PROJECT IDEAS FOR THE INDUSTRIPLEX NRD RESTORATION
Herring Enhancement Projects: December 16, 2018
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Horn Pond Herring Passage Improvements

This project would make fish passage improvements to Woburn's Horn Pond at the Scalley Dam. This year, the fish ladder at Winchester's Center Falls Dam allowed many herring to pass up upstream. The Mystic River Watershed Association estimated that 25,000 herring made it into Horn Pond using the rock spillway located to the right (east) of Scalley Dam.

The spillway, however, is steep and does not appear to be designed for fish passage. At times, many herring were seen at the bottom of Scalley Dam, apparently unable to ascend the rock spillway. Improvements to the spillway or, preferably, the construction of a designed and engineered fish passage would allow many more herring to reach Horn Pond. One possibility is to locate the fish passage to the left (west) of Scalley Dam. That location would allow the public to view the migrating fish from the nearby lawn area adjacent to the parking lot. This would be especially desirable because the herring are not easily seen at the Mystic Lakes or the Winchester Center Falls Dams.

Matt Devine, a PhD student studying herring production in New England, collected many juvenile herring in Horn Pond during a regional survey (summer of 2018), documenting successful spawning and reproduction in Horn Pond immediately following fish passage initiatives. Matt has stated to me that juvenile production in Horn Pond was high relative to other study sites and suggests that Horn Pond is suitable habitat for river herring.

The Mystic River herring run is one of the largest in the Commonwealth, and an improved Scalley Dam fish passage would provide even greater habitat for herring reproduction and species growth.

Installation of Educational Signage Regarding the Herring Migration

This project would be for the design, approval, and installation of informational signage regarding the herring migration at the Mystic Lakes Dam, Winchester Center Falls Dam, and Scalley Dam. The Mystic herring migration occurs in a densely populated area. Accordingly, there is a great potential for public education about this migration, which is relatively new to the area. Many people visit the Mystic Lakes Dam, but the fish ladder is hidden from view. A sign there would educate people about the herring migration. At Winchester Center and at Scalley Dam, there is a great deal of foot traffic, so many people would be able to view the signs and the fish ladders.

A group of Winchester residents has been working to design a sign and have discussed the idea of a sign in Winchester with the Winchester Conservation Commission, the Town's Design Review Committee, and with the former Town Manager.

The signage would be a relatively low cost way to educate the public about the river, the herring migration, and the greater ecosystem.

Improvements to the Mystic Lakes Dam to Address Excessive Herring Mortality

This project would evaluate and implement improvements to the Mystic Lakes Dam in Medford, operated by the DCR, to address the excessive herring mortality that occurs during the downstream herring migration. Each spring, on the spillway of the Mystic Lakes Dam, hundreds of seagulls devour the herring as they are exposed in the very shallow water of the spillway. Many thousands of herring are lost, equaling the total number of herring that migrate in many other rivers.

Both the Commonwealth's Division of Marine Fisheries (DMF) and the Mystic River Watershed Association consider this to be a problem worth addressing. I have attached two letters that the DMF has written to the DCR about this issue.

While the design of the dam was meant to minimize fish mortality, there are now six years of observation showing that the design of the dam insufficiently addresses this issue. As a temporary measure the DCR has been placing sandbags on the spillway to create a deeper channel for the herring, but a permanent solution is needed. An evaluation of permanent measures to address the excessive mortality is needed. There may be low-tech and low-cost solutions, and the DMF has suggested possible remedies. Brad Chase and Ben Gahagan at DMF may be able to provide a cost estimate for possible solutions.

Fish Passage Improvements Survey

This project would be to survey Horn Pond Brook and the Aberjona River for obstructions to fish passage and evaluate whether and how those obstructions could be remedied. As for Horn Pond Brook, although fish have arrived at Horn Pond, there are at least two structures that may be an impediment, especially during low flows. For example, there is a concrete structure, possibly a water or sewer main, located a few hundred yards upstream of the Town of Winchester's DPW yard. There is also another structure downstream of the Stop and Shop in the waterway that connects Wedge Pond to the Aberjona River. If these structures are determined to be impediments, there may be minor modifications that could be made to these structures, such as cutting a low flow channel in the concrete structure in Horn Pond Brook.

Herring have also been observed in the Aberjona upstream of the culverts in Skillings field, by the Winchester High School. This portion of the Aberjona has several possible obstructions, especially in Davidson Park, and there is a small water fall located just upstream of the Washington Street bridge, which appears to be a significant obstruction.

The evaluation and, if necessary, removal or remediation of these obstacles may help further fish passage and provide additional upstream spawning habitat.