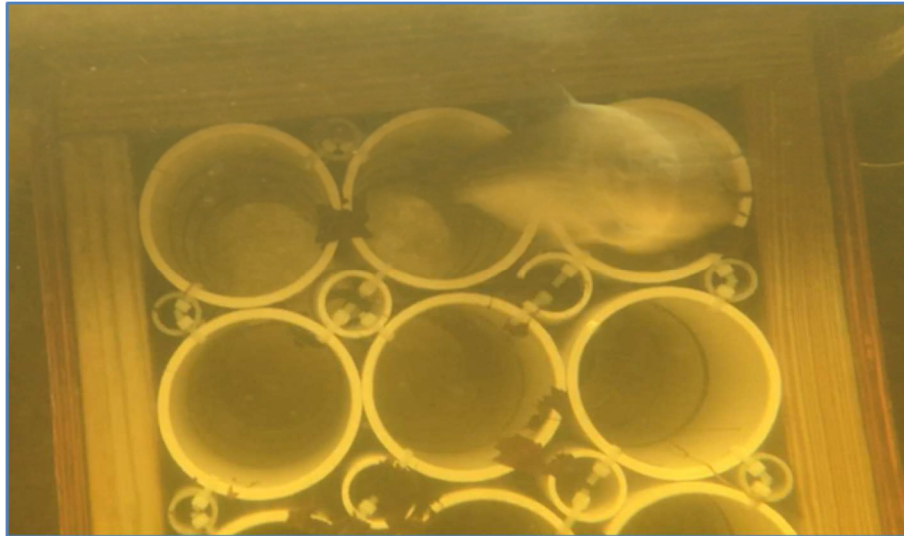




Washington County Council of Governments Downeast Sustainability River Herring Restoration Project



Alewife emerging through fish counter, Pennamaquan River (Pembroke, Maine) Spring 2018

"We appreciate the on-going efforts of Maine Sea Grant, the Department of Marine Resources as well as those of DSF, SCEC and WCCOG to make progress on the old road infrastructure that is blocking fish passage on the Pennamaquan and other Cobscook Bay tributaries." Milan Jamieson Pembroke Selectman 2018

PARTNERS

Washington County Council of Governments, Downeast Salmon Federation, Sunrise County Economic Council

PROJECT DESCRIPTION (completed September 2018)

This project is part of a years-long effort to restore commercial river herring fisheries to the greater Cobscook Bay ecosystem specifically, on the Pennamaquan River in Pembroke and other nearby streams. The project has particular benefit to two small target streams and supports a larger project to restore diadromous fish within the Orange River watershed. The project also develops a model to estimate productive capacity for river herring in the larger region of Washington County after restoration efforts. It then evaluates the development of markets to increase human consumption of river herring.

APPROACH

Alewives once made a significant contribution to Downeast Maine's economy. Due to substantial population declines, today the commercial fishery is a ghost of its historic size. The project partners launched a collaborative initiative to restore commercial river herring fisheries in the East Machias River, Orange River and greater Cobscook Bay tributary watersheds. This project supported assessment, design plans, and regulatory permitting to restore the entrance to the fishway over the Pennamaquan Dam on the Pennamaquan River in Pembroke; the purchase of an electronic counter to document fish runs in the Pennamaquan River;

APPROACH

supported coordination with Maine DOT to remove abandoned bridges over Smelt Brook and the Orange River; and allowed the partners to conduct an analysis of the logistical support needed for locally produced river herring (and other fish products such as lobster, crab, and clams) to reach local, regional, and international consumers.

RESULTS

The engineering contractor completed two conceptual drawings to repair the lower fish ladder on the Pennamaquan River and project partners await the outcome of grant requests to initiate construction. The fish counter was purchased and used successfully over two seasons; count data was analyzed and provided to the Department of Marine Resources. We have written permission to remove the debris in the river from abutting landowners to the two bridges that either had or were threatening to collapse into streams blocking fish migration. We have quotes from contractors to remove the debris and anticipate taking it out in 2019 with financial support from USDA-NRCS through their fish passage program. Finally, we completed the Alewife Production and Marketing Study that included a linked spreadsheet model to estimate the productivity of the watersheds in Washington County that could support significant estimate the productive capacity for river herring in the region. The partners also conducted taste tests of smoked alewives to assess consumer acceptance of the taste and texture of the fish and made a preliminary assessment of their willingness to purchase the product. The results from these efforts indicate that there is significant potential to increase the economic impact of the river herring fishery in Washington County, both by increasing the productivity of the region's watersheds and by developing value added products for human consumption.

NEXT STEPS

Currently the value of the river herring fishery in Washington County is constrained both by the lack of habitat for the species and the predominant use of the catch for bait for the lobster fishery. When used as bait, the per pound value of the catch is very low. Driven by higher demand for use as lobster bait, alewife prices have surged to historic highs in recent years with potential volume and price upside for the alewife fishery. Many river systems have underperforming, and in some cases no effective, fish passage. This can significantly limit the productive capacity of the fishery. This is especially true in Washington County where only a few of the watersheds with significant lake acreage have commercial fisheries and several of them have no effective fish passage to large parts of the watershed.

LESSONS LEARNED:

The linked spreadsheet model created by partners in this project estimates the current and potential productive capacity of the eleven watersheds which connect with the ocean in Washington County. The key finding is that the current commercial fisheries are only accessing a very small part of the potential resource. Of the 130,294 lake acres in these watersheds, only 8,241 lakes acres (about 6%) are being accessed by the current commercial fisheries.

APPLICABILITY FOR OTHER MUNICIPALITIES:

We anticipate that the model of potential productive capacity will be maintained, refined, and updated as we gain greater understanding of the productivity potential and include more years of actual harvest data. Project partners are already working toward application of lessons learned in this project to the large and mostly inaccessible (to sea run fish) St Croix watershed in northeastern Washington County.

Recommendations to MCP for follow-up by State agencies to address identified municipal and regional needs and emerging coastal issues

Continuing support for fisheries restoration across multiple small and large river segments through culvert upgrades and fish passage at existing dams and barriers.

For more information

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