

**Full Application Review for  
Low Impact Hydropower Certification of  
Crescent Hydroelectric Facility**



Prepared by Peter Drown, Cleantech Analytics LLC

June 11, 2015

**Cleantech**  
analytics LLC

## I. Executive Summary

This report reviews the Full Original Application for the Crescent Hydroelectric Project (“Crescent”) located on River Mile 24 of the Westfield River near Russell, Massachusetts. Renewable Power Consulting, on behalf of the dam owner and operator Littleville Power Company, a subsidiary of Enel Green Power North America, submitted a timely and complete application for Low Impact Certification to the Low Impact Hydropower Institute (“LIHI”) on February 27, 2015. Crescent is a 1.5 MW project operated as a run-of-river facility and consists of a dam, intake, fish passage collection and bypass pipe, trash sluice, concrete inlet channel and forebay, powerhouse, substation, canoe portage and appurtenant facilities. The project received a FERC License Exemption (#2986) on May 11, 1982.

The Westfield River travels for 78 total miles, from the Berkshire Hills region of Massachusetts to its confluence with the Connecticut River near Springfield, MA. 45 miles of the River is designated as Wild and Scenic Rivers, upstream of the Crescent Project, in the four tributaries comprising the upper reaches of the River and shortly after its confluence. The Crescent Project is located approximately 20 miles prior to the confluence with the Connecticut River, between the downstream Indian River Project and the upstream Army Corps of Engineers Littleville and Knightville Dams. Flows near the Crescent Project are approximately 500 CFS, and heavily effected by releases from the upstream ACOE facilities. The river is currently used for recreational purposes such as fishing and boating, with the best areas being located upstream of Crescent Project in the river’s four tributaries. No threatened or endangered species exist within the project area of Crescent, nor are any of the project impact areas designated or proposed “critical habitat.” No compliance issues were noted on the FERC e-library.

Crescent offers downstream fish passage in the form of bypass facilities and seasonal trashrack spacing. Massachusetts has discontinued efforts to stock salmon in the tributaries of the Connecticut River, (including Westfield River,) and does not require effectiveness studies for the facilities. Upstream passage for American Shad is not required and likely never existed due to several natural river features (natural falls downstream,) that prevent the upstream migration of these species. To date, upstream passage for American Eels had not yet been required pending installation of passage at the downstream Indian River Project (#12462.) The project owner, Littleville Power Company has reaffirmed their commitment to install these passage facilities when required to by resource agencies. During the review process, Caleb Slater from Massachusetts Department of Fish and Wildlife (MDFW) requested this passage measure, and this is included as a condition of certification. Flows at Crescent are not a concern to agencies due to the location of powerhouse adjacent to impoundment, rendering a minimal bypass reach.

An information request was sent to MDFW to conduct an evaluation of the presence of threatened or endangered species in the project area. Three species of rare dragonflies have been observed in the vicinity of the project, but are not designated as threatened or endangered. Recreational access is provided at the site for canoe take-out/put-in area and portage trail. No impact on cultural or historical resources at the site has been recorded by the project, and no compliance issues were noted on FERC e-library. With the installation of the upstream eel passage requested by MDFW, in my opinion the project meets all standards of LIHI certification.

## II. Recommendation

After review and consideration of the information provided by applicant, review of the FERC record, and conversations with agencies as noted in the Communications Log (Section VIII), **I believe the Crescent Hydroelectric Project meets LIHI criteria for Low Impact Certification, and recommend this project is certified, subject to the following condition:**

- The Facility Owner shall install upstream eel passage facilities as required by Massachusetts Division of Fisheries and Wildlife (MDFW) by July 15, 2016. The applicant shall work in collaboration with MDFW to install temporary eelways summer of 2015 to find the right locations, prior to finalizing the permanent upstream passage by date listed above.

## III. Facility Description

The Crescent Project is located on the Westfield River on Mile 24 between the town of Russell and Huntington, MA. The project is located approximately 6 miles downstream of the Army Corps of Engineers Knightville Dam (non-hydroelectric) and 2.5 miles upstream of the Indian River Hydroelectric Project (FERC #12462.) The Project has a 1.5 MW rated capacity and **produces 5,600,000 kWh in average annual generation.**

The River runs for 78 miles through western Massachusetts from the Berkshire Hills region before its confluence with the Connecticut River, and contains Wild and Scenic River segments upstream of the Crescent Project, primarily in the River's tributaries<sup>1</sup>. The East, Middle and West branches begin on the eastern slopes of the Berkshires, and flow southward through mostly rural communities. Within the watershed, population density is less than half a person per acre. These segments host abundant wildlife and recreational opportunities, including fishing, swimming, biking, boating and camping. Two of these tributaries (North and Middle Branch) pass over two Army Corps of Engineers dams and converge with the West Branch near the town of Huntington, to form the Main Stem of the Westfield River. After crossing the Crescent Project, the river travels downstream approximately 3 miles to the Indian River Project, after which it travels another 20 miles through the urban centers of Westfield and Springfield, where it meets up with the Connecticut River. The project has a total drainage area of 329 square miles.

Flows in the Westfield River upstream and downstream of the Crescent Project are influenced by the operations of the two Army Corps of Engineers Dams located upstream. The Knightville and Littleville Dams provide flood protection to Huntington, Westfield, West Springfield and other communities on the river, and reduce damages along the main stem of the Connecticut River. The Knightville Dam was completed in 1941, and impounds a flood storage area of 960 acres (normally empty and utilized only to store floodwaters.) The multi-purpose Littleville Dam was constructed in 1965, and impounds an area of 275-acres for water supply (backup water supply for Springfield) and a flood storage area of 510 acres. This area comprises the Littleville Lake. The Reservoir Regulation Team monitors river levels and weather conditions to regulate water releases at the dams. Both facilities offer significant recreational opportunities in the scenic landscape surrounding the dams, including hunting, fishing, canoe races,

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<sup>1</sup> These segments are one of the 12 rivers in the "Partnership Wild and Scenic River System," preserved and managed through a partnership of adjacent communities, state governments and the National Park Service.

skiing, snowshoeing, camping, etc. Each spring, water releases from Knightville and Littleville Dams are coordinated to provide challenging flows for the annual Westfield River Wildwater Canoe Races.

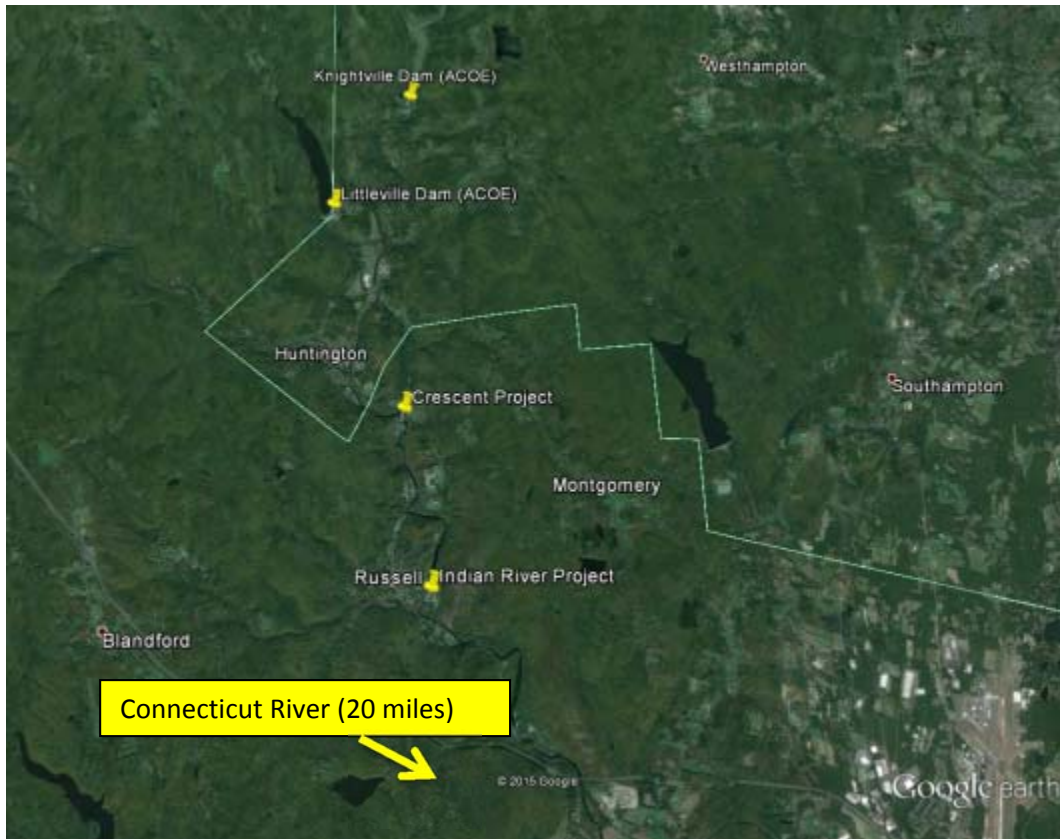


Figure 1- Crescent Hydroelectric Project on Westfield River

The Crescent Impoundment has a reservoir volume of 12 Acre-Feet with a surface area of 3 acres. Approximately 3 acres are inundated by the facility. The project works are laid out over approximately 0.5 acres of non-reservoir facilities. Works consists of: (a) a 250 wide 12 foot high masonry gravity dam comprised of stone blocks and concrete with 3 foot high wooden flashboards; (b) an angled bar rack intake; (c) a downstream fish passage collection chamber and bypass pipe (details in VII.C “Fish Passage”); (d) a trash sluice; (e) concrete inlet channel and forebay; (f) a single unit (Kaplan) powerhouse with installed capacity of 1.5 MW; (g) substation; (h) a canoe portage; and (i) appurtenant facilities. The project is adjacent to an abandoned mill on the western side and a railway on the eastern side. The riverbanks immediately downstream are bounded by exposed bedrock outcrops. Access to the river downstream of the project is located on the eastern embankment of the tailrace and serves as a put-in for canoers and fishermen. The powerhouse is adjacent to the dam so the bypass reach is minimal.

The applicant provided the following description of project operation: “The project is operated in an run-of-river mode. The project is manned during normal business hours and unmanned during the nighttime hours. Generally, the operator reviews the status of three upstream USGS stations for river flow verification, and reviews the status of the downstream fish passage facilities and trashracks. Project operation is automated (both on and off) with alarm dial out during any unusual occurrences (e.g.

station trip, low level alarm). Units automatically cycle between the maximum 700 cfs unit hydraulic capacity down to the minimum hydraulic capacity of 165 cfs. When in operation (generally between April 1 through July 1 and from October 15 to ice-in) 20 cfs is released through the downstream passage system. The SCADA records all pertinent information on generation and water levels and this info is available upon request.”

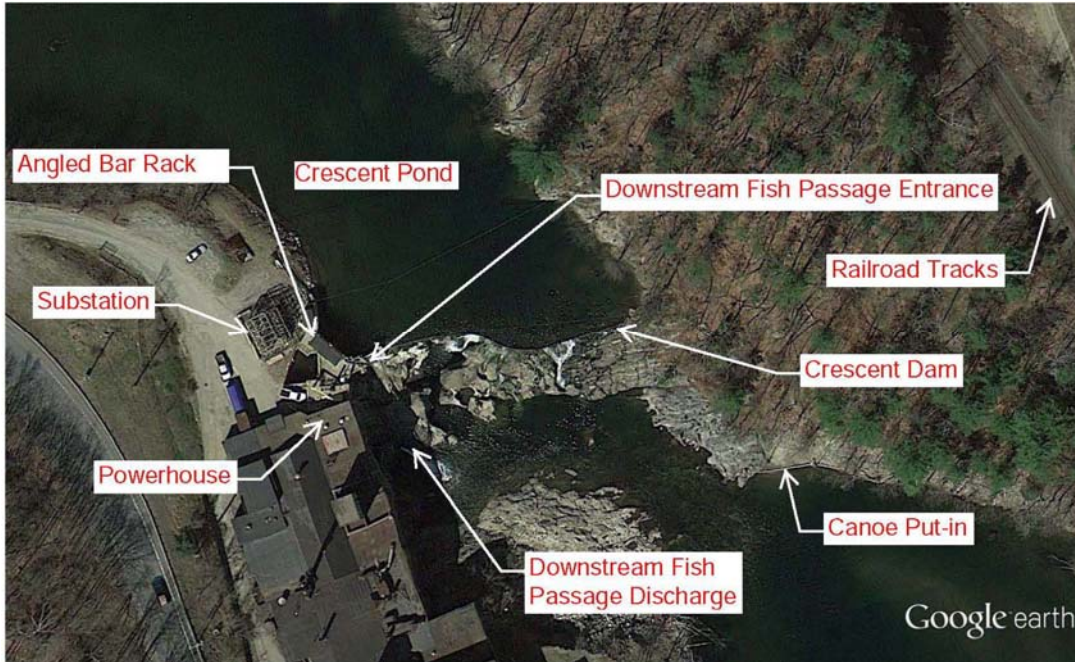


Figure 2 – Aerial View of Crescent Project



Figure 3 - Crescent Impoundment (looking upstream)



Figure 4 - Crescent Impoundment (facing West bank to East bank)

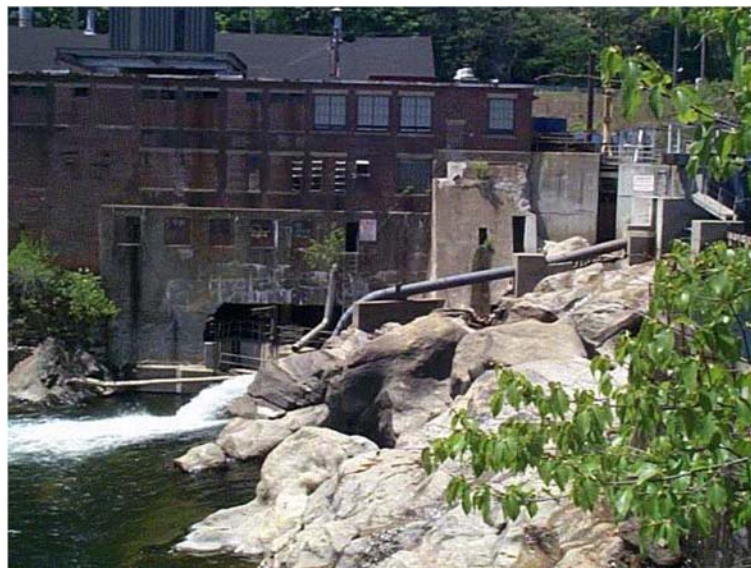


Figure 5 - Crescent Powerhouse (on right) with downstream fish bypass system in foreground

#### IV. Regulatory & Ownership Status

The Crescent Project received an Exemption from Licensing from FERC (#2986) on May 11, 1982. The original project exemptee was Texon, Inc, who utilized the existing gravity dam at the site to install hydroelectric generating equipment and associated infrastructure. (Texon was a footwear insole manufacturer established in Russell, MA in 1947, which has since moved production to China after auctioning off the plant and surrounding acreage, (not including hydroelectric facility which had already been acquired,) on April 19, 2012.) On or around March 1, 1993, the facility was sold to Littleville Power Company, now a subsidiary of Enel Green Power. No compliance issues were noted on FERC e-library.

As an exempted project, Crescent is subject to the Standard Terms and Conditions of exemption from licensing provided in the FERC Exemption. Article 2 requires the project to comply with any terms and conditions that any Federal or state fish and wildlife agency determine are appropriate to prevent loss of, or damage to, fish or wildlife resources. The Crescent Project has installed downstream fish bypass system and has worked with resource agencies to install seasonal trashrack spacing to improve operating efficiency at the site (see “Detailed Criteria Review VI.C” below.) The facility is required to install upstream passage facilities as requested at a future date, and the applicant, Littleville Power Company, provided a letter of commitment dated January 30, 2015 stating they understand this requirement and are prepared to do so when requested by agencies. *Caleb Slater, Anadromous Fish Project Leader for Massachusetts Division of Fisheries and Wildlife, has recently made this request – that upstream eel passage measures be installed at Crescent. Furthermore, he requested this be included as a condition of certification. Therefore, this appears to constitute a Resource Agency Recommendation and is included in the certification recommendation.*

## **V. Detailed Criteria Review**

### **A.) Flows**

1. *Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?*

**Not applicable** – Go to A2. Flow recommendation was issued May 11, 1982.

2. *If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or “good” habitat flow standards calculated using the Montana-Tennant method?*

**No – Go to A3.** In October 3, 1980 letter from USFWS, the agency provided a recommendation for the New England Aquatic Base Flow Standard of 0.5 cubic feet per square mile (cfsm) of drainage area. For this facility, the drainage area is 329 square miles so the Aquatic Base Flow is 165 cfs. USFWS noted that the project should not have a problem maintaining the ABF with run-of-river operation. The exemption from licensing, agreed upon by resource agencies, requires minimum low flow of 22 cfs, and the project requires a minimum of 80 cfs to generate power according to a letter provided dated July 30, 1981 during the project licensing process.

3. *If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?*

**Yes – Pass, Go to B.** Caleb Slater from MDFW noted that he has no concerns about flows at the site due to the location of the powerhouse being adjacent to the dam. With the run-of-river operational requirement, and minimal bypass reach, flows at the site are not a concern to his agency for protection

of fish and wildlife. Finally, the Littleville Power Company provided recent letters confirming compliance with minimum flow standard. Therefore, in my opinion the facility passes this criterion.

**B.) Water Quality**

1. *Is the Facility either:*
  - a. *In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or*

**Not applicable.** WQC issued August 11, 1981.

- b. *In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?*

**See B2.**

2. *Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?*

**YES – See B1.** River is designated Class 5 “Impaired or threatened for one or more uses and requiring a TMDL.” The most recent assessment for the Westfield upstream and downstream of the Crescent project is contained in the *Massachusetts Year 2012 Integrated List of Waters* prepared by the Massachusetts Division of Watershed Management. The river upstream and downstream of the facility is classified as Massachusetts Class 5, “Impaired or threatened for one or more uses and requiring a TMDL.” This designation constitutes the 303(d) list for Massachusetts. The relevant segment is MA32-05, an 18-mile stretch from the Confluence of the Middle Branch of the Westfield River in Huntington to the Route 20 bridge, Westfield. The following tables list the designated use status for the two segments, and are available on the EPA’s Watershed Assessment, Tracking & Environmental Results webpage for the Westfield River.

Designated Use	Designated Use Group	Status
Aesthetic	Aesthetic Value	Impaired
Fish Consumption	Aquatic Life Harvesting	Not Assessed
Fish, Other Aquatic and Wildlife	Fish, Shellfish, and Wildlife Protection and Propagation	Impaired
Primary Contact Recreation	Recreation	Not Assessed
Secondary Contact Recreation	Recreation	Not Assessed

**Table 1 - Water Quality Impairments at Crescent Hydroelectric Project**

Designated Use	Cause of Impairment	Probable Source
Fish, Other Aquatic and Wildlife	Aquatic Macroinvertebrate Bioassessments	Municipal Point Source Discharges/Sewage
Aesthetic	Excess Algal Growth; Taste and Odor; Turbidity	Municipal Point Source Discharges/Sewage

**Table 2 - Causes of Water Quality Impairments at Crescent Hydroelectric Project**



3. *If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation?*

**Yes – Pass.** On May 19<sup>th</sup>, Robert Kubit from the Massachusetts Department of Environmental Protection Division of Watershed Management sent a letter stating:

“In the opinion of MassDEP, the existence and/or operation of the Crescent Mills Hydroelectric Facility (FERC #2986) has no influence on the decision to list this segment as a Category 5.” (See Appendix A.)

**C.) Fish Passage and Protection**

1. *Are anadromous and/or catadromous fish present in the Facility area or are they known to have been present historically?*

**Yes – Go to C2.** American Eels are present, and upstream passage is required as mentioned below. It is unclear how many anadromous species (e.g. American Shad) ever migrated this far, due to several downstream natural features, including natural falls, that would have prevented the upstream migration. Caleb Slater from MDFW noted this in his comments (See Appendix A.)

2. *Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?*

**Yes – Go to B6.** In 1993, at the request of the USFWS and the Massachusetts Department of Fish and Wildlife (MDFW), Littleville Power Company installed downstream fish bypass facility at the Crescent Project. The installations included a 45 degree angle intake structure, 1 inch clear space trashracks, a dropbox and pipe downstream bypass facility, and was operated during the required timeframes as requested. According to communications between the facility owner and relevant resource agencies/FERC, the changes negatively impacted project operations due to debris and frazil ice loading, particularly during periods of high flow. The owner requested replacing the trashracks with coarser racks outside of normal fish passage season, and after several communications and meetings between the owner, USFWS and MDFW, the agencies agreed to these changes in addition to fishery studies in support of Atlantic salmon stocking activities (which have since been discontinued.) The Crescent Project is required in its Exemption from Licensing to install fish passage as required at a future date. Upstream passage was previously delayed pending installation measures at the downstream Indian River Project, however the applicant provided a letter of commitment with its LIHI application to install upstream passage when required by the agencies:

*“...LPC is providing this letter to confirm its commitment to providing upstream passage for catadromous fish species at the Crescent Project, if and when requested to do so by the resource agencies. While at this time no request has been made, LPC understands and supports the need to provide timely passage facilities at this project once such request is made.”* (Letter from LPC dated January 30, 2015 and provided in Full Application)

Caleb Slater from MDFW was solicited for comments during the review process, and he notified LIHI that he has requested upstream passage, and requested this be included as a condition of LIHI certification. Slater requested the applicant install temporary passage this summer to determine optimal location of eelways, and permanent eelways be installed by July 15, 2016. Therefore, the applicant passes this criterion conditional upon installing upstream eel passage facilities under guidance from MDFW.



Figure 6 - Downstream Fish Bypass Entrance



Figure 7 - Downstream Fish Bypass Pipe

6. *Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?*

**Not applicable – Go to C7.** No specific prescriptions for riverine fish have been issued.

7. *Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as trashrack barriers?*

**Yes – Pass Go to D.** The trashrack spacing constitutes the most recent agency prescription. See C2.

**D.) Watershed Protection**

1. *Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?*

**No – Go to D2.** The applicant mentioned that the facility is subject to the Massachusetts River Protection Act, which creates a 200-foot riverfront area, measured from the mean annual high-water line of the river, which extends on both sides of rivers and streams, including the Westfield River. The law requires any development in this area to demonstrate that projects have not practicable alternatives and will have no significant adverse impacts. The purpose of the area is to protect land, wildlife, and fisheries, flood control, storm damage prevention, and prevention of pollution. However, the law also states that existing structures are exempt from the MRPA, which would likely include this facility. In addition, LIHI does not consider the MRPA as satisfying this certification and requires legally binding document establishing the buffer zone for the above-stated purposes to be considered for the extra three years of certification.

2. *Has the Facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1, and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?*

**No – Go to D3**

3. *Has the Facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)?*

**No – Go to D4**

4. *Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project?*

**Not applicable – Pass, Go to E.** No shoreline management plan is required in the Exemption provided in application.

***E.) Threatened and Endangered Species Protection***

1. *Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?*

**No – Pass.** During project review, consultation with the MDFW Natural Heritage and Endangered Species Program was conducted to determine the existence and/or impacts on any federal or state-listed threatened or endangered (T&E) species. No federal or state-listed T&E species are located at the site (3 species of dragonflies in the vicinity are classified as “Rare,” but these are not designated as Threatened or Endangered.) See letter from MDFW in Appendix A.

***F.) Cultural Resource Protection***

1. *If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?*

**Yes – Pass Go to G.** The Exemption from Licensing contains Standard Terms and Conditions, of which none include requirements for Cultural Resource protection. During project licensing proceedings, the Massachusetts Historical Commission reviewed construction plans and noted that the project site is located adjacent to a 19<sup>th</sup> century paper mill which could meet National Register criteria, but noted “the project is unlikely to affect significant historic or archaeological resources,” and no further review was required (Mass. Historical Commission letter dated July 22, 1981.)

***G.) Recreation***

1. *If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?*

**Yes – go to G3.** The Exemption from Licensing contains Standard Terms and Conditions, of which none include requirements for recreational access. Nevertheless, the project has installed canoe take-out/put-in areas and an access trail for canoers and fishermen. Significant recreational activity takes place upstream of the project in the Wild and Scenic river segments of the Westfield River, and in the park areas surrounding the Army Corps of Engineer’s Knightville and Littleville Dams. Photos of the recreational access points in Crescent are provided below.

3. *Does the Facility allow access to the reservoir and downstream reaches without fees or charges?*

**Yes – Pass.** The applicant provided the following description of access at the site. “Impoundment access is available from the powerhouse drive. Access to the river right tailrace area is restricted by the non-project mill security fencing and the steep topography of the area. Access to the river left tailrace area is accomplished through the canoe portage trail. Public access near the transformer yard and powerhouse area is restricted by fencing for public safety and security measures.”



Figure 9 - Canoe Take-out at Impoundment



Figure 8 - Canoe put-in at tailrace area

#### H.) **Facilities Recommended for Removal**

1. *Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?*

**NO – Pass, facility is Low Impact**

#### VI. **Public Comments**

There were no public comments received during the comment period. Agency comments were solicited and noted below in Appendix A.

**Appendix A**  
**Supporting Communications Log (Reverse Chronological Order)**

**Date:** May 19, 2015

**Contact Person:** Robert Kubit

**Agency:** Massachusetts Department of Environmental Protection

**Title:** P.E., Division of Watershed Management

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

3:26 PM (3 hours ago)

to Peter

Hi Peter,

Turbidity, excess algal growth, taste and odor problems and a low aquatic macroinvertebrate bioassessment score are the reasons why this segment (MA32-05) of the Westfield River is designated Category 5 on the 2012 Integrated List and requiring a TMDL.

In the opinion of MassDEP, the existence and/or operation of the Crescent Mills Hydroelectric Facility (FERC #2986) has no influence on the decision to list this segment as a Category 5.

Please let me know if there are any questions.

Bob

Robert Kubit, P.E.  
MassDEP  
Division of Watershed Management  
8 New Bond Street  
Worcester MA 01606  
Telephone: [\(508\) 767-2854](tel:(508)767-2854)  
Email: [robert.kubit@state.ma.us](mailto:robert.kubit@state.ma.us)  
Fax: [\(508\) 791-4131](tel:(508)791-4131)

**Date:** May 14, 2015  
**Contact Person:** Caleb Slater  
**Agency:** Massachusetts Department of Fish and Wildlife  
**Title:** Anadromous Fish Project Leader

Caleb and I spoke by phone May 12<sup>th</sup>. I drafted notes from the call and sent him to him to review. These are his edits of my notes.

Slater, Caleb (MISC) <[caleb.slater@state.ma.us](mailto:caleb.slater@state.ma.us)>

8:17 AM (22 hours ago)

to Peter

### **Crescent Project**

- American Eel upstream passage required, all projects downstream have installed 3/4" clearspace racks **\*for downstream eel passage protection\***
- Requested LIHI condition to install upstream eelway
- Eelway **\* Exclusion (full depth 3/4 inch racks)\*** probably most effective measure/ previous efforts to conduct seasonal shutdowns looking less effective
- American Shad upstream passage not necessary or required/ due primarily to natural river features (2 dams downstream without passage, + a natural **\*fall\*** dam at Woronoco and a natural fall <1 mile above that
- Flows not a problem since the powerhouse is at the dam so no bypass reach

### **Lawrence Project**

- Requested LIHI condition to continue to work with Mass DFW to finalize eel passage and improve effectiveness
- Eelway is now "in the right spot", last year it didn't work out as well
- Site Visit still shows room for improvement/ thousands of eels identified at the dam, but only several hundred in the eelway
- Good Shad and Herring Passage due to rubber flashboard system installed several years ago
- Flows not a problem since the powerhouse is at the dam so no bypass reach
- Any additional issues would be revisited during re-licensing

Caleb Slater, PhD  
Anadromous Fish Project Leader  
Massachusetts Division of Fisheries and Wildlife  
1 Rabbit Hill Road  
Westborough, MA 01581  
[508-389-6331](tel:508-389-6331)  
[www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)

Date: May 14, 2015

Contact Person: Thomas French, Assistant Director &  
Lauren Glorioso, Endangered Species Review Assistant  
Agency: Massachusetts Division of Fisheries and Wildlife

Reviewer Comments: Species below are not designated as "Threatened" or "Endangered."



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Jack Buckley, Acting Director

May 14, 2015

Peter Drown  
Low Impact Hydropower Institute  
266 Prosperity Ave, #320  
Fairfax VA 22031

RE: Project Location: Crescent Mills Dam, Westfield River  
Town: MONTGOMERY  
NHESP Tracking No.: 15-34419

#### To Whom It May Concern:

Thank you for contacting the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located within *Priority Habitat 1166* (PH 1166) and *Estimated Habitat 953* (EH 953) as indicated in the *Massachusetts Natural Heritage Atlas* (13<sup>th</sup> Edition). Our database indicates that the following state-listed rare species have been found in the vicinity of the site:

<u>Scientific name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Boyeria grafiانا</i>	Ocellated Darner	Dragonfly	Special Concern Not Listed as of 2/27/2012
<i>Stylurus scudderi</i>	Zebra Clubtail	Dragonfly	Not Listed as of 2/27/2012
<i>Stylurus spiniceps</i>	Arrow Clubtail	Dragonfly	2/27/2012

The species listed above is/are protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website ([www.mass.gov/nhesp](http://www.mass.gov/nhesp)).

Please note that projects and activities located within Priority and/or Estimated Habitat must be reviewed by the Division for compliance with the state-listed rare species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

#### Wetlands Protection Act (WPA)

If the project site is within Estimated Habitat and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the Division so that it is received at the same time as the local conservation commission. If the Division determines that the proposed project will adversely affect the actual Resource Area habitat of state-protected wildlife, then the proposed project may not be permitted (310 CMR 10.37, 10.58(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the

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

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