

REVIEW OF APPLICATION FOR RECERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE WEST SPRINGFIELD PROJECT, LIHI #19

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August 23, 2021

I. INTRODUCTION

This report summarizes the review findings of the application submitted by A&D Hydro, Inc. (Applicant or licensee) to the Low Impact Hydropower Institute (LIHI) for recertification of the West Springfield Hydroelectric Project FERC (P-2608). The Project is a 1.4-MW facility that operates in an instantaneous run-of-river mode and is located on the Westfield River approximately 3.7 miles upstream of the confluence with the Connecticut River in West Springfield, Massachusetts. On June 18, 2021 LIHI received a complete application package for recertification of the Project. This current review was conducted using the new 2nd Edition LIHI Certification Handbook.

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. While there were no material changes at the Project, the LIHI Handbook was materially changed, thus, this Stage II report was required for the Project.

A review of the initial application, dated January 2021, resulted in a Stage I Report dated March 2, 2021 that indicated additional data was needed. A revised application dated June 2021 was subsequently submitted to LIHI.

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.

III. PROJECT'S GEOGRAPHIC LOCATION

The Project is located at river mile 3.7 on the Westfield River in West Springfield and Agawam, Hampden County, Massachusetts and is the most downstream of 5 dams on the Westfield River (Figure 1). The Westfield River is approximately 78.1 miles long, from its headwaters in the Berkshires in northwestern Massachusetts, to its confluence with the Connecticut River. The Westfield River flows from three branches in a northwest to southeast direction, with a total drainage area of 513 square miles at the dam (Figure 2).

IV. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

The West Springfield dam was constructed in 1836 and is 18 feet high and 447.5 feet long with a crest elevation of 92.8 feet above mean sea level that creates a 20-acre impoundment about 0.6 miles long with storage capacity of 200 acre-feet. The power canal is 2,610 feet long and 50 feet wide with stone and concrete headworks and six hydraulically operated steel and timber slide gates. The bypassed reach is bifurcated by an island into two channels with an overall length of about 0.5 miles. The powerhouse contains two vertical Francis turbine/generators. Unit One is rated at 900 kW and Unit Two is rated at 466 kW, or about 1,400 kW combined. With flow restrictions in the power canal the combined capacity is 1,200 kW (800 kW and 400 kW respectively). The tailrace is about 157 feet long and about 30 feet wide (see Figures 3 - 5).

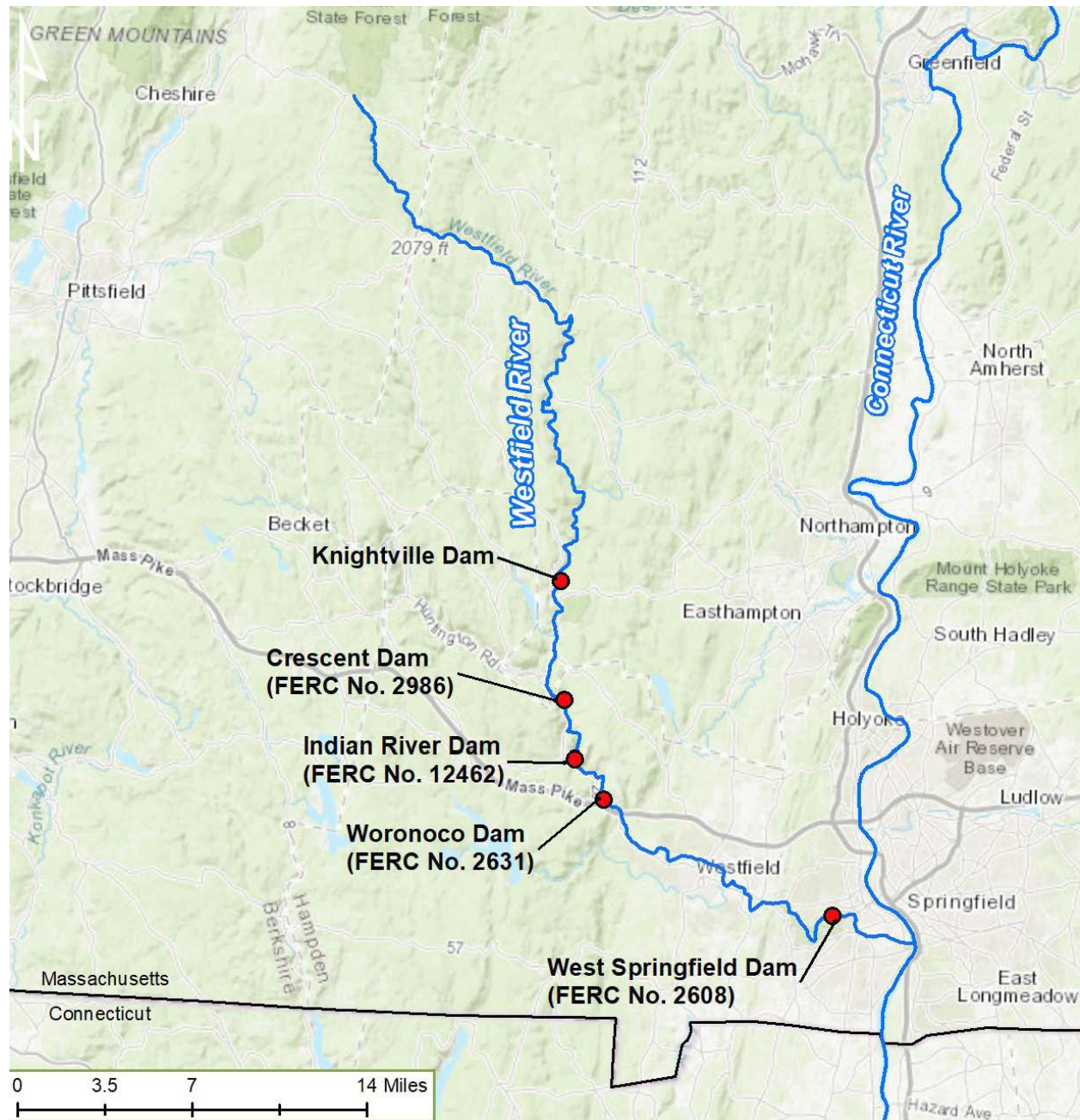


Figure 1 – West Springfield Project Location

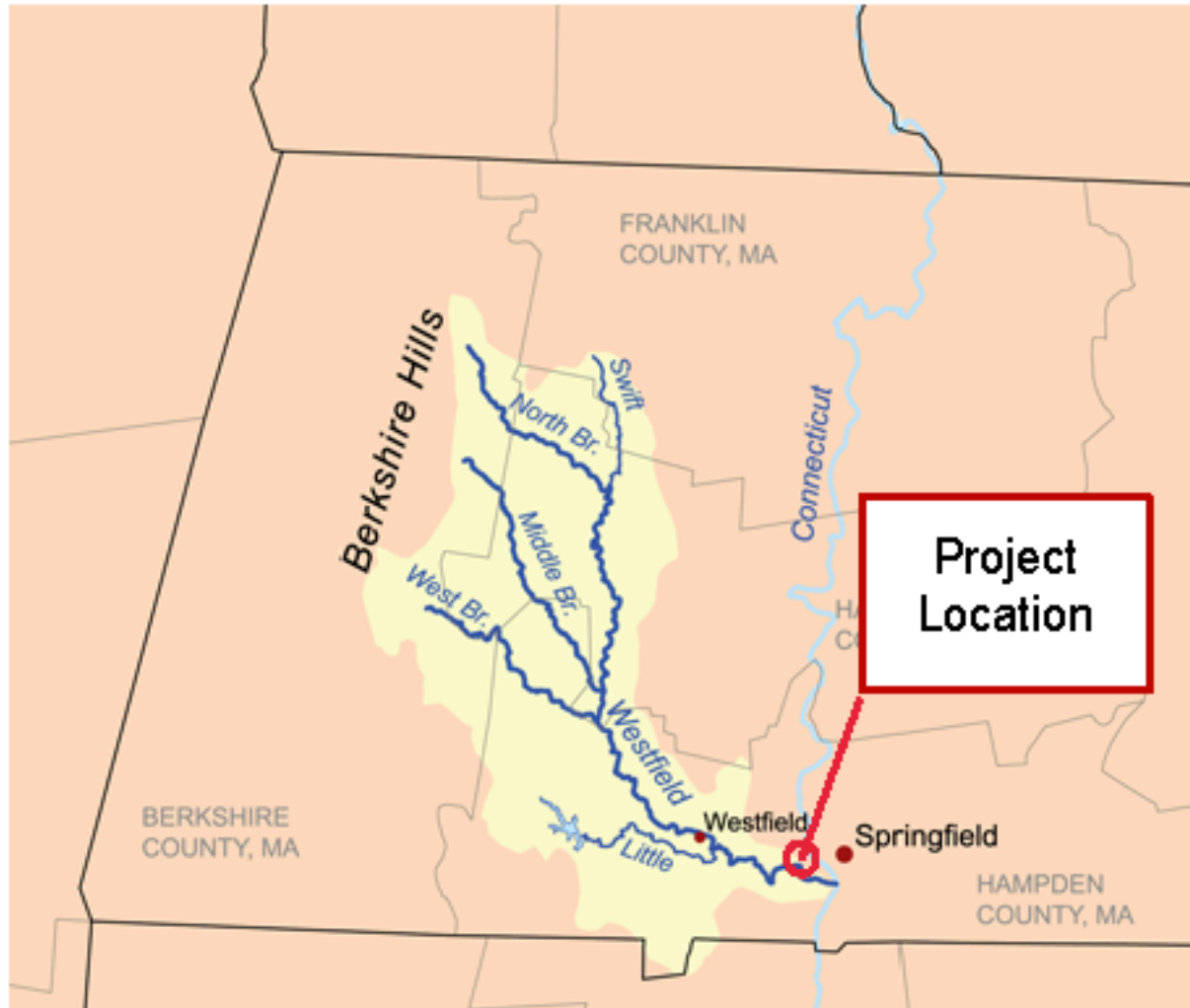


Figure 2 – Westfield River Basin



Figure 3 – West Springfield Project Zones of Effects



Figure 4 – Project Fishway



Figure 5 – Upstream eel ramp

V. ZONES OF EFFECT AND STANDARDS SELECTED

Three Zones of Effect (ZOE) were designated by the Applicant and were determined to be appropriate. Zone 1 includes the West Springfield impoundment; Zone 2 includes the bypassed reach from the dam to the Project tailrace; and Zone 3 includes the tailrace and downstream reach. Table 1 shows the Standards selected for each criterion for the three ZOE. Where applicable, reviewer recommendations for alternate standards are show in **red**.

Table 1. Standards Matrix for the West Springfield Project.

Zone:		1: Impoundment Reach	2: Bypass Reach	3. Downstream Reach
River Mile Extent:		RM 4.3 – 3.7	RM 3.7 – 3.2	RM 3.2 – 2.75
Criterion		Standard Selected		
<i>A</i>	<i>Ecological Flows</i>	2, 1	2	2
<i>B</i>	<i>Water Quality</i>	1, 3	1, 3	1, 3
<i>C</i>	<i>Upstream Fish Passage</i>	1	2	2
<i>D</i>	<i>Downstream Fish Passage</i>	2	2	1
<i>E</i>	<i>Shoreline and Watershed Protection</i>	1	1	1
<i>F</i>	<i>Threatened and Endangered Species</i>	3, 2	3, 2	3, 2
<i>G</i>	<i>Cultural and Historic Resources</i>	1	1	1
<i>H</i>	<i>Recreational Resources</i>	3, 1	3, 1	2

VI. REGULATORY AND COMPLIANCE STATUS

The Federal Energy Regulatory Commission (FERC) issued a license order for the Project on October 24, 1994. At the time of licensing, FERC determined that because the Massachusetts Department of Environmental Protection (MA DEP) did not act within one year of the water quality certificate application, the agency had waived the requirement. In 1994 prior to the FERC license, a Memorandum of Agreement (MoA) was executed between the licensee, the Massachusetts Division of Fisheries and Wildlife (MA DFW) and the U.S. Fish and Wildlife Service (FWS) concerning fishway construction, operation and maintenance and instream flows for aquatic habitat protection.

The current LIHI certification was issued effective August 29, 2015 expiring on August 29, 2020. It was subsequently extended one year to August 29, 2021. The certification includes the following condition:

- Condition 1. During downstream fish passage periods, the fish exclusion racks/screens shall be maintained at the head of the power canal to the satisfaction of the Massachusetts Division of Fish and Wildlife (MA DF&W) and the U.S. Fish and Wildlife Service. The Owner shall continue to coordinate with MA DF&W regarding the installation, removal, and maintenance of these exclusion racks/screens. In its Annual Compliance Statement to LIHI, the Owner shall include a statement confirming that such agency coordination has been successfully completed. If any formal, written concerns about fish passage

operations are received by the Owner from either agency, the Owner shall notify LIHI within 30 days. In such an event, LIHI may request a report from the Owner identifying the planned corrective actions and implementation schedule to remedy the reported problem.

A review of annual compliance statements indicate that the Applicant has submitted the required documentation under Condition 1 and remains in compliance with it.

VII. PUBLIC COMMENT RECEIVED OR SOLICITED BY LIHI

The application was posted for public comment on June 21, 2021 and the notice was forwarded to agencies and stakeholders listed in the application. The deadline for submission of comments was August 20, 2021. One comment letter from the Connecticut River Conservancy (CRC) was received. Based on the completeness of the application and documents available on the FERC elibrary, I did not need to contact resource agencies.

VIII. 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-2, Agency Recommendation for all zones. For reasons discussed below, this review finds that Standard A-1, Not Applicable/De Minimis Effect is more appropriate for the impoundment zone.

The Project operates in an instantaneous run-of-river mode with outflow approximating inflow. There is no impoundment storage. The FERC license article 404 required a plan to install and operate a headwater monitoring gage in the impoundment to monitor compliance with run-of-river operations and the minimum flows required by article 403. Because the headwater monitoring gage is intended to ensure compliance with flows downstream of the dam, this review finds Standard A-1 is more appropriate for the impoundment zone than Standard A-2.

FERC article 403 required a continuous minimum flow release from the dam into the bypass reach of 85 cubic feet per second (cfs) or inflow. The minimum flow is released via three rectangular weirs notched into the northern end of the spillway. The Fish Passage Operations and Maintenance Plan specifies a schedule and distribution of flows at the dam totaling 90 to 155 cfs seasonally: 90 cfs year-round, through slots in the northerly end of the spillway crest, and up to an additional 40 cfs through the fishway (15 cfs for the fishway and 25 cfs for attraction flow)

and 25 cfs through the downstream migrant bypass pipe, during Spring and Fall passage seasons for fish passage operation and upstream fish movement through the bypassed reach.

The minimum flow was developed based on an Instream Flow Incremental Methodology (IFIM) conducted during the last FERC relicensing. US Fish and Wildlife Service policies have a default base flow of 0.5 cfs per square mile of watershed in New England but allows for an alternative base flow based on measured values for similar unregulated rivers. At the dam, the alternative base flow was calculated to be 0.21 cubic feet per second per square mile (cfs/m) or 108 cfs. The IFIM study included demonstration flows that showed habitat was available and suitable at flows from 65 to 108 cfs. Agencies agreed with 85 cfs as the most appropriate flow level to provide 100% available habitat for smallmouth bass, the target species, which also provides 89-98% of available habitat for other species.

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 Ecological Flow Regime 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 selected Standard B-1, Not Applicable/De Minimis Effect for all Zones. However, this review finds that Standard B-3, Site-Specific Studies is more appropriate.

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 are not assessed for others. The Westfield River in the vicinity of the Project is listed as supporting aesthetics, primary and secondary contact recreation, and fish, aquatic and wildlife habitat. 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 (°C)	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

Physical parameter	Standard
	lakes and ponds the rise shall not exceed 3°F (1.7°C) 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 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.

Based on 33 periodic water quality samples recorded by USGS gage no. 01183610¹, located in the downstream zone at Bridge St. from November 28, 2018 to July 26, 2021, water quality was consistent with the standards listed in Table 3, with the exception of 4 pH samples that exceeded the 8.3 standard in the fall of 2020.

No state water quality certificate was issued for the Project during the last relicensing. Because the state did not act on the application in one year's time FERC deemed the requirement waived.

The run-of-river operation and minimum flow requirement minimize Project impacts on water quality. 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 during the previous LIHI certification period.

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 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 bypass and downstream zones.

¹ https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=01183610

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 coldwater and warmwater fish species. Diadromous species that may occur at the Project include sea lamprey, American eel, American shad, Atlantic salmon, and river herring. The Atlantic salmon restoration program for the Connecticut River basin ended in 2013 but a very small number of salmon still return to the Connecticut River most years based on data from Holyoke, although none were counted there in 2020. Migratory species that remain in freshwater (potamodromous species) that may occur at the Project include smallmouth bass, white sucker, carp, and trout species.

There are no dams on the Westfield River downstream of the West Springfield dam and similarly no dams on the Connecticut River downstream of its confluence with the Westfield River. Upstream passage facilities have been in place since 1996 under license Articles 406 and 407 and the MoA. Facilities include a Denil style fish ladder near the north abutment (see Figure 4) and a former fish trap with a sorting and holding facility at the upstream end of the ladder previously used for the Atlantic salmon restoration program. Tailrace fish screens consist of bar racks with 3/4 inch spacing prevent upstream migrants from entering the tailrace area.

Channel modifications including Jersey barriers, sandbags and rock debris, help improve flow conditions in the north channel of the bypass reach at the immediate area of confluence with the tailrace to optimize conditions for zone of passage for upstream migrating fish. In order to comply with the FWS requirement for zones of passage to be 2 feet deep and 2 to 3 feet wide, spur dikes were added in the channel to achieve an adequate zone depth along with the minimum flow regime with sufficient velocity to assist fish in moving upstream or downstream through the bypass reach.

The FERC-approved Fish Passage Evaluation Plan required by Article 407 establishes that evaluation of the passage facilities would be based on visual observation by the licensee, FWS, and MA DFW during the migration season. MA DFW monitors, counts, and conducts the trap and truck operation under the MoA terms. In 2020, MA DFW installed a video system to record fish traveling upriver. As fish exit the ladder, they pass an underwater window and are caught on camera. Fishways are operated from April 1 through July 15 and from September 1 through October 31 each year.

CRC provided a link (no longer active)² to a 2019 news report of a fire and vandalism at the Project and inquired about the current status of fishway operation. LIHI staff was aware of the fire, and the Applicant provided this additional information: In 2019, the fish facilities were

² A currently active link to information can be found here https://www.westernmassnews.com/news/reward-offered-following-arson-vandalism-at-west-springfield-dam/article_9a942aac-c364-11e9-a734-1fdfa24c0d9c.html

vandalized and the shed containing the chilled water tanks used to hold salmon trapped at the head of the ladder for trucking to the MA DFW hatchery, was completely destroyed along with all its contents. The underground fish viewing and counting chamber was broken into and vandalized but not destroyed. Since the salmon restoration program had been abandoned, there was no need to replace the equipment lost in the shed fire. Viewing and counting fish migrating through the ladder has been semi-automated with installation of the video camera.

An upstream eelway was constructed in 2001 and was reconstructed in 2013 after being destroyed by high water. It includes an inclined ramp and holding tank with a water supply siphon feeding the tank; however, the facility has not been effective at passing eels. The Applicant informed MA DFW by email dated November 24, 2020 that it had conversations with Alden Labs about performing the work necessary to design and site effective upstream eel passage. However, prior to any eel migration study, deterioration of the dam and spillway crest must be repaired so that accurate flow patterns are established. The Applicant expects that an eel migration study will be conducted in 2023 after completion of the dam work, and effective eel passage will be installed in 2024 and operational by 2025. Additionally, if the study finds that interim trap and transport facilities would greatly enhance passage, such facilities will be temporarily installed until permanent facilities are completed. MA DFW informed the Applicant that this schedule for installing permanent effective eel passage is acceptable (see Appendix A of the application).

Based on my review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Upstream Fish Passage criterion. However, because the upstream eel passage facilities are not operating effectively yet, a condition is warranted (see Section IX).

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 correctly selected Standard D-2, Agency Recommendation for the Impoundment and bypass zones and Standard D-1, Not Applicable/De Minimis Effect for the downstream reach zone.

As noted previously in Criterion C - Upstream Fish Passage, diadromous species that may occur at the Project include sea lamprey, American eel, American shad, Atlantic salmon, and river herring and migratory species that remain in freshwater (potamodromous species) that may occur

at the Project include smallmouth bass, white sucker, carp, and brook, brown, and rainbow trout. resident species include common shiner, spottail shiner, brown bullhead, chain pickerel, rock bass, pumpkinseed. Additional resident species that may occur in the Project area include common shiner, creek chubsucker, fall fish, golden shiner, longnose dace, blacknose dace, red breast sunfish, slimy sculpin, tessellated darter, and yellow perch.³ MA DFW stocks brown and rainbow trout both upstream and downstream of the dam. All upstream dams except for the Army Corps of Engineer's Knightville Dam (a flood control dam) have downstream passage. Additionally, because the downstream Enfield Dam on the Connecticut River is breached, the West Springfield dam is the last dam on the Westfield River between downstream migrating fish and the Atlantic Ocean.

Downstream passage facilities were installed per license articles 405, 407 and the MoA. Passage is afforded via the spillway as well as through the downstream bypass flume that releases fish from the power canal intake into the bypass reach. The Project provides minimum flows into the 0.57-mile-long bypass reach of 85 cfs from April 1 through July 15 and a 125 cfs flow from September 1 through October 31. Twenty-five cfs is released through the downstream bypass flume. These minimum flows facilitate downstream passage at the Project based on the IFIM study, as noted above and effectiveness testing was conducted at the time of construction.

Fish protection in the form of entrainment exclusion is afforded via the permanent 1-inch trash rack at the head of the power canal as well as the seasonal installation of ¾-inch exclusion racks from approximately April 1 to ice-in each year. Trashrack spacing this small will exclude all but the smallest fish (minnows and juvenile of carp and game species). Regarding smaller fishes that may be entrained, turbine mortality via blade strikes is expected to be low as the small size of entrained fish should allow them to avoid blade strikes.

Standard D-1 is appropriate for the Downstream Reach Zones because once in this zone there are no Project-related barriers to further downstream movement.

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. However, I am recommending that Condition 1 in the current LIHI Certificate be extended into the next LIHI term with minor modifications (see Section IX).

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.

³ http://www.pvpc.org/sites/default/files/wap_final_small.pdf

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 10 acres. The land around the impoundment is heavily vegetated while the land along the power canal and powerhouse is developed with some residential housing and mill buildings. The island is vegetated with trees including white pine, oak, and locust as well as scrub/shrub and wetland areas along the south shoreline. There are no critical habitats for plants or wildlife, and there are no lands of special ecological significance.

The Project is not required to have, nor does it have a shoreline management or similar plan. The run-of-river operations of the Project minimize the potential for the Project to negatively affect the shoreline.

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

Based on my review of the application, supporting documentation, and publicly available information, the Project's operations sufficiently protect shoreline and watershed lands. 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 selected Standard F-3, Recovery Planning and Action for all Zones with a note that Standard F-1, Not Applicable/De Minimis Effect could also apply. However, this review finds that Standard F-2, Finding of No Negative Effect is more appropriate for all Zones.

A FWS IPaC report generated by the Applicant, included the federally-threatened Northern long-eared bat. There is no critical habitat for this species. The Applicant states that it does not have a need to cut trees at the Project and should the need arise it would only cut trees during the allowable period as prescribed by the FWS 4(d) rule.

Based on an online data check at check via the Massachusetts Oliver mapping tool and a review of the Massachusetts BioMap2 report for West Springfield conducted by the Applicant, the Westfield River is part of the Connecticut River Core Habitat and along with adjacent uplands supports 24 rare and uncommon species. State-listed species that may occur in the Core Habitat area include the bald eagle (threatened), three species of dragonflies – the endangered

rapids clubtail, and the threatened riffle snaketail, and skillet clubtail, and four species of plants including the endangered great blue lobelia, many-fruited false loosestrife, and narrow-leaved spring beauty, and the threatened fen cuckoo flower. The lack of tree cutting minimizes Project impacts to bald eagles while the run-of-river operations and minimum flows minimize Project impacts on water quantity for dragonflies during their egg and nymph life stages. The Applicant states that there is no vegetation management conducted on Project lands that would impact the state listed plant species, if present.

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

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.

There is no cultural resources or historic properties management plan for the Project. License Article 410 requires consultation with the Massachusetts State Historic Preservation Office (SHPO) if any previously unknown archaeological or historic resources are discovered and preparation at that time, if needed, of a cultural resources management plan to evaluate their significance and avoid or mitigate impacts. To date, no such discoveries have been made and no SHPO consultation has been needed.

At the time of the 1994 relicensing, the SHPO commented that the papermill complex of which the powerhouse and power canal is a part was eligible for listing on the National Register of Historic Places, however the complex has not been listed since that time.

A review of the National Register of Historic Places database found two registered sites within the city of West Springfield, but neither are 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 downstream zone and Standard H-3, Assured Accessibility for the impoundment and bypass reach zones. This review finds that Standard H-1, Not Applicable/De Minimis Effect is more appropriate for the impoundment and bypass reach zones since there is no safe access available, discussed below.

The Project does not have a formal recreation plan but License Article 411 required enhancements to recreational amenities including a downstream parking area, an ADA-compliant trail, a canoe launch and fishing access site, and signage. This recreation area is located approximately 1,000 feet downstream of the tailrace along the northern shore. The parking area is on the east side of Bridge Street near the railroad crossing and has a capacity of approximately 10 cars.

CRC commented on the recreation facility, stating that as of September 2019 the area was overgrown, signage was dilapidated, and there was no obvious trail even if ADA compliant. The Applicant provided additional information stating that as of April 2021, they were working with a landscape company to rebuild the area including improving ADA access. As part of that effort the Applicant contacted the local conservation commission, had a meeting with the City recreation department, police, fire, and the mayor's office. All of whom expressed concerns over public use of that area, it being perennial problem for the City since it is an attractive nuisance and has become a place where illegal activities occur. The Applicant reported that they will engage with the City on finding a potential alternate site. This review notes that if that occurs, the FERC license will need to be amended.

License article 412 required an agreement for the owner at the time to provide \$10,000 to the Town of West Springfield for the Town to design and construct an impoundment canoe and fishing access trail in Mittineague Park or if a financial agreement could not be reached, that the owner would be required to develop a plan for an impoundment canoe and fishing access at an alternative site, in accordance with articles 408 and 409 which required habitat and wetland delineation surveys at any proposed alternative site and consult with resource agencies on an alternative plan. The agreement was executed in 1995 and filed with FERC which subsequently approved that plan and removed articles 408 and 409 from the license in an order dated October 25, 1995⁴.

⁴ <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=0014BB30-66E2-5005-8110-C31FAFC91712>

CRC commented that the final outcome of the impoundment access project is uncertain and noted that the Project lacks a canoe portage around the dam. LIHI staff researched the matter with the following result:

The 1995 FERC order indicated that article 412 had been satisfied. The order referenced the agreement’s terms and conditions including stipulations that the Town would accept funds from the licensee and the Town would design and construct the facility, and that “the licensee will not be responsible for satisfactory completion of the project, the adequacy of the funds to complete the project, or for any ongoing operation or maintenance of the project”. The agreement itself stipulated that the date of project commencement was up to the Town’s discretion and the agreement would be terminated upon the earlier of a) expenditure of the \$10,000; or b) completion of the project. Funds were transferred to the Town which awarded a contract in 1998 to an engineering firm for design of picnic areas, parking, shelters, and a canoe ramp at Mittineague in the amount of \$36,500, and documentation was filed with FERC in 1999⁵.

According to the Town’s 2009 Master Plan⁶ canoe access to the Westfield River is provided at the former Big Y on Route 20 as well as at the DSI (West Springfield) dam. It is not clear where the Route 20 site is located but the only place where Route 20 is close to the river is about 3.5 river miles upstream of Mittineague Park and upstream of the impoundment. The plan notes that river access along the impoundment is restricted by the rail lines that border the park to the north (the south side of the Westfield River is located in Agawam MA). The Town’s 2015 Open Space and Recreation Plan⁷ references a need to establish a crossing over the railroad or to pursue additional canoe access points within the park. The plan also noted that at public meetings held to discuss the Open Space Plan, some members of the public expressed a need for more locations along the Westfield River to put in and take out a kayak or canoe. Several locations along Westfield Street (Route 20) were mentioned, as well as “improving the existing access” to the river in Mittineague Park.

Therefore, it appears from available information that the original plan was never implemented but the funds provided by the former owner were spent as part of the design contract, thus terminating the agreement required under license article 412. It also appears that the Town provides some kind of river access from Mittineague Park. Boating access is also provided via Robinson State Park (with an entrance fee) on the south side of the impoundment in Agawam.

There are steep banks on both sides of the impoundment and access closer to the dam on the north side is severely constrained due to the railroad and power canal providing no safe portage

⁵ https://elibrary.ferc.gov/eLibrary/filelist?accession_number=19990312-0226&optimized=false

⁶ <https://www.townofwestspringfield.org/home/showdocument?id=1532>

⁷ <https://www.townofwestspringfield.org/home/showdocument?id=1534>

route along that side. It would also be unsafe for boaters to exit the impoundment from the south side at the small area of Project land that provides access to the dam due to the dam's proximity. The Applicant reported that there is no safe place for a take-out near the dam. This review finds that it might be possible to create a take-out in Robinson State Park (although it is still quite steep) at one of the existing trails that extend from or are adjacent to the impoundment. Some of these trails lead to public roadways that, in turn, lead to the bridge below the tailrace and the existing Project put-in on the north side of the river just below the bridge. According to the Applicant, any such a portage would be at least 4,000 feet long.

A review of the FERC eLibrary indicated that no issues related to recreation have occurred during the current LIHI term.

Based on my review of the application, supporting documentation, and publicly available information, the Project continues to satisfy the Recreational Resources criterion. However, I recommend a condition to ensure that the Project's required recreation facilities are improved, or an alternate site found if feasible, and that any required FERC approvals are obtained. I also recommend that the Applicant engage with Robinson State Park staff to discuss the feasibility of providing a take-out and portage route through the park.

IX. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION

Based on my review, I believe that the Project continues to meet the requirements of Low Impact Certification and recommend it be recertified for a five-year period. Because the existing certification Condition 1 pertains to the annual downstream fish passage period, I am recommending that this condition be carried over during the new certification period. Additionally, because new, effective upstream eel passage facilities are to be completed during the next certification period, I am recommending the following Conditions also be included during the next certification period:

Condition 1. During downstream fish passage periods, the fish exclusion racks/screens shall be maintained at the head of the power canal. The facility Owner shall continue to coordinate with MA DFW regarding the installation, removal, and maintenance of them. In its annual compliance statements, the Owner shall confirm that such agency coordination has occurred and report on any issues or concerns raised by MA DFW or USFWS with a summary of the corrective actions taken.

Condition 2. In its annual compliance statements, the facility Owner shall include a summary of any progress made towards installation of new upstream eel passage facilities, including but not limited to dam repairs so that permanent flow patterns are established, eel passage studies,

temporary eel passage facilities, permanent eel passage facilities, or discussions between the Owner and MA DFW regarding upstream eel passage.

Condition 3.

a) The facility Owner shall consult with the City of West Springfield to resolve concerns related to the FERC-required recreation area or an alternate site if possible; and shall obtain any FERC-required approvals or license amendments needed. Status updates shall be provided to LIHI in annual compliance submittals.

b) Within 180 days of the final recertification notice, the facility Owner shall consult with Robinson State Park management on the feasibility of adapting or extending an existing trail to provide a safe take-out and portage route through the park. The results of discussions shall be summarized in annual compliance statements until a final feasibility determination is made.