

ENVIRONMENTAL ASSESSMENT FOR THE  
MANHAN RIVER DAM FISH PASSAGE PROJECT  
EASTHAMPTON, MASSACHUSETTS

**RESPONSE TO COMMENTS RECEIVED ON THE PROPOSED ACTION**

INTRODUCTION AND SUMMARY

The Environmental Assessment for the proposed Manhan River Dam Fish Passage Project was provided to the public and other agencies for comment from January 8, 2010 through February 7, 2010. As part of the public involvement process, the City of Easthampton published a Legal Notice "U.S. Fish and Wildlife Service Public Notice" in the Daily Hampshire Gazette on January 8, 2010.

A total of four comments were received during the public comment period (all by electronic message). Table 1 lists each respondent, their affiliation, the date the comment was sent, and the identification number that was assigned to each letter for tracking. This document responds to the comments received.

Table 1. Agencies, Individuals, and Organizations Providing Comments on the Environmental Assessment for the Manhan River Dam Fish Passage Project

Commenter	Date Comment Received	Letter Number
Individual	January 11, 2010	1
Individual	January 12, 2010	2
Individual	January 18, 2010	3
Individual	February 2, 2010	4

COMMENTS AND RESPONSES

Each comment received has been reviewed and analyzed. The full text of comments can be found in the project record.

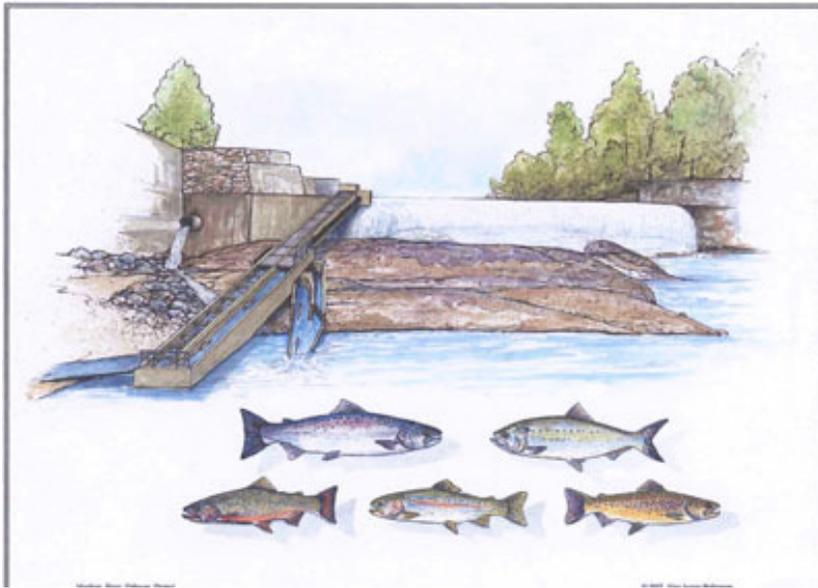
**Proposed Action**

Three respondents expressed support for the preferred alternative of constructing a Denil fish ladder at the Manhan River Dam.

**Aesthetics**

One respondent expressed concern that the structure not detract from the aesthetics of the site, and that the site be suitably revegetated after construction of the ladder.

*Response:* While there are no engineer's visual renderings of what the ladder will look like at this time, there is an artist rendering that was done a number of years ago:



Artist Alan James Robinson

However, this is a conceptual drawing, and was not meant to accurately represent the engineering design plans.

As noted in the Environmental Assessment, any previously vegetated areas disrupted during construction will be replanted post-construction (other than those within the direct footprint of the ladder).

### **Public Access**

One respondent expressed concern that the project would limit public access.

*Response:* Under the preferred alternative, the intent is to attempt to include two points of public access; one at the upstream end of the fish ladder and one downstream of the Waterworks building. The upstream access would allow people to view fish exiting the ladder, and the downstream access would consist of a footpath to the river for portage or viewing purposes.

### **Alternative Ladder Layouts**

One respondent wanted to know what other Denil layout alternatives were considered.

*Response:* The other alternatives that were considered before deciding on the preferred layout include locating the ladder on the opposite side of the river, and using a smaller Alaska steppass design (on either bank). These other layouts/designs had disadvantages over the preferred alternative, including being less well protected from flood flows, being located away from attraction water, and, in the case of steppasses, potentially causing fall-back of American shad.

### **Waterworks Redevelopment**

One respondent expressed concern that future work at the Waterworks building might impact fish use of the ladder.

*Response:* So long as any work done to the Waterworks building does not disrupt operation of the ladder, the work would not be expected to impact fish using the Denil ladder.

### **Hydroelectric Power**

One respondent inquired whether developing hydropower at the site had been considered in the fish passage design.

*Response:* The fish ladder design did not consider future use of the site for hydropower. The City has agreed that it will not modify the dam or its site in any way that would significantly impair the operation of the fish ladder, so if hydropower is proposed there in the future, it would have to be designed to work with the fish passage facilities.

### **Wildlife**

One respondent requested the source of the determination that there were no rare species within the project area.

*Response:* As noted in the Environmental Assessment, the State of Massachusetts Natural Heritage and Endangered Species Program Atlas, 13<sup>th</sup> Edition (effective October 1, 2008) and Mass GIS online mapping (data updated October 2008) were consulted to determine the presence of any state listed species within the project area. According to these sources, no proposed work will occur within designated Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife. The respondent noted that a variety of wildlife had been observed in the area, but none of the species the respondent mentioned are federally or state listed as threatened or endangered, so would not trigger changes to the existing NHESP map (the bald eagle was delisted in June of 2007). Figure 1 below shows the results of the MassGIS online mapper.

### **Effectiveness of Denil Ladders**

One respondent expressed concern regarding the effectiveness of concrete ladders at passing fish, and requested additional design and effectiveness information. This respondent also asked if it would be possible to install natural substrate inside the ladder.

*Response:* While there are examples of ladders that have passage issues, there also are a number of examples of ladders that pass many thousands of fish each year. For example, Denil ladders located at the first dams on both the Westfield River in Massachusetts and the Pawcatuck River in Rhode Island have passed thousands of fish, with the Pawcatuck ladder passing over 20 different species of fish. Another Denil ladder at the Leesville dam on the Salmon River in Connecticut has passed thousands of fish, including white sucker, sea lamprey

and brown trout. In Maine, a Denil ladder on the Saco River at the Cataract Dam has passed as many as 25,000 river herring and hundreds of shad in a season.

In addition, a vertical slot fishway (which is a different design than a Denil, but is constructed out of concrete like most Denils) at the Brunswick Dam on the Androscoggin River in Maine has passed tens of thousands of river herring, and another vertical slot at the Ellsworth Dam on the Union River has passed hundreds of thousands of river herring.

Fish ladders, when designed, constructed and operated properly, have the ability to effectively pass a variety of fish species, including Atlantic salmon, American shad, river herring and sea lamprey - all target species for the Manhan River.

It is not possible to install natural substrate within a Denil ladder, as it would change the internal hydraulics of the ladder. There are some bypass channel fishways that do have natural substrate, but those have a very low gradient, and thus require a lot of land which is not available at the Manhan dam. With technical fishways, the intent is to have the fish pass through it as quickly as possible so that they can access suitable habitat upstream of the obstruction.

**Figure 1.** Map of Priority Habitat & Estimated Habitat in Easthampton, Massachusetts ([http://maps.massgis.state.ma.us/PRI\\_EST\\_HAB\\_TEST/viewer.htm](http://maps.massgis.state.ma.us/PRI_EST_HAB_TEST/viewer.htm))

