United States Department of the Interior

FISH AND WILDLIFE SERVICE

Connecticut River Fish and Wildlife Conservation Office
103 East Plumtree Road
Sunderland, MA 01375

April 3, 2026

Maryalice Fisher
Certification Program Director
Low Impact Hydropower Institute
68 Harrison Ave Ste 605 PMB 113938
Boston, MA
02111-1929

Dear Ms. Fisher;

I was contacted in an email from you on March 9, 2026 regarding the Low Hydro Impact Institute's (LIHI) application by the Chicopee Falls Project (P-6222) owners, on the Chicopee River, Massachusetts. I convened an ad hoc meeting of the Technical Committee of the Connecticut River Migratory Fish Restoration Cooperative where we discussed this email request and the broader LIHI program. My responses, on behalf of the U.S. Fish and Wildlife Service (USFWS), are informed by the broader group discussion of basin resource agency members and consensus, that are provided here.

1) ***What is the status of American Eel in the river? Are you aware of eel populations there? There have been prior anecdotal reports. If so, can you quantify the populations?***

Response – American Eel are documented throughout the Chicopee River basin in areas upstream of the Chicopee Falls Project. The Connecticut River Atlantic Salmon (CRASC) Connecticut River American Eel Management Plan (2023), reports data on these occurrences from the Massachusetts Division of Fisheries and Wildlife (MADFW). A more recent data gathering effort has been applied to a Geographic Information System project, by my office, that utilizes electrofishing detections of American Eel (Figure 1). It should be noted that the absence of sample evidence from electrofishing should not be taken as proof of absence of eel. This is due to the fact detections are based on daytime electrofishing and eel are known to be nocturnal and seek dense cover to shelter in during daytime. The survey data cannot be used to quantify the population based on the study design(s) of those efforts. However, the data do support a fairly extensive range distribution in spite of there being no dedicated upstream eel passage on dams in this system, currently.

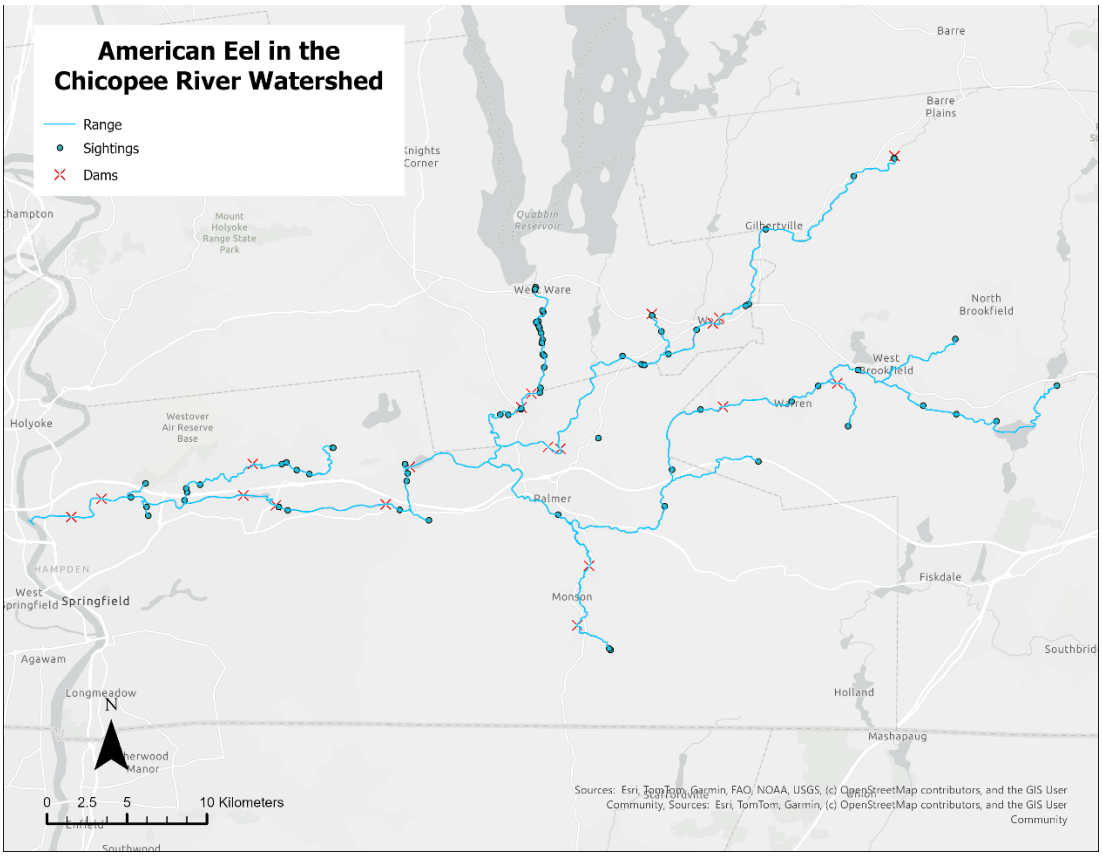

Figure 1. The range of American Eel in the Chicopee River Basin (MA), based on electrofishing samples from 1984 to 2024, from MADFW (USFWS draft GIS).

2) What is the Current agency perspective on the need for upstream American eel or anadromous fish passage in the river?

Response – The USFWS and Massachusetts Division of Fisheries and Wildlife retain authority, per DOI submitted comments, 30(c) mandatory terms and conditions, to require fish passage at the Chicopee Falls Project and the first dam (Dwight) located downstream, through the original FERC exemption licensing process of these projects. At this time, the USFWS and our partner agencies have not required upstream and downstream measures for diadromous species due to competing, higher priority projects and limited staff resources. This should not be taken to mean there are no concerns regarding fish passage and fish passage potential in this system. The LIHI certification presents an opportunity for the agencies to identify fish species impacts of hydro power facilities that would need to be addressed in order for the agencies to concur with a "low impact" designation. The LIHI designation affords owner/operators access to substantially increased revenue for power generations as well as overall value of the project on the market if they are meeting criteria defined by LIHI.

According to the LIHI website, certification is based on the following:

> *Low Impact Certification means that the hydropower facility has been found by the Institute to meet or exceed the Institute's Certification Criteria which address eight key areas: flow regimes, water quality, upstream fish passage, downstream fish passage, shorelines and watershed, threatened and endangered species, cultural and historic resources, and recreational, public and traditional cultural access. Certification is designed to provide consumers with assurance that a facility has avoided or reduced their environmental impacts*

pursuant to the Low Impact Hydropower Institute's criteria. Once certified, the owner or operator can market the power from the facility to consumers as produced by a LIHI Certified Facility. Certification from the Institute may also qualify the power produced for other "green" energy certification programs.

The CRASC Connecticut River American Eel Management Plan (2023), accepted by the FERC as a Comprehensive Management Plan (meaning it is to be considered in all FERC related proceedings), has a number of important items relevant to the question of American Eel in the Connecticut River basin, including the Chicopee River. These include the following excerpts from the Plan (*not a complete list of all objectives or strategies*):

GOALS

The goals of this management plan are to protect, conserve, and enhance American Eel populations for their intrinsic ecological and cultural values, and for sustainable economic, recreational public use, and scientific, and educational values.

OBJECTIVES

POPULATION

1.1 Increase the population size (abundance in all habitats) and expand distribution throughout the basin, including mixed sizes, ages, and sex ratios. In support of the American Eel stock.

1.2 Establish safe, timely, and effective upstream and downstream fish passage performance criteria for all life stages of American Eel.

1.2.1 Achieve upstream passage performance of 95% (internal structure passage) based upon fish present at the entrance of the fishway (or dedicated eelway) for all size classes present.

1.2.2 Achieve downstream passage performance of no more than 5% through project mortality and debilitating injury that needs to be assessed on project level basis, and a time to pass of 24 hours or less for fish actively migrating within 1 km of a project facility.

1.2.3 Address project-specific fishway attraction, entry, internal passage efficiency, and delay as suitable information is available.

1.2.4 Address project specific downstream bypass route attraction, entry, passage efficiency, and delay, as suitable information is available.

STRATEGIES

1.1 Where dams are not removed increase abundance throughout the historical range by restoring access to upstream habitat with passage facilities (refer to Distribution, Demographics and Monitoring section; Appendix D).

1.1.1 Improve access to historical rearing habitats by requiring safe, timely, and effective (consistent with Objective 1.2) upstream fish passage at known barriers.

1.1.2 Eelways should be constructed at known aggregation areas of juvenile eels. More than one eelway may be required, depending on project configuration.

1.1.3 Implement appropriate operational periods to fully coincide with passage season.

1.1.4 Conduct testing and compliance checks to ensure fish passage provisions are effective and operating as designed for the defined periods of operations.

1.1.5 Require additional protective measures at hydropower facilities including operational changes, if warranted.

1.1.6 Require eel passage provisions at non-hydropower dams and other barriers through state-issued permits, including flows necessary to promote outmigration.

1.1.7 Increase survival and fitness of out-migrating silver eels by requiring safe, timely, and effective downstream fish passage at known barriers where eel occur upstream.

3) ***What about any need for downstream passage of eels, is there enough of a population to warrant passage now or in the future?***

Response - Based on the known presence of American Eel throughout the upper Chicopee River basin, that reach upstream habitats, downstream fish passage measures and protections are recommended for any project seeking or having "low hydropower impact" designation, based on the LIHI criteria**.** The LIHI review and criteria should include recognition of the Connecticut River American Eel Management Plan (2023), as is the case with the FERC and its proceedings with eel passage and protections. Downstream passage recommendations should be safe, timely and effective, per Section 18 of Federal Power Act as amended. The Connecticut River Plan importantly defines what is safe, timely and effective for American Eel in that plan:

> 1.2.2 Achieve downstream passage performance of no more than 5% through project mortality and debilitating injury that needs to be assessed on project level basis, and a time to pass of 24 hours or less for fish actively migrating within 1 km of a project facility.

The LIHI Low Impact Hydropower Certification Handbook (2nd edition) March 2025, in Section 3. Certification Criteria, states that the eight listed criteria and supporting goal statements, "*all of which must be met for a hydropower facility to qualify as Low Impact Certified*": this includes #4 Downstream fish passage. Details of this are found in:

> ***3.2.4 Criterion D - Downstream Fish Passage***
> ***Goal:*** The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, including resident potamodromous fish, the facility minimizes loss of fish from impoundments and upstream river reaches affected by facility operations. Migratory species can successfully complete their life cycles and maintain healthy populations in the areas affected by the facility.
> ***Introduction to Standards:*** The applicant shall list all fish species (riverine, anadromous, catadromous, and potamodromous) that occur now or have occurred historically in the area affected by the facility. To pass the downstream fish passage criterion, the applicant must demonstrate compliance with one of the following standards (D-1 through D-4). Note that the downstream reach (but not a bypassed reach) typically qualifies for Standard D-1 unless there are additional facility-related barriers to downstream passage once fish have passed below the dam and/or bypassed reach.

The Service recommends the project applicant be held to achieve **Standard D-2**. "***Resource Agency and Tribal Government Recommendations:*** *The facility is in compliance with science-based resource agency and, if applicable, science-based or indigenous knowledge-based tribal government recommendations for downstream fish passage and/or fish protection in the applicable Zone of Effect and which may include provisions for appropriate monitoring and effectiveness determinations; …*" .

The LIHI should seek to meet the FERC definition of fish passage. USFWS recommendations for providing safe, effective, and timely fish passage in situations such as the Chicopee River, for outmigrating American Eel include following downstream guidance as described in the USFWS' Fish Passage Engineering Design Criteria, Region 5 (2019). Standard USFWS passage measures used to reduce impacts (i.e. "low impact") to outmigrating adult eel include the following:

- ¾ inch clear space, trash rack spacing, full depth, all turbine intakes
- Maximum velocities at racks not to exceed 2 fps

- Low-level entrances are recommended when providing safe downstream passage for adult eels, otherwise vertical guidance (e.g., ramp) towards a surface bypass would be helpful
- Bypass conduit, to move eel from in front of turbine racks to a safe depositional/release area, requiring sufficient depth (depending on volume and height of bypass flow) and egress route, to continue downstream migration.
- seasonally defined period of installs and/or operations from August 15 to November 15 in Connecticut River basin

If you have any questions about this letter, please contact me. Thank you for reaching out and asking those questions.

Sincerely,

KENNETH SPRANKLE Digitally signed by KENNETH SPRANKLE
Date: 2026.04.03 10:33:18 -04'00'

Kenneth Sprankle
Project Leader, Connecticut River Fish and Wildlife Conservation Office
Email: Ken_sprankle@fws.gov
Phone: 413-548-9138

No hard copy will be mailed, electronic copy only.

c:
Thornton Ritz, MADFW
Ben German, NOAA
Jessica Pica, USFWS
Audrey Mayer, USFWS
Connecticut River Migratory Fish Restoration Cooperative members