REVIEW OF APPLICATION FOR RE-CERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE COMTU FALLS HYDROELECTRIC FACILITY, LIHI #124

Prepared by Patricia McIlvaine
June 22, 2021

I. INTRODUCTION

This report summarizes the review of the application submitted by Gravity Renewables, Inc. (Gravity), on behalf of Comtu Falls Corp., a wholly owned subsidiary of Gravity), to the Low Impact Hydropower Institute (LIHI) for re-certification of the Comtu Falls Hydroelectric Project (Comtu Falls Project) LIHI #124. The 0.46 MW Comtu Falls Project holds a Minor License from the Federal Energy Regulatory Commission (FERC) P-7888. The Project was acquired by Gravity in 2014.

The Comtu Falls Project was first certified by LIHI in 2015 for a five (5) year term, which was to expire on July 10, 2020, but was extended to July 31, 2021. At that time, the Project's original 2015 certification had one condition that had been recommended by the Vermont Department of Environmental Conservation (VDEC) during the previous LIHI review:

- The Owner shall operate the downstream fish passage facilities annually from April 1 through June 15 and from September 15 through November 15.

The Project has complied with this requirement.

II. RECERTIFICATION PROCESS AND MATERIAL CHANGE REVIEW

Under the current LIHI Handbook (Revision 2.04: April 1, 2020), recertification reviews are a two-phase process starting with a limited review of a completed LIHI application, focused on three questions:

(1) Is there any missing information from the application?
(2) Has there been a material change in the operation of the certified facility since the previous certificate term?
(3) Has there been a change in LIHI criteria since the Certificate was issued?

In accordance with the Recertification Standards, all Projects currently applying for renewal must go through a full review unless their most recent certification was completed using the 2016 version of the Handbook. Thus, this Stage II report was required for the Comtu Falls Project.

A review of the initial application, dated August 5, 2020, resulted in a Stage I Report dated October 2020, that indicated additional data was needed, which was incorporated into a revised application submitted on March 19, 2021. The Stage 2 review was authorized on April 19, 2021.

This Stage II assessment included review of the application package, public records in FERC's eLibrary since the last LIHI certification in 2015, and annual compliance statements received by LIHI during the past term of Certification. Also, follow-up communication with the Applicant was conducted for this review, which is contained in Appendix A.

III. PROJECT'S GEOGRAPHIC LOCATION

The Project is located on the Black River in the City of Springfield, VT. The Black River is a tributary of the Connecticut River and is entirely located within the State of Vermont. The Black River flows from Rutland County in its upper reaches, continuing into Windsor County at its confluence with the Connecticut River.

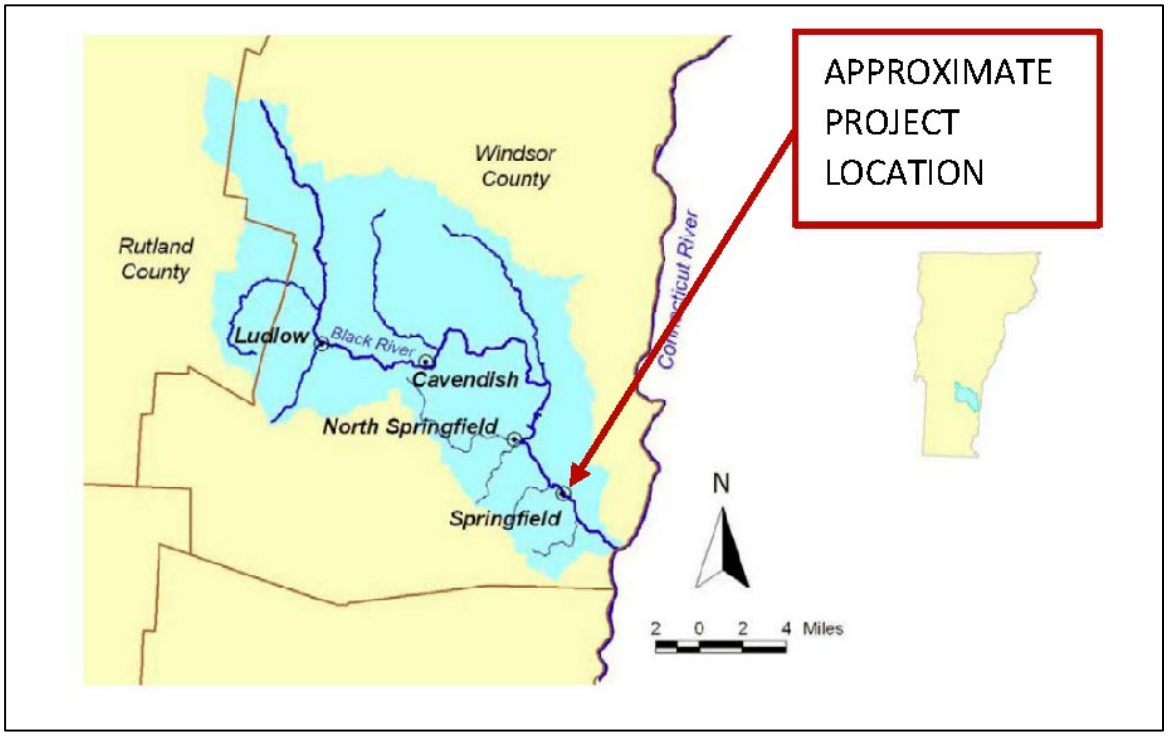

Figure 1 – Black River Watershed

The Comtu Falls Project is 4.2 miles upstream of the confluence of the Black River with the Connecticut River and is the only Project on the river owned by Gravity Renewables. There 14 dams on the Black River, with five hydro facilities in a 3/4 mile stretch of the Black River in Springfield. The Comtu Falls Project (RM 4.3) is located approximately1/4 mile upstream of the Slack Dam (P-8014) (RM 4.1) and Lovejoy (P-9649) (RM 4.0) impoundments, and 1/3 miles downstream of the Gilman (P-9650) (RM 4.3) and Fellows (P-9648) (RM 4.5) projects. The USACE North Springfield Dam is further upstream located at RM 8.3 and provides flood protection for downstream communities along the Black River. Figure 2 shows the Comtu Falls Project and the two closest dams.

None of the dams have upstream passage for migratory species. Cavendish (RM 20.8), Fellows, Gillman, Lovejoy, Slack and Comtu Falls have downstream passage. The Slack Dam Project received LIHI re-certification in 2017 as Certificate #78 and Cavendish in 2018 as Certificate #97.

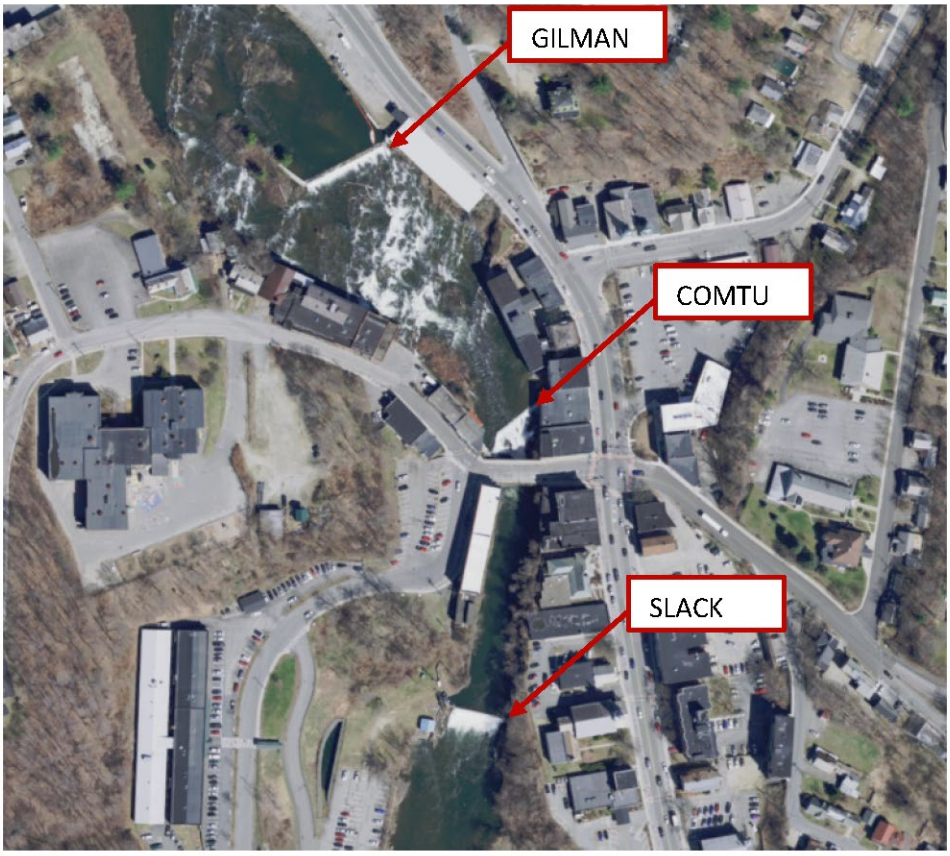

Figure 2 – Aerial Showing Comtu Falls and the Two Closest Dams

IV. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

The Project is located directly in the urban center of downtown Springfield, Vermont, and is surrounded by industrial buildings up to the water's edge on all sides. Project works consist of: (a) the 4-foot high, 128-foot-long concrete gravity dam with crest elevation of 392 feet mean sea level, tapering from 5.5 feet high at its western side to zero feet high at its eastern side with irregular bedrock comprising the last 17-18 feet, situated on the top of a natural falls; (b) 2-foot high flashboards over 74 feet of the dam; (c) an impoundment of 0.4 acres; (d) an intake structure at the west side of the dam having 1.5-inch clear bar spacing and set at a 45 degree angle to the intake; (e) a six by six foot, 65 foot long reinforced concrete penstock; (f) a powerhouse with one turbine; (g) 600-volt induction generator leads; (h) a downstream fish passage facility consisting of a 2.5-foot-wide by 2.0-foot-high discharge weir at the west abutment of the dam and trashrack, leading to a 3-foot-deep plunge pool. The flashboards consist of steel pins and wooden boards. The boards are designed to fail when there is 3.17 feet of overtopping at the boards. In 2018 FERC requested a review of the design of the flashboards, but no changes were needed. The boards are maintained

in place unless they are damaged from debris or the pins are bent from overtopping. The boards are repaired or replaced when conditions allow for safe access of personnel. There is no seasonal operation of the flashboards. Figure 3 on the next page shows the key features of the Project.

The powerhouse contains one 0.460 MW vertical Kaplan turbine, with an estimated generation of +/- 2,300 MWh. The surface area of the reservoir is approximately 0.4 acres. The volume of the reservoir is approximately 1 acre-foot.

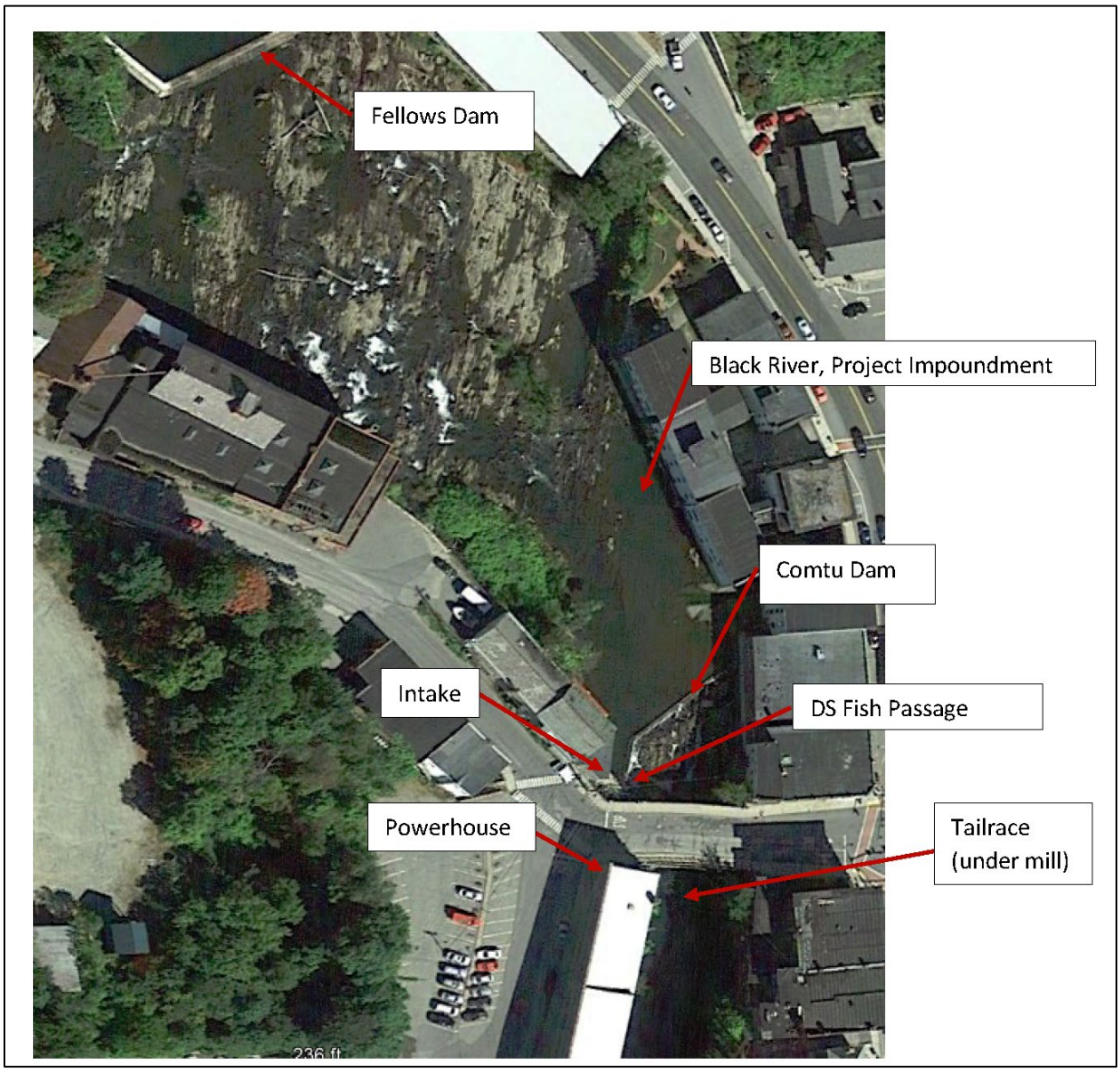

Figure 3 – Key Project Features

V. ZONES OF EFFECT AND STANDARDS SELECTED

Three Zones of Effect (ZOE) were appropriately designated which are illustrated on Figures 4-6.

- ZOE #1 – Impoundment RM 4.205 to RM 4.2
- ZOE #2 – Bypass Reach RM 4.2 to RM 4.199
- ZOE #3 – Tailrace RM 4.199 to RM 4.149

The application noted that the draft tube discharges close to the toe of the dam and the bypass is very short, approximately 65 feet (i.e. the length of the penstock) and mostly natural falls.

Figure 4 – Impoundment

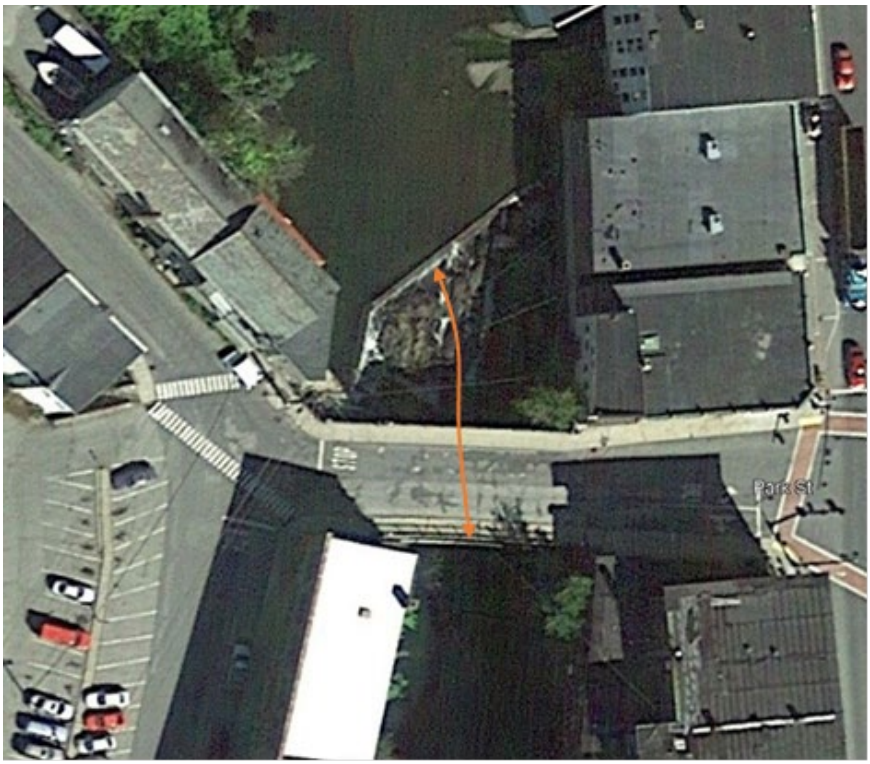

Figure 5 – Bypass Reach

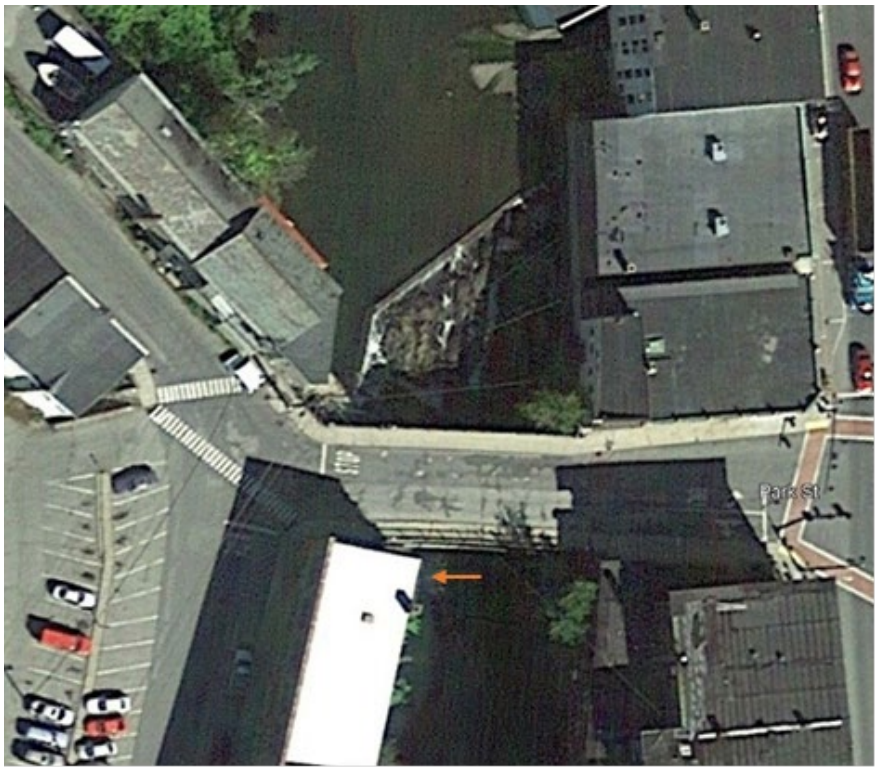

Figure 6 - Tailrace

Tables showing the standards selected for each ZOE are shown below. I believe that Standard F-2 is more appropriate for all ZOEs for the Threatened and Endangered Species Protection criterion, as discussed under that criterion. As also discussed under the applicable criteria, I do not believe that any PLUS requirements have been demonstrated.

Standards for the Impoundment (ZOE #1)

Criterion		Alternative Standards				
		1	2	3	4	Plus
A.	Ecological Flow Regimes	X				X
B.	Water Quality	X				X
C.	Upstream Fish Passage	X				
D.	Downstream Fish Passage		X			X
E.	Watershed and Shoreline Protection	X				X
F.	Threatened and Endangered Species Protection	~~X~~	**X**			X
G.	Cultural and Historic Resource Protection		X			
H.	Recreational Resources	X				

Standards for the Bypass Reach (ZOE #2) and Tailrace (ZOE#3)

Criterion		Alternative Standards				
		1	2	3	4	Plus
A.	Ecological Flow Regimes		X			X
B.	Water Quality	X				X
C.	Upstream Fish Passage	X				
D.	Downstream Fish Passage	X				X
E.	Watershed and Shoreline Protection	X				X
F.	Threatened and Endangered Species Protection	~~X~~	**X**			X
G.	Cultural and Historic Resource Protection		X			
H.	Recreational Resources	X				

V. REGULATORY AND COMPLIANCE STATUS

On July 18, 1986, FERC issued a License for Minor Project jointly to the Comtu Falls Corporation (CFC) and Comtu Falls Associates to construct, operate, and maintain the 400 KW Comtu Falls Project at the existing Comtu Falls Dam. The license includes requirements for flow, water quality control, and the future need for fish passage. Additional requirements were included as part of the Water Quality Certificate (WQC) issued in 1983 by VDEC. The WQC was amended in 1989 after the Applicant requested an amendment to reflect the Project's increased capacity from 250 KW to 400 KW. The 1989 amendment reaffirmed original WQC by requiring run-of-river operation, instantaneous streamflow of no less than 0.5 inches of water discharged over the full crest of dam at all times, and all inflows passed over the dam when they fall below 44 cubic feet per second (cfs). Downstream passage for Atlantic salmon was mandated by a US Fish and Wildlife Service

(USF&WS) recommendation, adopted by FERC's Order dated June 1, 1995. FERC issued an additional amendment on February 21, 1995, authorizing an increase in the installed capacity from 400 KW – 460 KW to reflect maximum generation available during excessive spring runoff and infrequent storm events.

On September 6, 2005, the VDEC sent notification to CFC requesting that the Project operate downstream passage facilities during the fall period, in addition to the spring migration operation, but CFC objected to this request, citing the deliberate decision-making process used in the original FERC requirements. However, fall operation of the downstream passage was adopted by Gravity in 2015 when VDEC again made this recommendation during the comment period of the 2015 LIHI certification review. A copy of this June 1, 2015 is attached to the LIHI application.

No other amendments to the license nor WQC have been issued since 2015. However, relicensing activities will begin with filing of a Pre-Application Document (PAD) which is due in June 2021.

No deviations or non-adherence to FERC license requirements or notifications were found during the review of the FERC eLibrary from June 1, 2015 through May 1, 2021.

VI. PUBLIC COMMENT RECEIVED OR SOLICITED BY LIHI

The deadline for submission of comments on the LIHI certification application was June 18, 2021. No comments were received. Outreach was made only to Melissa Grader of USF&WS and Eric Davis of Vermont Agency of Natural Resources (VANR) regarding fish passage, but neither responded. My email communication is included in Appendix A.

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 selected **Standard A-1 Not Applicable/De Minimis Effect** for the impoundment and **A-2 – Agency Recommendation** for the bypass and downstream reaches. The Applicant also proposed a **PLUS** standard for all ZOEs as the Project is operated in instantaneous run-of-river (ROR) mode with no pondage or storage.

There have been no changes in requirements of the Facility since it was certified by LIHI. Flows on the Black River are impacted by the release schedule from the upstream U.S. Army Corps of Engineers North Springfield Lake Dam, and the existence of the hydroelectric facilities along the reach. Turbine flow is controlled by the Project's automatic programable logic controller (PLC). A minimum flow release of 0.5 inches of depth (4 cfs) over the flashboards is required whenever

river flow is 44 CFS or greater for flow to pass over the falls for aesthetics[1]. When less than 44 cfs, all flows are spilled over the falls. The Applicant stated it is not aware of any science-based methodology for the development of aesthetic flows and does not have access to any of the original studies used during past licensing. However, since the bypass reach is de minimis with little aquatic habitat due to the natural falls, it is likely that the aesthetic flow provision was based on the Vermont water quality standards that include aesthetics. The Applicant stated it is not aware of any deviations from the aesthetics flows nor ROR operation; review of FERC records did not indicate any deviation reports.

Based on my review, I believe the Project continues to satisfy this criterion. However, it does not appear that the Project "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 with demonstrated net benefits to fish and wildlife resources affected by the facility" as required to meet the PLUS standard. Operating as ROR as dictated by both the license and WQC does not meet this requirement.

This Project Passes Criterion A – Ecological Flow Regimes

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 selected **Standard B-1 Not Applicable/De Minimis Effect** and proposed a **PLUS** standard for all ZOEs, based on the fact that it is operating in compliance with the Project's WQC.

While the WQC is greater than ten years old, an email dated Nov 10, 2020, from Eric Davis of VDEC included in the application, acknowledges that the WQC remains valid. According to the 2016 State of Vermont Stressed Waters List issued by the VDEC which is linked to the LIHI application, the Black River at VT10-11 is impaired due to sediment, nutrients and E. coli. The source of the problems is described as, "contributions from upstream urban runoff, land development". Stressed uses include aesthetics, aquatic life (biota and/or habitat support) and direct contact recreation."

A review of FERC records does not suggest any deviation concerns. No water quality concerns were expressed by VDEC in their 2020 email to Gravity. Based on this information, I believe the Project continues to satisfy this criterion. However being in compliance with the WQC does not satisfy the requirements for the PLUS standard as defined by LIHI: "the facility has deployed advanced technology to enhance ambient water quality or is operating an adaptive management program to regularly evaluate the operation of the facility with respect to enhancing water quality.

This Project Passes Criterion B – Water Quality

[1] This release was recommended by the US Department of Interior and Vermont Agency of Environmental Conservation as noted in the 1986 Environmental Assessment Report issued by FERC. This is incorporated into FERC license Article 401 and WQC Condition A.

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 selected **C-1 - Not Applicable/De Minimis Effect** for all ZOEs.

Neither the current license nor WQC requires upstream fish passage, although authority to require fish passage in the future was reserved in the license. No projects on the Black River have upstream passage. The 2015 LIHI certification files included an email from Melissa Grader dated June 1, 2015[2], in which she noted that "given TransCanada's[3] CT River mainstem projects (Vernon, Bellows Falls and Wilder) are undergoing relicensing, we anticipate that eel passage will be a requirement of any new licenses issued for those projects. As the Black River enters the CT River upstream of the Bellows Falls Project, and there is only one other obstruction between Bellows Falls and Comtu Falls, it is likely that the agencies will be seeking eel passage at Black River projects within the next 5 to 10 years."

It does not appear that upstream passage for eel or anadromous fish have yet been requested by the agencies, as downstream barriers at four dams prevent their upstream migration.

I believe that the Project continues to satisfy this criterion. However, a condition is recommended to address the potential for agency requests for upstream eel passage within the next certification term.

This Project Conditionally Passes Criterion C – Upstream Fish Passage

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. Migratory species are able to successfully complete their life cycles and maintain healthy populations in the areas affected by the Facility.

Assessment of Criterion Passage

The Applicant has selected Standard D-1, **Not Applicable/De Minimis Effect** for the bypass and downstream reaches and **C-2 – Agency Recommendation** for the impoundment. There are no migratory barriers once fish enter the tailrace/downstream reach. A **PLUS** standard was also proposed for all three ZOE's.

Standard Article 11 of the original FERC license provided a reservation of authority for FERC to

[2] This email is included in the 2015 application to LIHI and referenced in the final Reviewer's Report.
[3] The Projects are now owned by Great River Hydro. The three noted Projects have not yet completed their re-licensing efforts, although the licenses may be issued sometime in 2023.

require fish passage if determined to be required by a resource agency. Downstream passage for Atlantic salmon was mandated by a USF&WS recommendation, adopted by FERC's Order dated June 1, 1995 which amended the license. At the time, this requirement was associated with the Connecticut River Atlantic salmon restoration program, when young salmon were stocked in the river upstream of the Project. The fish passage (see Figure 7) consists of a weir in the concrete dam adjacent to the intake structure. The weir is approximately 2.5 feet wide by 3.0 feet deep and discharges water into a concrete plunge pool approximately 3 feet deep. The passage was constructed in 1995 and has been operating since 1996.

Figure 7 – Downstream passage

In the FERC-prepared June 1, 1995 Environmental Assessment for the downstream passage requirement, it was noted that USF&WS typically requests use of trashracks with one-inch spacing. However, it appears that the use of angled trashracks guiding the fish towards the bypass and away from the turbine intake was found to be satisfactory. Follow-up communication with the Applicant confirmed that the angled trashracks with 1.5-inch spacing remains in use today.

Likely because the Atlantic salmon restoration program was eliminated, it does not appear that any effectiveness assessment for passing salmon has been conducted, based on follow-up consultation with the Applicant.

On September 6, 2005, the Vermont Agency for Natural Resources sent a request to the former owner of Comtu Falls requesting they also operate the facility during fall migration seasons. The owner declined the request. Stocking ceased in 2012 when the Atlantic salmon restoration program ended. VDEC indicated that to ensure the safe passage of any remaining Atlantic salmon smolts (already in the system as of 2012), the downstream fish passage should continue to operate at least until 2016. During the 2015 LIHI certification process, this issue was again raised by the VDEC, and Gravity agreed to operate the downstream passage in both spring and fall seasons to support riverine species. As a result, VDEC issued a letter of support in 2015 to LIHI for certification of Comtu Falls. This letter is included with the current LIHI application.

Based on my review of all available information, I believe that the Comtu Falls Project continues

to satisfy this criterion. However, due to the current definition of what constitutes a "legal proceeding" in the LIHI definition of a "Resource Agency Recommendation*",* I do not believe that the Project satisfies the PLUS standard. Under LIHI's Handbook, "Resource Agency Recommendations" form the basis of Standard D-2. Gravity applied for PLUS credit since they believe their fall operation of the downstream passage is totally voluntary. The Applicant noted extra years of certification were awarded to the Slack Dam Project (LIHI # 78) during that Project's 2017 LIHI certification decision, in response to compliance with a similar VDEC recommendation[4]. The key difference, however, is that the Slack Dam Project was reviewed under the 2016 revision of the LIHI Handbook. In the current 2020 Handbook revision, legal proceedings included in a Resource Agency Recommendation include those "issued specifically as part of LIHI Certification", which was not part of the definition in the 2016 Handbook revision. Thus, compliance by the Slack Dam Project with the 2016 VDEC request was assessed by LIHI to be a voluntary action above and beyond agency requirements, not compliance with a "*Resource Agency Recommendation*" (i.e. Standard D-2), as I believe is the case with the Comtu Falls Project. My review also noted that the Cavendish Project also operates in both seasons, however both periods are included in Condition H of their WQC and Article 407 in their FERC license. Thus, two season operation is common on the river. Spring and fall operation at Comtu Falls has been agreed to by Gravity since 2015, however, I believe that a condition is warranted to ensure this operational schedule will continue.

The Project Conditionally Passes Criterion D – Downstream Fish Passage and Protection

E. SHORELINE AND WATERSHED PROTECTION

Goal: The Facility has demonstrated that sufficient 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 has appropriately selected **Standard E-1, Not Applicable/De Minimis Effect** to pass the Shoreline and Watershed Protection criterion for all Project ZOEs. The Applicant also proposed it satisfies the PLUS standard because it operates as ROR and therefore does not cause any unnatural shoreline flows.

There continue to be no shoreline and watershed protection requirements for the Project. The application states there is no natural shoreline around the limited impoundment as it is either armored or developed by infrastructure. The Project is located in an urban setting in downtown Springfield, Vermont. Land area within the Project Boundary was reported as two acres.

Based on my review, I believe the Project continues to satisfy this criterion. However, I do not believe that ROR operation meets the PLUS standard.

The Project Passes Criterion E – Shoreline and Watershed Protection

[4] In a letter dated April 14, 2016, VDEC stated that they are making an official "agency recommendation" requiring the downstream passage at the Slack Project to be operated in the spring and fall. This letter can be found on LIHI's website for the Slack Project.

F. THREATENED AND ENDANGERED SPECIES PROTECTION

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

Assessment of Criterion Passage

Standard F-1, Not Applicable/De Minimis was selected for all ZOEs, although I believe that standard F-2, **Finding of No Negative Effect** may be more appropriate as two species are noted as possibly being in the area, however no available habitat likely exists onsite. Gravity also proposed it meets the PLUS standard for this criterion for all ZOEs as they "proactively evaluate the presence of threatened and endangered species to identify if there have been any changes".

The Applicant used the USF&WS's Information for Planning and Consultation (IPaC) online tool to complete a site-specific review of threatened and endangered species and critical habitats. The IPaC review, which was included in the application, identified one federally threatened mammal, the Northern Long-eared Bat (NLEB) (*Myotis septentrionalis*) and the Northeastern bulrush (*Scirpus ancistochaetus*), a federally endangered flowering plant, as potentially occurring in the Project area. The IPaC review specified that there are no critical habitats within the Project area for either species. As presented in the application, it is unlikely that either species occur onsite due to lack of habitat, given the highly developed nature of the Project lands and immediately surrounding lands.

Regarding state protected species, in July 2020, the Applicant performed a review of the State of Vermont's Rare Threatened and Endangered Species GIS mapping information. The mapping results did not show any rare, threatened or endangered species in the Project area.

Based on this review, I believe that the Project continues to satisfy this criterion, however I do not believe that sufficient evidence was provided to meet the PLUS standard requirements which are *"the facility has established an enforceable agreement with resource agencies to operate the facility in support of rare and endemic species, is implementing proactive measures to substantively minimize impacts on species which are at risk of becoming listed species in the vicinity of the facility in the future, or the facility is a significant participant in a species recovery effort."*

The Project Passes Criterion F – Threatened and Endangered Species Protection

G. CULTURAL AND HISTORIC RESOURCE PROTECTION

Goal: The Facility does not inappropriately 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 has appropriately selected **Standard G-2, Approved Plan** to pass this criterion for all ZOEs.

The LIHI application noted the following taken from the National Register of Historic Places Inventory Nomination Form for Comtu Falls Dam, listed as item no. 53 (Number 62 on the 1986 amended district form) of the Springfield Downtown Historic District. The application noted that the Comtu Falls Dam is included in the Springfield Downtown Historic District.

> *"The Comtu Falls Dam is a concrete dam approximately 106 feet long. It was built in 1902 and repaired in 1952 during the upgrading of a hydroelectric station on site. Dams have stood in the general area since 1774 when William Lockwood built the first sawmill in Springfield. Beers 1896 map shows a dam a few hundred feet upstream of the present one."*

Article 402 of the FERC license requires consultation with the Vermont Historic Preservation Office (SHPO) for any construction at the Project. The 1995 license amendment which approved the construction of the downstream fish passage, briefly discussed the apparent disagreement between the Project owner at the time and the SHPO as to whether or not the dam is a contributing element of the Historic District. The following excerpt was taken from the previous LIHI Reviewer's Report:

> *"During the 1995 License Amendment process to install fish passage at the site, the Agency commented on the Environmental Assessment, disagreeing with the applicant's finding of "No Effect," as the project involved altering a dam listed as a contributing historic structure within the Springfield Historic District. However, the Agency concluded that altering the historic dam would result in an effect but that effect would not be adverse, provided the Applicant provide (1) documentation of the dam prior to project implementation (including prescribed set of photographs and site plan); and (2) comply with DOI's standards for rehabilitation and alteration of the facility. The required documentation was submitted on October 14, 1995, and the Agency reviewed and found the documentation package "complete and excellent," and accepted as compliance with their Agency's requirements".*

No further construction activities have been conducted onsite. Based on my review, I believe that the Project continues to satisfy this criterion.

The Project Passes Criterion G – Cultural and Historic Resource Protection

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 has appropriately selected with **Standard H-1, Not Applicable/De Minimis Effect** for all Project ZOEs.

There are no requirements in the License regarding recreation at the site. The reservoir is very small and extends from the Comtu Falls Dam approximately 150 feet upstream. The falls and tailrace area are not safety accessible and are bordered by the industrial and commercial buildings

owned by others. It does not appear that FERC does any environmental inspections at the Project. Based on my review, I believe the Project continues to satisfy this criterion.

The Project Passes Criterion H – Recreational Resources

VIII. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION

Based on my review, I believe that this Project continues to conditionally meet the requirements of a Low Impact facility and recommend it be re-certified for a five-year period with the following conditions. However, I do not believe any PLUS standard requirements were demonstrated.

Condition 1: If either the USF&WS or the state fisheries management agency requires the facility to provide upstream eel passage in the future, the facility Owner shall notify LIHI within 30 days of receipt of such a notification. The Owner shall then consult with the requesting agency(ies) to develop plans to implement upstream passage and shall provide LIHI with a copy of these plans pursuant to the schedule required by the requesting agency(ies), but no later than one year after receiving the notification.

Condition 2: For the full term of the LIHI certification, the facility Owner shall continue to operate the downstream fishway in the spring from April 1 through June 15 and in the fall from September 15 through November 15 or as otherwise requested by the state fisheries agency.

Appendix A

Follow-up Communications with Stakeholders and the Applicant

From: PBMwork@maine.rr.com
To: "Melissa_Grader@fws.gov" <Melissa_Grader@fws.gov>, "Eric.Davis@vermont.gov" <Eric.Davis@vermont.gov>
Cc:
Bcc:
Priority: Normal
Date: Tuesday May 4 2021 12:08:08PM
Comments on LIHI recertification of Comtu Falls

Hi Melissa and Eric

As you know from LIHI's recent announcement, Gravity Renewable has filed with LIHI for recertification of their Comtu Falls Project. As noted in the LIHI email, the comment period for this application closes on June 18, 2021. I am the LIHI reviewer for the Project.

I was wondering if you can share with me, your thoughts on the recertification of the Project, and specifically, any insight as to fish passage at the Project. Currently there is only downstream fish passage which is operated in the spring and fall, in part, due to comments issued by you during the 2015 LIHI certification process. To date, I understand that upstream passage for anadromous species and American eel is not currently required, due to migratory obstacles downstream. In 2015, Melissa issued the attached email in response to a request from Gravity Renewable that discusses possible future upstream passage for American eel at Comtu Falls. At that time, Gravity elected to not file for a PLUS standard following their initial communications with you. Likewise, they are NOT seeking a PLUS Standard for upstream passage at this time. However, I would be interested in knowing if you think the timeframe discussed in this email for focusing on upstream eel passage is still current, and contingent upon such passage implementation at four downstream dams, three of which are still undergoing FERC re-licensing.

A link to the 2015 reviewer's report is included on the attached excerpted 2015 email if you wish to see the chain of emails associated with this 2015 communication.

If you plan on submitting formal comments to LIHI, if you could simply let me know that I would appreciate it. Alternatively, please feel free to provide your comments to my specific questions by email.

Thanks for your time.

Pat McIlvaine

Excerpt taken from the 2015 LIHI Reviewer's Report linked to LIHI's Website
https://lowimpacthydro.org/lihi-certificate-124-comtu-falls-project-vermont/

From: Grader, Melissa
Sent: Friday, June 05, 2015
To: Jon Petrillo
Cc: Brittany Hinz; Eric Davis; Crocker, Jeff
Subject: Re: FW: Comtu Falls: LIHI Follow---Up

Hi Jon,

Looking through the email chain and letter from ANR, I think the Service is fine with that particular issue (operating the d/s bypass in spring and fall for riverine species). However, if Gravity will be seeking PLUS certification, the extended timeframe for certification raises the issue of eel passage. As you probably know, TransCanada's CT River mainstem projects (Vernon, Bellows Falls and Wilder) are undergoing relicensing. We anticipate that eel passage will be a requirement of any new licenses issued for those projects.

As the Black River enters the CT River upstream of the Bellows Falls Project, and there is only one other obstruction between BF and Comtu Falls, it is likely that the agencies will be seeking eel passage at Black River projects within the next 5 to 10 years. Therefore, in order for FWS to support extended "PLUS" LIHI certification, we would want assurances that Gravity will agree to implement eel passage measures when requested by the agencies. Given that you will be operating the bypass in the fall anyway for riverine species, any requests likely will focus on upstream passage measures.

We'd be more than happy to discuss this issue further with you if needed.

Regards,
Melissa Grader
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service - New England Field Office
103 East Plumtree Road
Sunderland, MA 01375
413-548-8002 x124
melissa_grader@fws.gov

From: "Celeste Fay" <celeste@gravityrenewables.com>
To: PBMwork@maine.rr.com
Cc: "Jon Petrillo" <jon@gravityrenewables.com>
Bcc:
Priority: Normal
Date: Friday May 21 2021 11:15:22AM
Re: Question on your LIHI Comtu Falls LIHI Application

Hi Pat,
1. Gravity does not own any of the other projects on the Black River
2. DS passage was constructed in 1995. I assume the first real year of operations was 1996. Note that the premise for the whole system was Atlantic salmon which were being stocked. The stocking program has since been abandoned so our target species is no longer present.
3. The trashrack is angled to the fish bypass.
4. I am not aware of any assessments of the effectiveness of the passage for Atlantic salmon. And there are no longer any Atlantic salmon.
5. We proactively check the GIS information to see if there have been any changes / additions.
6. I am not aware of any FERC E&R inspections during our ownership.

Celeste

On Fri, May 21, 2021 at 10:48 AM <PBMwork@maine.rr.com> wrote:

> Hi Celeste
>
> I was wondering if you can provide me the following information on your Comtu Falls application so I can finalize my review.
>
> **General**
>
> Does Gravity Renewable own any of the other hydropower projects on the Black River? If so, which ones? (Ownership of nearby dams should have been noted in the Application.)
>
> **Downstream Passage**
>
> - When did the passage begin operation?
> - Please confirm that the 1.5 in spacing trashrack is still maintained in the angled position to move the fish towards the bypass rather than the turbine intake.
> - Has any agency provided you an assessment of whether or not this passage is considered to be providing safe and effective downstream passage? If so, please provide me a copy of that information.
>
> **Threatened and Endangered Species**
>
> - Please provide a more detailed discussion of what is meant by your statement that the "project proactively evaluates the presence of threatened and endangered species to identify if there have been any changes" and how that supports the requirements of the PLUS credit as defined in the LIHI Handbook.
>
> **Recreational Facilities**
>
> - Please confirm whether or not FERC has conducted any Environmental and Recreational Inspections since Gravity has assumed ownership. I could not find any on FERC eLibrary.
>
> Thanks
>
> Pat McIlvaine