REVIEW OF APPLICATION FOR RECERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE TEXON PROJECT

Prepared by Stephen Byrne
March 16, 2021

I. INTRODUCTION

This report summarizes the review findings of the application submitted by Hitchcock Hydropower, LLC (Applicant or licensee) a subsidiary of Gravity Renewables, Inc., to the Low Impact Hydropower Institute (LIHI) for recertification of the Texon Hydroelectric Project (Project) FERC No. P-2986. The Project, LIHI # 119 and formerly known as Crescent, is a 1.5 MW run-of-river facility located on the Westfield River in Russell, Massachusetts. It was originally certified in 2015. On January 12, 2021 LIHI received a complete application package for recertification of the Project. This current review was made using the new 2nd Edition LIHI Certification Handbook (Revision 2.04, April 1, 2020).

II. PROJECT'S GEOGRAPHIC LOCATION

The Project is located at river mile 24 on the Westfield River in Hampden County, Massachusetts. The Texon Dam, also known as the Crescent Dam, is the 4th dam on the river upstream of the confluence with the Connecticut River (Figure 1). The West Springfield Dam (LIHI #19) is the most downstream dam on the Westfield River, located at river mile 4. Woronoco Dam (LIHI #68) is the 2nd dam at river mile 18.5. Indian River Dam is located at river mile 21. The Knightville Dam is located upstream of the Project at river mile 30 and is operated as a flood control structure by the US Army Corps of Engineers (Corps). There are no dams on the Connecticut River downstream of the Westfield River confluence.

III. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

The Texon Dam was originally constructed prior to 1878 when it was rebuilt after a flood[1], and later modified in 1965. The existing hydropower facilities have been associated with the dam since 1985. The Project consists of: (a) a 250-foot-wide by 12-foot-high masonry gravity dam with 3-foot-high wooden flashboards; (b) a 3 acre impoundment; (c) an angled bar rack intake; (d) a downstream fish passage collection chamber and bypass pipe; (e) a trash sluice; (f) a concrete inlet channel and forebay; (g) a single unit powerhouse with a total installed capacity of

[1] Per Massachusetts Historic Inventory Form RUS.907 https://mhc-macris.net/index.htm

1.5 MW; (h) a substation; (i) a canoe portage; and (j) appurtenant facilities. The Project is adjacent to a non-project abandoned mill complex and bounded on the east (river left) by an active railway. The river immediately below the Project is bounded on both shores by exposed bedrock outcrops. The east bank further downstream of the Project consists of mixed ledge, gravel, and sand outcrops. The canoe portage extends from the east (river left) impoundment shore near the boat barrier along the eastern embankment to the tailrace pool area. The access at the bypassed reach serves as both a put-in site for canoeists and an access point for bank fishing. (see Figures 2 - 8).

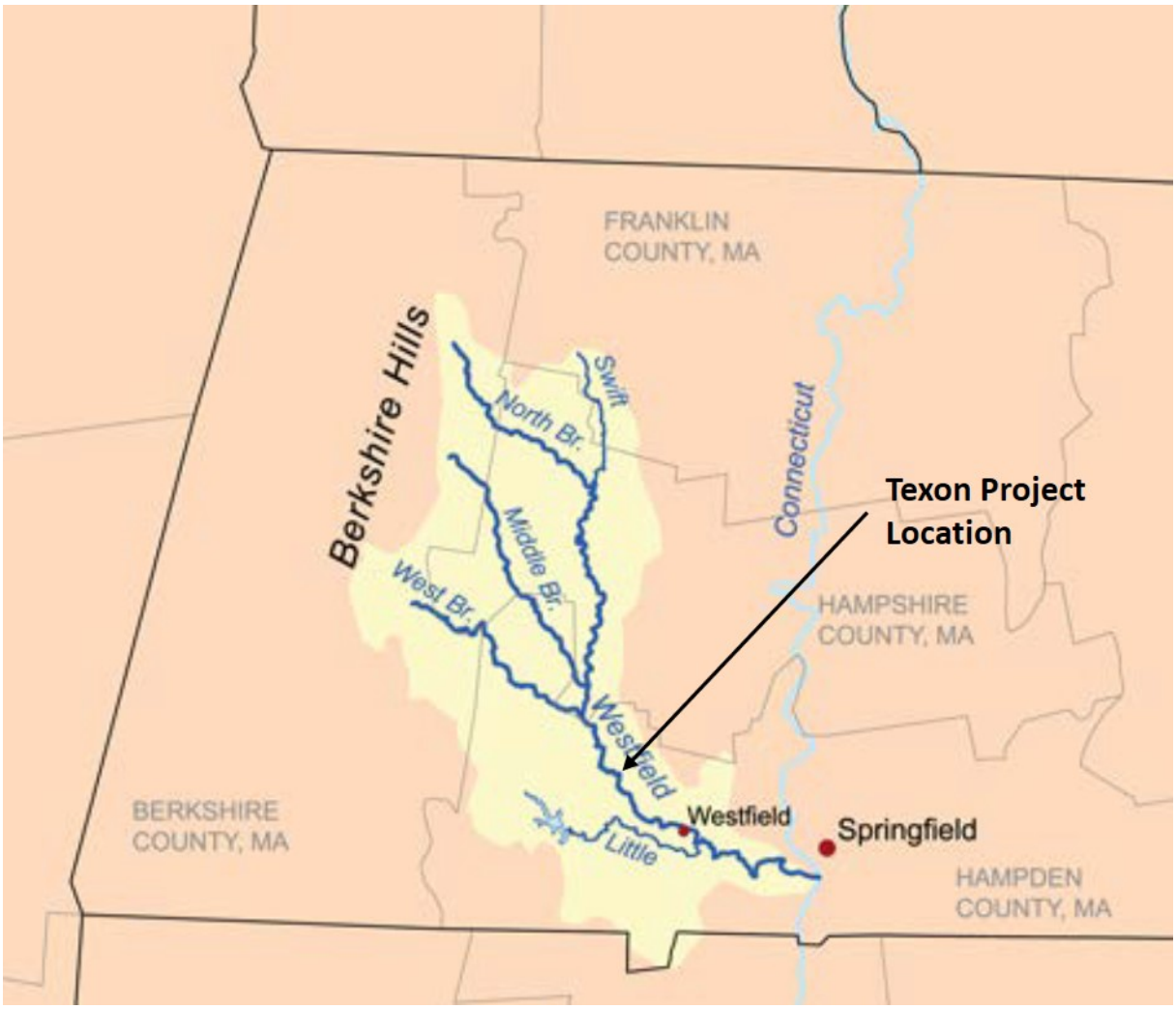

Figure 1 – Texon Project Location

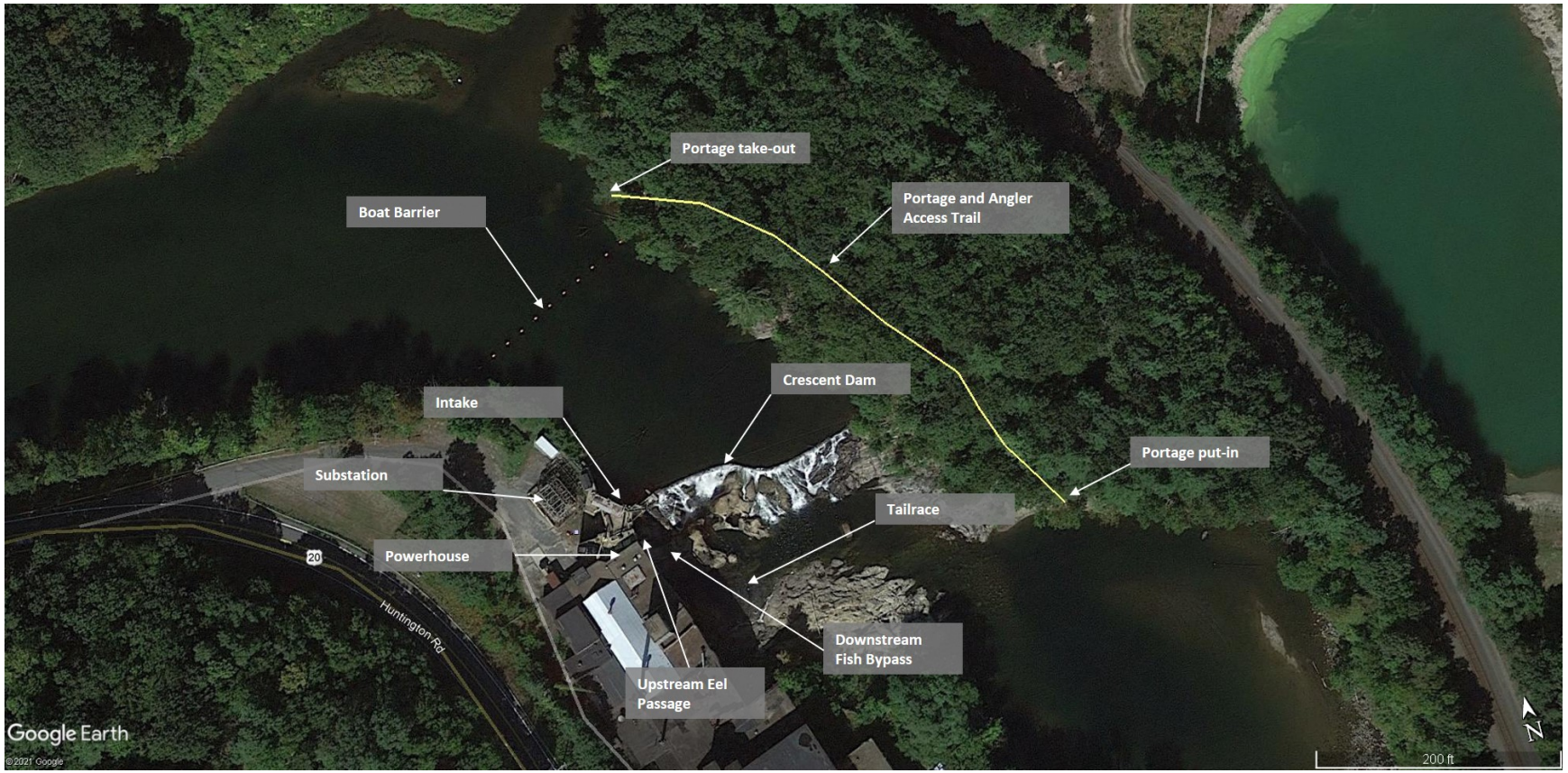

Figure 2 –Texon Hydroelectric Facility Layout

Figure 3 –Impoundment

Figure 4 –Dam

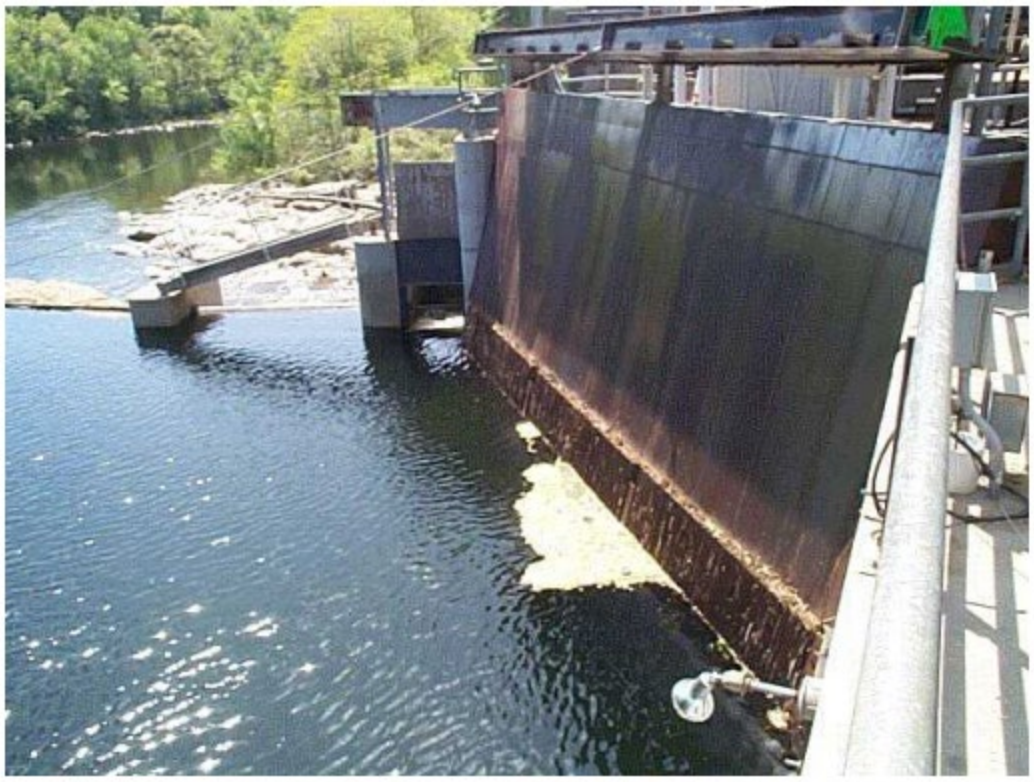

Figure 5 –Trashrack and Downstream Fish Passage Intake

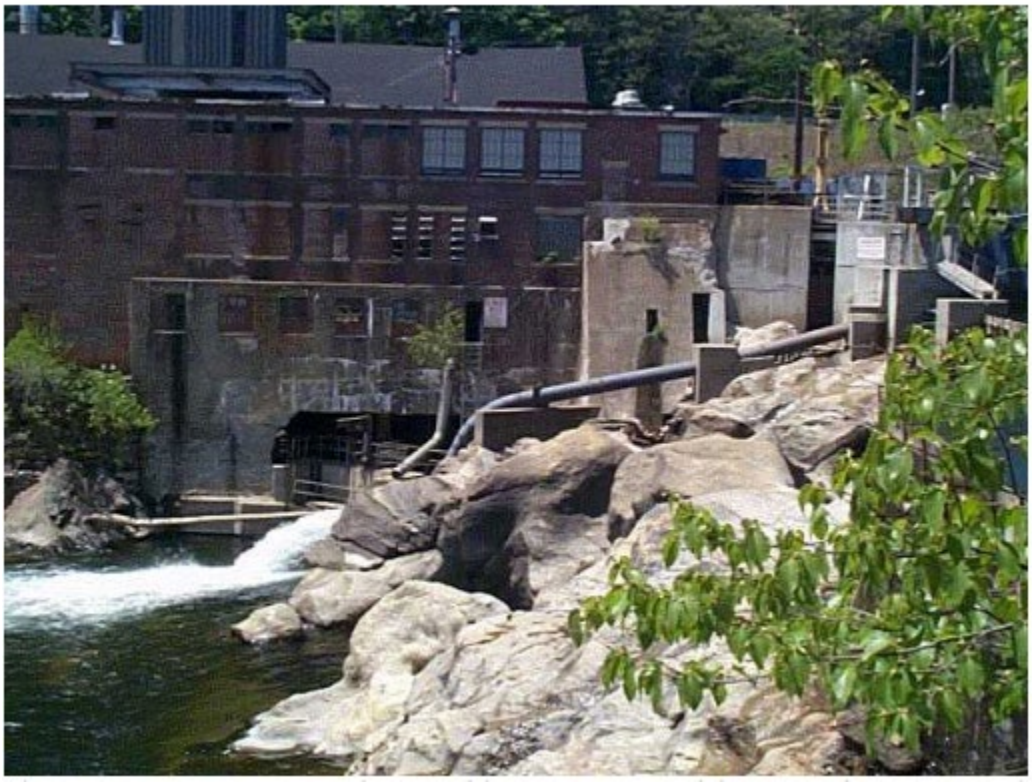

Figure 6 –Powerhouse with Downstream Fish Bypass in Foreground

Figure 7 – Upstream Eel Passage System

Figure 8 – Downstream Area

IV. ZONES OF EFFECTAND STANDARDS SELECTED

Three Zones of Effect (ZOE) were designated by the Applicant and were determined to be appropriate. Zone 1 is the impoundment; Zone 2 is the bypassed reach; and Zone 3 is the tailrace and downstream reach. The bypassed reach is a nearly vertical bedrock reach were water that passes over the dam is mixed immediately with the Project's tailrace flows. Table 1 shows the Standards selected for each criterion for the three ZOEs. Where applicable, reviewer recommendations for alternate standards are show in **red**.

Table 1. Standards Matrix for the Texon Project.

	Zone:	**1: Impoundment**	**2: Bypassed Reach**	**2: Downstream Reach**
	River Mile Extent:	RM 30.0 to RM 24.0	RM 24.0 to RM 23.9	RM 23.9 to RM 21
Criterion		**Standard Selected**	**Standard Selected**	**Standard Selected**
A	**Ecological Flows**	1, PLUS	2, PLUS	2, PLUS
B	**Water Quality**	1	2	2
C	**Upstream Fish Passage**	1, PLUS	2, PLUS	2, PLUS
D	**Downstream Fish Passage**	2	1	1
E	**Shoreline and Watershed Protection**	1, PLUS	1, PLUS	1, PLUS
F	**Threatened and Endangered Species**	2	2	2
G	**Cultural and Historic Resources**	1	1	1
H	**Recreational Resources**	2	1	~~1~~, 2

V. REGULATORY AND COMPLIANCE STATUS

The Project was issued an exemption order from the licensing requirements of part I of the Federal Power Act by the Federal Energy Regulatory Commission (FERC) in 1982. The Applicant is required however, to adhere to the standard license articles listed in the exemption order and any mandatory terms and conditions filed by state and federal resource agencies. By letter dated August 11, 1981, The Massachusetts Department of Environmental Protection (Mass DEP) issued a Water Quality Certificate (WQC) for the operation of the Project and required that a continuous minimum flow of 22 cubic feet per second (CFS) be maintained either over the dam or through the tailrace. By letter dated March 22 1982, the U.S. Fish and Wildlife Service (FWS) filed recommended conditions that included installing fish passage facilities when the Massachusetts Department of Fish and Wildlife (Mass DFW) implements an anadromous fish restoration plan at the Project area, a discharge of 165 cfs or inflow to protect downstream

habitat, and angler access to Project waters. Downstream fish passage was installed in 1993 pursuant to recommendations from FWS and Mass DFW. Upstream eel passage became operational in 2016.

The current LIHI certification included one condition:

- Condition 1. 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 in summer of 2015 to find the right locations, prior to finalizing the permanent upstream passage by date listed above.

The condition was deemed satisfied in 2018 upon completion of the permanent upstream eelway.

VI. PUBLIC COMMENT RECEIVED OR SOLICITED BY LIHI

The application was posted for public comment on January 12, 2021 and the notice was forwarded to agencies and stakeholders listed in the application. The deadline for submission of comments was March 13, 2021. A comment letter was received from Mass DWF (Appendix 1) Based on the completeness of the application and documents available on the FERC elibrary, I did not need to contact resource agencies.

VII. DETAILED CRITERIA REVIEW

A. ECOLOGICAL FLOW REGIMES

Goal: The flow regimes in riverine reaches that are affected by the facility support habitat and other conditions suitable for healthy fish and wildlife resources.

Assessment of Criterion Passage: The Applicant correctly selected Standard A-1, Not Applicable/De Minimis Effect for the Impoundment Zone and Standard A-2, Agency Recommendation for the Bypassed Reach and Downstream Reach Zones.

The Project operates in a run-of-river mode with outflow equaling inflow and no useable storage. There is no allowable impoundment water level fluctuation for power generation. Therefore, the normal, maximum, and minimum operating water surface elevations are maintained at 332.7 feet msl. The impoundment has a surface area of 3 acres and Roaring Brook, a tributary enters the river approximately 300 feet upstream of the dam. Run-of-river operation and lack of operational impoundment fluctuations are not likely to adversely impact habitat in the impoundment.

The bypassed reach is a nearly vertical bedrock reach approximately 50 feet long where water that passes over the dam is mixed immediately with the Project's tailrace flows. Figures 4 and 6 illustrate the cascade that forms the natural dam, and the river drops 33 feet at the dam[2]. An October 3, 1980 letter from FWS indicated that since the powerhouse is located adjacent to the dam, outflows from the tailrace would adequately cover the substrate below the dam under run-of-river operations, it would not be necessary to provide flows over the dam. However, the lack of stream flow over the dam would expose about 50 feet of riverbed but FWS noted there would be a negligible loss of habitat in the bypassed reach since it consists largely of a vertical bedrock outcrop[3].

The 1981 WQC requires a continuous minimum flow of 22 cfs (the 7Q10 flow) either over the dam and thus through the bypassed reach, or through the tailrace. The Project powerhouse contains a single vertical Kaplan turbine with a minimum hydraulic capacity of 165 cfs and a maximum hydraulic capacity of 700 cfs[4]. The 165 cfs is also the Aquatic Base Flow recommended by FWS in its October 3, 1980 letter. When inflow is less than 165 cfs, all flow is passed over the dam. When inflow is between 165 and 700 cfs, all flow is routed through the turbine. When inflow is greater than 700 cfs, 700 cfs is routed through the turbine while all remaining inflow is spilled over the dam. Turbine flow is controlled by the Project's automatic programmable logic controller.

The Applicant also selected **Standard A-Plus** for all Zones

The Applicant has selected the Plus Standard citing that significantly more than the required 22 cfs out of the tailrace or over the dam is typically provided. In order to qualify for Standard A-Plus the Applicant must demonstrate that the facility is operating an adaptive management program to regularly evaluate and adjust facility operations with respect to flows and habitat conditions, or has implemented significant, non-flow habitat enhancements (for example, structural improvements leading to river restoration) with demonstrated net benefits to fish and wildlife resources affected by the facility. A flow-related adaptive management program or non-flow habitat enhancement measure that has led to river restoration are not discussed in the application or in any supporting materials. Releasing more than the required minimum flow can at times be necessary to maintain run-of-river operations. As such, the Plus Standard is not satisfied.

Based on my review of the application, supporting documentation, and publicly available information, the Project is operated in a manner such that it does not adversely affect fish and wildlife resources under its limited flow regime. As such, the Project continues to satisfy the

[2] https://www.massachusettspaddler.com/westfield-river-5-crescent-dam-to-woronoco-dam
[3] Page 5 in https://lowimpacthydro.org/wp-content/uploads/2020/07/Crescent-LIHI-App_Attachments-A-Flows.pdf
[4] The 2015 LIHI application review report incorrectly states the minimum hydraulic capacity of the turbine to be 80 cfs.

Ecological Flow Regimes criterion.

B. WATER QUALITY

Goal: Water Quality is protected in waterbodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions.

Assessment of Criterion Passage: The Applicant appropriately selected Standard B-1, Not Applicable/De Minimis Effect for the Impoundment Zone, and Standard B-2, Agency Recommendation for the Bypassed Reach and Downstream Reach Zones.

The run-of-river nature of the Project ensures that operations do not impact water quality. The WQC requires a minimum flow release of 22 cfs in order to maintain water quality in the vicinity of the Project.

The Westfield River in all Zones is classified a Category 2 waterway in MA DEP's Massachusetts Year 2016 Integrated List of Waters. Category 2 waters include those that support some uses and not assessed for others. The Westfield River in the vicinity of the Project is listed as supporting fish and other Aquatic Life and wildlife and primary and secondary contact recreation. In 2014 MA DEP classified the project waters into its Category 5 – Waters requiring a TMDL due to impaired benthic macroinvertebrates, excess algal growth, taste and odor, and turbidity. However, as of 2016 these waters have improved and have been reclassified as Category 2. Applicable water quality standards related to benthic macroinvertebrates were attained due to restoration activities, while the attainment of applicable water quality standards for excess algal growth, taste and color, and turbidity was due to unspecified reasons. Waters in the Project area are listed as Class B – Warm Water by the MA DEP – Division of Water Pollution Control. Water quality standards associated with Class B waters are shown in Table 3 below.

Table 3. MA DEP water quality standards for Class B water.

Physical parameter	Standard
Water Temperature (ºC)	Temperature shall not exceed 83°F (28.3°C) in warm water fisheries. The rise in temperature due to a discharge shall not exceed 5°F (2.8°C) in rivers and streams designated as warm water fisheries (based on the minimum expected flow for the month); in lakes and ponds the rise shall not exceed 3°F (1.7°0C) in the epilimnion (based on the monthly average of maximum daily temperature);
Dissolved Oxygen (mg/l)	Shall not be less than 5.0 mg/l in warm water fisheries. Where natural background conditions are lower, DO shall not be less than natural background conditions. Natural seasonal and daily variations that are necessary to protect existing and designated uses

Physical parameter	Standard
	shall be maintained.
pH	Shall not be less than 6.5 nor more than 8.3 and not more than 0.5 units outside of the natural background range.
Turbidity (NTU)	These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this Class.

The Applicant contacted MA DEP on August 27, 2020 as part of the LIHI application for confirmation of the status of the WQC and conditions. MA DEP confirmed on August 28, 2020 that the WQC remains valid and in effect.

A review of the FERC eLibrary and the Applicant's annual compliance letters to LIHI, indicated that no issues related to water quality have occurred at the Project.

Based on my review of the application, supporting documentation, and publicly available information, the Project does not appear to impact water quality in the river nor contribute to the listed impairments and therefore continues to satisfy the Water Quality criterion.

C. UPSTREAM FISH PASSAGE

Goal: The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy populations in areas affected by the facility.

Assessment of Criterion Passage: The Applicant appropriately selected Standard C-1, Not Applicable/De Minimis Effect for the Impoundment Zone and Standard C-2, Agency Recommendation for the Bypassed Reach and Downstream Reach Zones.

The Applicant appropriately selected Standard C-1 for the Impoundment Zone since once above the dam there are no Project-related barriers to further upstream passage.

The Project waters support a mix of warmwater and coldwater fish species. Fish species of the Westfield River that could occur in the Project area include: sea lamprey, American eel, common shiner, creek chubsucker, fall fish, golden shiner, longnose dace, blacknose dace, white sucker, brook trout, brown trout, pumpkinseed, red breast sunfish, rock bass, smallmouth bass, slimy sculpin, tessellated darter, and yellow perch.[5]

There are three dams downstream of the Texon Project on the Westfield River including the

[5] http://www.pvpc.org/sites/default/files/wap_final_small.pdf

West Springfield Project (most downstream), Woronoco Project (second) and Indian River Project (most upstream). The West Springfield Project has a denil fish ladder installed to facilitate the movement of herring and shad to upstream waters of the Westfield River. There are requirements for upstream eel passage at the West Springfield, Woronoco and Indian River Projects as part of their FERC license requirements. The West Springfield and Woronoco Projects have passage installed and based on communications between the Applicant and Mass DFW, installation of an upstream eel passage at the Indian River Project was to begin in the summer of 2020.

No mandatory prescriptions (Section 18 or similar) or recommendations for upstream fish passage were required for the Project at the time of exemption although the exemption's Standard Article 2 requires compliance with any terms and conditions imposed by state and federal fish and wildlife agencies.

As a condition of the previous LIHI certification, and at the request of Mass DFW, the Applicant was to work in collaboration with Mass DFW to install temporary eelways during the summer of 2015 to find the right locations prior to finalizing the permanent upstream passage by July 16, 2016. Pursuant to this requirement, upstream eel passage is installed at the Project and typically operates in the spring through the fall. The voluntary eel passage at Texon consists of a short eel ladder section that terminates at a trap. Water (estimated at less than 1 cfs) is discharged from the upstream end of the ladder to ensure the system remains wetted. The trap is checked daily for the presence of eels. In the event that an eel is observed in the trap, the operations staff manually release the eel in the impoundment. The application materials indicate that while no eels have been observed upstream of the dam, they were observed attempting to ascend the dam on both abutments in 2015.

Mass DFW submitted a comment letter on the application dated March 9, 2021. The agency requested continued operation of the upstream eel ramp and notes the planned eel ramp at the Indian River Project is now scheduled for installation in 2021. The West Springfield eel ramp was found to be ineffective but is now scheduled for replacement after current required dam repairs are made in 2021-2022, and an eel migration study is conducted in 2023.[6]

The Applicant also selected **Standard C-Plus** for all Zones.

The Applicant has selected the Plus Standard citing the upstream eel passage is installed as a voluntary measure above and beyond any requirements of the 401 WQC or FERC exemption. However, this review finds that installation of upstream eel passage facilities was recommended by Mass DFW during the previous certification review process and was made a condition of the

[6] Based on email communication with Mass DFW provided by the West Springfield project owner.

prior certification in order to satisfy the fish passage criterion. As such, the Plus Standard is not satisfied.

Based on my review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Upstream Fish Passage criterion. Since the upstream eel passage is in place and subject to the exemption's Standard Article 2, no condition is warranted.

D. DOWNSTREAM FISH PASSAGE AND PROTECTION

Goal: The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by Facility operations. All migratory species are able to successfully complete their life cycles and to maintain healthy populations in the areas affected by the Facility.

Assessment of Criterion Passage: The Applicant appropriately selected Standard D-2, Agency Recommendation for the Impoundment Zone and Standard D-1, Not Applicable/De Minimis Effect for the Bypassed Reach Zone and Downstream Reach Zone.

As noted previously in Criterion C - Upstream Fish Passage, the only migratory species that may be present is the catadromous American eel.

The downstream fish bypass facility, located on the right descending end of the dam, consists of a bypass pipe and collection chamber, and was installed pursuant to the 1993 request from FWS and Mass DFW. Downstream passage was installed to support Atlantic salmon restoration efforts in the Connecticut River watershed. However, the Atlantic Salmon program was abandoned, and downstream passage is no longer a requirement of the Project. As such, the downstream passage facilities are not operable. Mass DFW in their application comment letter recommends that the Project provide safe and appropriate downstream passage measures for American eel upon an agency request.

Neither the FERC Exemption Order nor the LIHI application mention any entrainment study being conducted at the Project. The project trashrack has 1-inch clear spacing between the bars with an estimated approach velocity at the project trashrack of 1.5 feet per second, which is less than the current agency recommendation for approach velocity to be less than 2 feet per second. The Project is allowed to install larger spaced trash racks seasonally, but maintains the smaller, 1-inch spaced racks all year. Based on burst swim speeds listed in Bell (1991)[7] adult fishes and most juvenile life-stages as well as individuals would be capable of swimming away from the

[7] Bell M.C. 1991. *Fisheries handbook of engineering requirements and biological criteria*. Fish Passage Development and Evaluation Program, U.S. Army Corps of Engineers, North Pacific Division, Portland, Oregon

trashrack and avoid impingement. With the one-inch spacing, all but the smallest fishes (minnows and juvenile of carp and game species) would be unable to fit through the trash rack.

Regarding smaller fishes that may be entrained, the Project utilizes a vertical Kaplan design turbine, which are considered "fish-friendly" and can be adjusted as needed. This design typically yields passage survival rates of at least 70 percent.

The Applicant appropriately selected Standard D-1 for the Bypassed Reach and Downstream Reach Zones because once in these zones there are no Project-related barriers to further downstream movement. Additionally, the bypassed reach consists of near vertical bedrock which does not create or maintain aquatic habitat.

Based on my review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Downstream Fish Passage and Protection criterion. A condition is recommended to ensure that LIHI is notified if/when resource agencies request downstream eel passage.

E. SHORELINE AND WATERSHED PROTECTION

Goal*:* The Facility has demonstrated that enough action has been taken to protect, mitigate and enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility.

Assessment of Criterion Passage: The Applicant appropriately selected Standard E-1, Not Applicable/De Minimis Effect for all Zones.

The FERC Project boundary covers approximately 5 acres. Of this area, approximately 3 acres are water (impoundment). Approximately 1 acre is wooded shoreline and approximately 1 acre is industrial. Some land use around the Project is recreational (see Section VII.H below) and includes fishing and kayaking.

The Project is not required to, nor does it have a shoreline management or similar plan. The Project also operates in a run-of-river mode and thereby does not create unnatural water surface fluctuations in the impoundment or in the downstream reach as can be the case with hydroelectric projects that have ramping rate operational provisions.

The Applicant also selected **Standard E-Plus** for all Zones.

The Applicant has selected the Plus Standard citing that it did not seek to operate in store and release mode in the original exemption application and instead the Project maintains run-of-river

operations. However, to qualify for the Standard E-Plus the Applicant must demonstrate that the Project has an approved and legally enforceable site-specific shoreline buffer or equivalent watershed land protection plan for ecological land protection of water quality, aesthetics, and low-impact recreation values. The buffer zone must be dedicated for conservation purposes and must also be vegetated similarly to adjacent natural lands. In addition, the buffer zone must include at least 50% of the undeveloped shoreline around the reservoir, or a reservoir shoreline equivalent along its riverine zones. Alternatively, the facility has established a watershed enhancement fund that provides at least that level of conservation benefit. Based a review of the application and supporting material, neither of these are in place at the Project. As such, the Plus Standard is not satisfied.

A review of the FERC eLibrary indicated that no issues related to shoreline and watershed protection have occurred during the FERC licensing period.

Based on my review of the application, supporting documentation, and publicly available information, the Project is operated a manner that has a de minimis effect on the watershed. Therefore, the Project continues to satisfy the Shoreline and Watershed Protection criterion.

F. THREATENED AND ENDANGERED SPECIES PROTECTION

Goal: The facility does not negatively impact federal or state listed species.

Assessment of Criterion Passage: The Applicant appropriately selected Standard F-3, Recovery Planning and Action, for all Zones.

Neither the WQC, nor the FERC exemption contained requirements related to federal or state-listed threatened or endangered species. Based on results of the Applicant's IPaC review the only federally listed species that may occur in the Project area is the Northern long-eared bat. No critical habitat for any species was identified in the IPaC review. Northern long-eared bats spend the winters in caves and mines and roost in tree cavities during the summer months. There are no caves or mines in the Project area and the Applicant reports that normal operation and maintenance activities including any routine landscaping or vegetation management do not have the potential to impact bats given the Project location at a former industrial site.

The Applicant's review of Massachusetts Natural Heritage Endangered Species Program's online mapping tool showed that one state-listed species may occur in the Project area. In its July 17, 2020 letter to the Applicant, Massachusetts Natural Heritage Endangered Species Program stated that the Project will not result in a prohibited Take of any state-listed species; no additional detail was provided.

A review of the Project's record on the FERC eLibrary indicated that no issues related to threatened and endangered species have occurred.

Based on my review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Threatened and Endangered Species criterion.

G. CULTURAL AND HISTORIC RESOURCE PROTECTION

Goal: The facility does not unnecessarily impact cultural or historic resources that are associated with the Facility's lands and waters, including resources important to local indigenous populations, such as Native Americans.

Assessment of Criterion Passage: The Applicant appropriately selected Standard G-1, Not Applicable/De Minimis Effect for all Zones.

The application discusses the early incorporation of the town of Russell in 1792 and its agrarian community prior to transforming into a more industrial way of life in 1841 with the expansion of railroads through the town. The application does not mention the presence or absence of any cultural or historic resources is the Project area, however. According to the Massachusetts Historic Commission's Cultural Resource Information System mapping tool[8] several historic properties are present in the town of Russell. The only state historic properties within the Project boundary are the Crescent Mill and Crescent Dam, however while the Applicant owns the dam it does not own the mill or industrial properties. During the FERC exemption process, the Massachusetts Historical Commission noted that the mill would remain unaltered as a result of the Project's construction and only the machinery inside would be replaced, and that the Project was unlikely to affect significant historic or archeological resources. A review of the National Register of Historic Places database did not find any resources listed inside the Project boundary.

Based on a review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Cultural and Historic Resource Protection criterion.

H. RECREATIONAL RESOURCES

Goal: The facility accommodates recreation activities on lands and waters controlled by the facility and provides recreational access to its associated lands and waters without fee or charge.

Assessment of Criterion Passage: The Applicant appropriately selected Standard H-2, Agency Recommendations for the Impoundment Zone and H-1, Not Applicable/De Minimis Effect for

[8] https://mhc-macris.net/index.htm

the Bypassed Reach Zone. The Applicant selected standard H-1 for the Downstream Zone, but for reasons discussed below, this review finds that Standard H-2 is more appropriate for that zone.

The bypassed reach is near vertical bedrock. Standard Article 2 of the FERC exemption order required the exemptee to comply with the terms and conditions made by federal and state fish and wildlife agencies. Interior recommendation 3 called for the exemptee to provide angler access to project waters. On the left descending bank there is a portage trail that begins just upstream of the boat barrier, extends along the shore past the dam and terminates just downstream of the exposed bedrock. The portage trail and put-in and take-out sites also provide angler access to the impoundment and tailrace. For this reason, I find Standard H-2 to be more appropriate for the Downstream Zone. A review of the FERC eLibrary indicated that no issues related to recreation have occurred during the FERC licensing period.

Based on my review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Recreational Resources criterion.

VIII. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION

Based on my review, I believe that the Project meets the requirements of Low Impact Certification and recommend it be certified for a five-year period with one condition.

> **Condition 1:** If a resource agency formally requests downstream American eel passage at the Project during the term of the new LIHI certificate, the facility Owner shall notify LIHI within 90 days of such action and shall provide a plan and schedule for installation upon plan approval by the resource agency(ies).

APPENDIX A – MASS DFW COMMENT LETTER

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

March 9, 2021

Ms. Shannon Ames, Executive Director
Low Impact Hydropower Institute
1167 Massachusetts Avenue, Office 407
Arlington, Massachusetts 02476

RE: Texon (Cresent) Hydroelectric Project
FERC No. P-2986, LIHI No. 119

Dear Ms. Ames:

The Department of Fish and Game ("DFG") hereby submits the following comments on the Low Impact Hydropower Institute's ("LIHI") Pending Application for the proposed LIHI certification of the Texon (Cresent) Hydroelectric Project in the town of Russell and the County of Hampden, Massachusetts.

DFG is submitting these comments to LIHI in order to fulfill the requirements of the Massachusetts Department of Energy Resources ("DOER") Renewable Energy Portfolio Standard Regulations (225 CMR 14.00; "RPS I" and 225 CMR 15.00; "RPS II"). The RPS I and RPS II regulations were promulgated by DOER on January 1, 2009 and require that any hydroelectric project wishing to qualify as either a RPS I or RPS II generator first obtain LIHI certification. These regulations also require all relevant regulatory agencies to comment on the pending LIHI application.

PROJECT
The Texon (formerly known as Cresent) 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 upstream of the Indian River Hydroelectric Project (Ferc No. 12462). The Project has a 1.5 MW rated capacity and produces 5,600 MWh in average annual generation.

COMMENTS
We request the continued operation of the upstream eel ramp at the Texon Project. The Indian River Project (next downstream dam) has an eel ramp installation planned for spring/summer 2021. Additionally, the first dam on the Westfield River (West Springfield Project-LIHI No. 19) has a planned eel ramp installation for summer 2022-2023. Therefore, we continue to anticipate the need for upstream passage at the Texon Project. We also request that safe and appropriate downstream passage measures for American Eel be provided at the Project upon request.

We have no other comments on this relicensing.

Thank you for this opportunity to comment.

Sincerely,

Steven Mattocks
Fisheries Operations Biologist
Massachusetts Division of Fisheries and Wildlife
Westborough, MA