

Bill Short

From: Melissa_Grader@fws.gov
Sent: Thursday, October 13, 2011 11:26 AM
To: w.shortiii@verizon.net
Cc: Robert.Kubit@state.ma.us; caleb.slater@state.ma.us; John_Warner@fws.gov
Subject: Fw: LIHI certification for the Red Bridge Project; FERC No. 10676

Dear Mr. Short,

This responds to your various requests for information necessary for NAEA to complete its application for Low Impact Hydropower Institute (LIHI) Certification. We have reviewed the project file and filings contained on the FERC Online database, and offer the following:

1. Threatened and Endangered Species

According to the FWS/New England Field Office's online database

(<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>), there are no federally listed T&E species known to occur in the project area.

2. Minimum Flow

The Red Bridge Project is required to release a continuous flow of 237 cfs (or inflow, if less) to the 1,600 foot-long bypass reach. Originally this flow was passed via uniform spill at the dam, but in 2002 the previous owners (Consolidated Edison Energy Massachusetts, Inc.; or CEEMI) installed a slide gate to pass the bypass flow. In a letter to CEEMI's consultant (Kleinschmidt Associates) dated March 13, 2001, the FWS requested that once the slide gate was installed and operational, CEEMI should provide data for the first six months to verify that the project was complying with its bypass flow requirement. The FWS also requested that CEEMI provide a method to allow visual verification of gate discharge. By letter dated March 19, 2001, Kleinschmidt agreed to these requests. To date, it appears that neither of these requests have been fulfilled; therefore, we are unable to determine whether the project is in compliance with its minimum flow requirement.

In January of 2000, the FWS submitted modified terms and conditions (T&Cs) for the Red Bridge Project. One of those T&Cs was a requirement to submit a plan to monitor impoundment level and bypass flow releases at the project. Kleinschmidt Associates prepared a draft Minimum Flow and Impoundment Fluctuation Monitoring Plan for all four of CEEMI's Chicopee River projects (including Red Bridge) in October of 2001. The FWS provided comments on that plan by letter dated November 6, 2001. That letter contained a number of issues/concerns that the Service recommended be addressed in the final plan. There is no indication in our files that a revised plan addressing the comments received by the Service was ever submitted for our approval; therefore it appears that the project is not in compliance with Condition #5 of the exemption.

3. Fish Passage

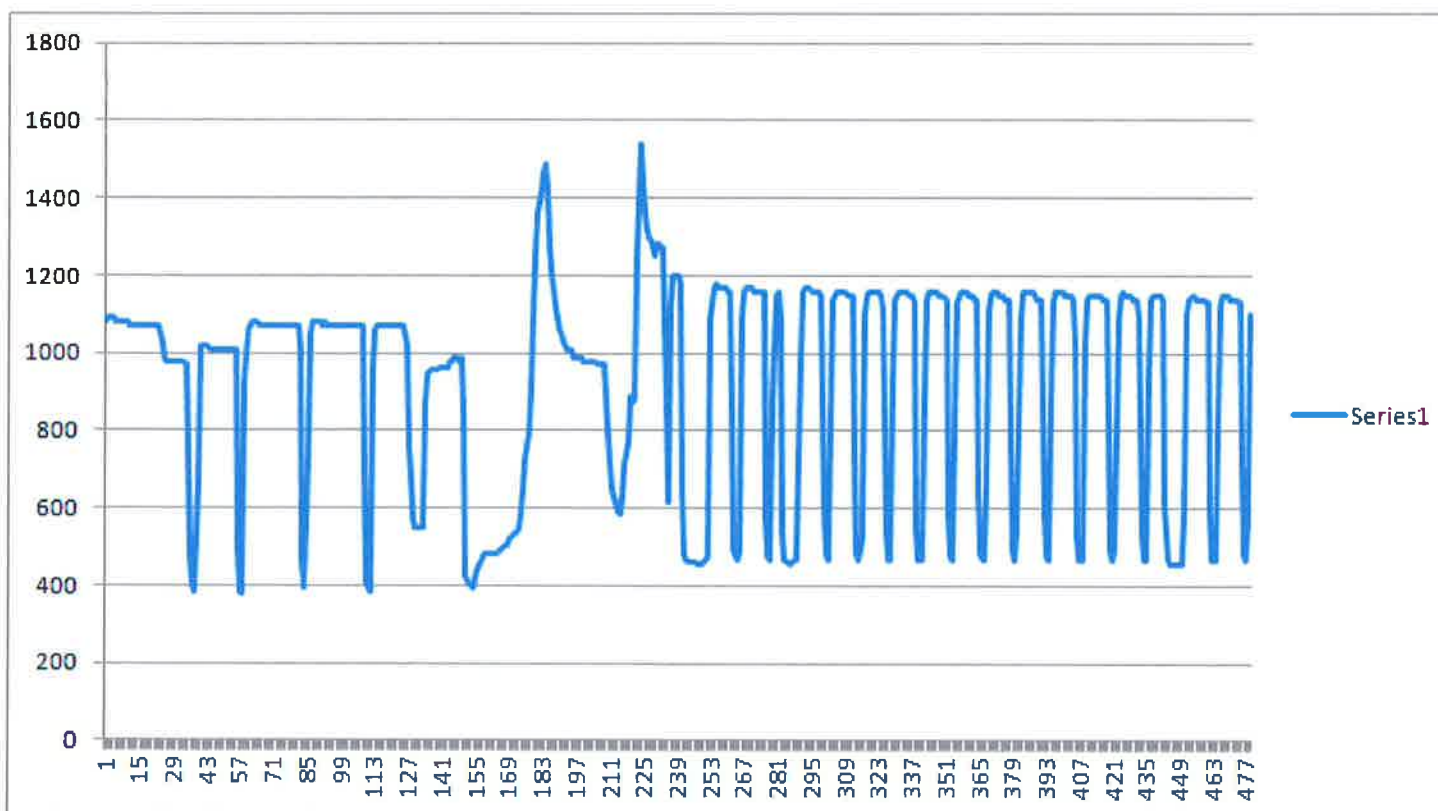
The original terms and conditions set for this project by the Service on July 31, 1992 contained a requirement that the Exemptee construct, operate, maintain and monitor upstream and downstream fish passage facilities when prescribed by the Service and/or the Massachusetts Division of Fisheries and Wildlife. Currently there are no active migratory fish management efforts within the Chicopee River watershed. The Red Bridge Project is the most upstream of NAEA's Chicopee projects. While it is likely that the lower dams will need fish passage facilities in the near future, it likely will be a number of years before passage will be required at Red Bridge. Therefore, the project appears to be in compliance with respect to fish passage.

4. Watershed Protection

The Service did not set any mandatory terms and conditions relative to watershed protection. The Commonwealth of Massachusetts is the appropriate agency to respond to this particular information request.

5. Below-project Flows

The Red Bridge Project is allowed to fluctuate the headpond up to one foot from April 1 through June 30, and up to 2 feet from July 1 through March 30. According to documents in our project file, in the early post-licensing days it appears that the project did not do drawdowns (although allowed to) because the impoundment level needed to be kept higher than the dam crest in order to provide the required bypass flow. However, the agencies were concerned that the uniform dam spill method of providing the bypass flow was not satisfactory, because the project still operated with an approximate three-inch fluctuation, which resulted in times when less than 237 cfs was being provided to the bypass reach. Therefore, a new method of providing the bypass flow (via a deep slide gate) was agreed to. Since it was installed, this new bypass flow mechanism has provided the project with the ability to utilize the allowable drawdown limits. While the Service does not know exactly how Red Bridge operates, viewing the downstream Indian Orchard USGS streamflow gauge indicates that at least some projects on the river are operating in a cycling mode: the units turn off and on several times a day, leaving only the minimum flow in the river. Below is a hydrograph for the period June 15 through June 19, 2011 (provisional data). It appears that the agencies may have inadvertently facilitated the conversion of Red Bridge operations from one of more or less run-of-river under uniform spill, back to a store and release mode of operation under the slide gate method. We raise this issue because, although the project may be operating in compliance with the terms and conditions of its exemption, and therefore may meet requirements of LIHI certification under the existing criteria, this may not be the case under future revisions to LIHI criteria.



In developing this response to your request, we identified several information gaps relative to the project facilities. We would appreciate it if NAEA could provide us with the following:

- the type of units at the project, and their minimum and maximum hydraulic capacities;
- trashrack specifications (wetted area and clear spacing);
- as-built plans of the slide gate.

We hope this has been responsive to your requests. If you have any questions or require further information please feel free to contact me.

Sincerely,
Melissa Grader

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