

## **FOR IMMEDIATE RELEASE**

### **Bristol Mills Dam Advisory Committee Develops Plan for Feasibility Study**

*Bristol, Maine - January 24, 2017* - The Bristol Mills Dam Advisory Committee and Wright-Pierce Engineering have developed a scope of work for a feasibility study to guide future investments in the Bristol Mills Dam and fishway. The dam, which was built in 1914, is in need of repairs and lacks adequate fish passage for alewives and other native fish species in the Pemaquid River. The major focus of the study is to develop a long term plan for the dam and fishway that are cost effective and low maintenance, enhance fish passage, improve firefighting water supplies, and maintain of upstream water levels and recreational opportunities like the swimming hole. The study is being completed with financial support from The Nature Conservancy.

The feasibility study follows efforts to improve fish passage at the dam. Alewives of the Pemaquid River had long been harvested by people of the Pemaquid Peninsula, but the alewife population has also been marked by long periods of decline, primarily due to construction of dams to power various mills on the River. When dams lack fish passage or passage is inadequate, sea-run fish, like alewife, can rapidly collapse to the point where they no longer return each year from the ocean to seek freshwater spawning habitat. Reports from the 1890s for the Pemaquid River assert that the first prolonged period of decline occurred from the 1830s to sometime in the early 1900s and was due to inadequate passage at a dam that no longer exists. The most recent decline is thought to have started in the 1980's and continues to this day. The Maine Department of Marine Resources (DMR) tried to boost alewife population levels with stocked fish from 1987 to 2012. Were it not for the tireless efforts of local citizens and Fish Committee members, the Pemaquid's alewife run would be far more diminished.

Efforts to understand and restore the Pemaquid's declining alewife run led the Town of Bristol, Pemaquid Watershed Association, Maine Coastal Program and DMR to start a volunteer alewife count at the Bristol Mills Dam. Results from 2013-2016 showed that the number of adult alewives passing the fishway on their spawning run was far less than the large amount of upstream spawning habitat could produce and far less than historical population levels. Assessments of the fishway identified major deficiencies in its performance, leading the Town of Bristol, Wright-Pierce Engineering, and other project partners to complete a new fishway design in 2015 with support from a Maine Coastal Program grant. Shortly after, the dam underwent inspections by Wright-Pierce and was found to be in "fair to poor condition". Building the new fishway and making necessary repairs and modifications to the dam is estimated as potentially costing the town over \$400,000. This short-term estimate does not include the long-term investment needed for ongoing dam and fishway maintenance costs and the cost of a replacement fishway every 40-50 years. The Town of Bristol completed some of the necessary repairs in fall 2016, which Wright-Pierce estimates constitutes about 15% of the work necessary to bring the dam to "satisfactory" condition.

In 2016 the Town applied for a National Oceanographic and Atmospheric Administration (NOAA) Coastal and Marine Habitat Restoration grant to fund construction of the new fishway. Comments received from NOAA indicated the grant was not awarded largely because fishways

are increasingly regarded as less financially and ecologically sustainable than projects that remove barriers altogether, rather than routing fish around the barrier. The reasons why are that fishways 1) require annual financial and manpower obligations for maintenance, 2) require rebuilding or major overhaul in 40-60 years, 3) provide lower passage efficiency for fish compared to natural conditions, 4) do not allow passage of many of Maine's native aquatic species, and 5) do not provide the full spectrum of ecological benefits that a free-flowing river does, including maintenance of water quality and transport of sediment, woody material and nutrients that create and sustain stream habitats. Consequently, the Selectmen decided it was prudent to consider additional options before making a large initial investment to replace the current fishway and repair, upgrade and maintain the dam.

Over the next several months, the Dam Committee and Wright-Pierce will gather information about the physical characteristics of the watershed, fish and wildlife affected by the dam, and water quality. Specific attention will be directed to firefighting water supply needs, recreational opportunities (including the community's swimming hole) and water level maintenance upstream of the dam. The study will inform the development of several alternatives for the dam and fishway and short and long-term costs estimates associated with each alternative. These alternatives will include doing nothing, building the new fishway as designed and completing the necessary dam repairs, and replacing the dam with one or more stone "nature-like" water-level controls designed to maintain water levels within the current range and enhance fish and wildlife passage between critical habitats. Each option will include short and long-term cost and maintenance estimates and impact statements for each of the natural resource and community values under consideration.

The study provides a chance to design alternatives that improve upon the aspects of the dam that are highly valued. At the conclusion of the feasibility study, the Committee will provide the study results to the Town of Bristol Selectmen, which will include a summary of each alternative and its ecological, economic and social values.

During the three meetings to date, the Dam Committee has hosted presentations from members of the fish committee about the history of the alewife run and annual efforts to maintain and enhance the fishway and the run. The US Fish and Wildlife Service also delivered a presentation about the influence of dams on different aspects of river ecology and wildlife.

At the most recent meeting, Wright-Pierce presented preliminary information about the dam's role in controlling upstream water levels. A key finding was that the bedrock ledges and narrows at the stone arch bridge over the Pemaquid River at Benner Road represents a natural water level control which, absent the Bristol Mills Dam, would define the base water level for the upstream watershed. In the absence of the Dam, the water levels in the wetland and Biscay Pond would be lower by 13 inches. Lakes further upstream would see little change in water level as the stream between Biscay and Pemaquid Ponds acts as another natural water level control feature. These findings indicate that nature-like rock weirs (or other nature-like water control structures) could be constructed in the area between the stone arch bridge on the Benner Rd. and the falls below that would maintain water level at its current condition.

Future meetings of the Dam Committee will host presentations about the habitat in the wetland upstream of the dam and its wildlife, native and sea-run fish species in the watershed, water quality in the river and the potential impacts of the dam, perspectives from nearby communities that have recently completed fishway and dam assessments, and the results of the Feasibility Study. The other towns within the Pemaquid watershed (Damariscotta, Nobleboro, Bremen, and Waldoboro), as well as the Pemaquid Watershed Association, have and will continue to be kept informed about the process and are invited to all meetings.

The next meeting of the Bristol Mills Dam Committee is February 28<sup>th</sup>. The Committee meets the 2<sup>nd</sup> and 4<sup>th</sup> Tuesday of every month from 6-8pm at the Bristol Town Office. All meetings are open to the public and all Committee materials, including supplementary reports and background information, are available at the Town Office in the Committee Binder.