be small.

Charlie Rosenfield  
Putnam Hydropower

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

**From:** Gephard, Steve

**To:** 'Charles Rosenfield'

**Cc:** 'Melissa Grader@fws.gov' ; Golembiewski, Brian

**Sent:** Thursday, March 01, 2012 12:54 PM

**Subject:** FW: Putnam

Sorry, I sent this without copying Melissa and Brian, which I now have done.

Steve

**From:** Gephard, Steve

**Sent:** Thursday, March 01, 2012 12:53 PM

**To:** 'Charles Rosenfield'

**Subject:** RE: Putnam

Hi Charlie,

I spoke to Melissa last week about this and we are pretty much on the same page. For us to endorse LIHI certification for a project upstream of any anadromous fish runs, we look for the following:

1. Upstream eel passage, when recommended by the state agency. In the case of the Quinebaug River, we are recommending that for all projects above and including Cargill Falls. We discussed the option of installing "Delaware-style" eel pass through your flashboards.
2. Protection of downrunning eels in the fall—keeping them out of the turbines
  - a. Either, an effective exclusion rack
  - b. Or, shutdown of generation from dusk to dawn, September 1 to November 15.

In regard to item 2b, Melissa and the USFWS has allowed in some states the shutdown to be limited to rainy nights. In CT, I have recommended it be ALL nights due to the uncertainty of when the eels will react. It could rain Monday night and clear up before Tuesday night. But the river might not come up until Tuesday morning and stay up Tuesday and Wednesday night, which is when the eels might move. If an operator shuts down only Monday night, he might miss protecting the run. Another issue is enforcement/accountability. If LIHI requests my input, I will



suggest nightly shutdowns. If it decides to go with the USFWS's recommendations of only rainy nights, I would suggest that be for "rainy nights plus 2" and submitted year-end reports for accountability, as a compromise.

Steve

Stephen Gephard

*Supervisor*

Diadromous Fish Program *and* Habitat and Conservation  
Enhancement Program

Inland Fisheries Division

Dept. Energy and Environmental Protection

P.O. Box 719, Old Lyme, CT 06371

860-447-4316



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**From:** Charles Rosenfield [<mailto:putnamhydro@charter.net>]

**Sent:** Wednesday, February 29, 2012 4:29 PM

**To:** Gephard, Steve

**Subject:** Putnam

Steve-

I sent you an email inquiry December 28, 2011 about Putnam Hydropower's LIHI recertification and followed up with an telephone inquiry as to its status on January 31, 2012

I just wanted to follow up again to find out the status of this.

Charlie Rosenfield

Putnam Hydropower