Head Tide Dam Committee

Desired Outcomes

August 19, 2015

Introduction

Over the past two decades Maine has become a national leader in river restoration. As a state blessed with 30,000 miles of rivers and streams, 12 native species of sea-run fish, and dozens of native freshwater fish, Maine is the only state on the East Coast with increasing populations of sea-run fish. The restoration of Maine's rivers has also become a state priority, as evidenced by the creation of the Sea-Run Fisheries Bureau with the Department of Marine Resources and the establishment of state funding programs to help NGOs and communities implement river restoration projects. At the federal level, both NOAA Fisheries and the US Fish and Wildlife Service have made the restoration of sea-run fish a priority. Given the quantity of river habitat in Maine, we have competed extremely well for federal grant funds for river restoration and protection projects, enhancing community recreation, native fisheries, and overall river health.

In just the past fifteen years, more than $8 million has been spent on the Kennebec, $64 million on the Penobscot, $25 million on Downeast rivers, and millions more on rivers like the Ducktrap; communities have recognized the important connections between rivers and their citizens. Today river festivals, river trails, and river parks are common in many towns around Maine. The Head Tide Committee is looking at ways to take advantage of public policy and funding opportunities that could improve the Head Tide Dam site and be part of a larger initiative to improve the ecology, recreation, and community interest in the river throughout the Sheepscot watershed. Any improvements or changes would be at no cost to the town of Alna.

1. History

Issue: The Head Tide site has had a series of dams to power mills since approximately 1762. The current dam was built in 1916, and the last mill powered by the dam burned in 1949. The dam and mills played a prominent role in the early settlement and the economy of Alna. Historically, there were 44 dams in the Sheepscot watershed. The majority have been slowly taken away by the forces of the river. Currently there are two dams on the main stem of the river and at least 12, mostly mill dams, at pond and lake outlets in the watershed.

Desired Outcome: The history of the site will be displayed and interpreted to the general public. The site will continue to be an important historic asset to the Town of Alna. The Alna community will see the site as an educational representative of past historical use.

2. Recreation

Issue: The site is used by fisherman, paddlers, swimmers, visitors, and just as a local meeting place. There has been little to no maintenance of the site and it can be expected the benefits the site provides to users, viewers, and visitors will continue to decline over time as vegetation grows and the dam deteriorates. Access is considered an issue by some as the trail above the dam is overgrown and the steep path down to the water requires some nimbleness to navigate. This section of the river sees many canoeists and kayakers. Currently, these paddlers take out on private property upstream of the dam and then portage the rocky path on the downstream side to put boats back in. The upstream side of the site is overgrown with vegetation; it is unclear what if anything could be done with this portion of the site.

Desired Outcome: Current recreational uses will be maintained and enhanced where possible.

3. **Safety**

Issue: The current dam is not in danger of imminent failure but it is in poor condition. It is unlikely the town will spend money on needed repairs. At some point in the future the dam will decay and break down, leaving the town responsible for cleaning debris out of the river, creating expense, and foregoing present opportunities to pro-actively preserve the historical character of the site. The railings along the west abutment need to be replaced. The old gates have been removed below the west abutment so this is now the weakest part of the dam. The path the public uses on the downstream side of the dam for canoe portage, fishing, and swimming are difficult to navigate. The site can be expected to continue to deteriorate over time.

Desired Outcome: Public safety will be improved through potential modifications to the west abutment. New signs could be put in place and the path on the downstream side of the river could be reconstructed.

4. **Fisheries**

Issue: The Sheepscot supports at least 9 different species of sea-run fish (alewife, blueback herring, American shad, rainbow smelt, Atlantic salmon, sea lamprey, American eel, striped bass, shortnose sturgeon). Two of these species are endangered (Atlantic salmon, shortnose sturgeon), and at least seven of these species are known to have been historically present

above the Head Tide Dam. All sea-run fish populations are at greatly diminished numbers due to a variety of issues within and outside of the watershed. The river also supports resident fish such as brook trout, some of which are known to move seasonally through the dam site.

The Committee recognizes that improvements are needed to improve fish passage throughout the Sheepscot watershed. Currently 12 of the 13 alewife ponds above the dam are blocked, 40% of the road crossings are considered 'severe barriers' for fish, and there is a second mill dam in the main stem of the river. There have been very few habitat or river restoration projects in the watershed.

The federal fisheries agencies define acceptable fish passage at dams as needing to be 'safe, timely, and effective'. Currently, the two openings in the Head Tide Dam only meet this criteria part of the time. In particular, there are periods during the spring migration season when the water velocity through the dam openings is too high for fish to migrate upstream to their spawning grounds. Since each species has a finite seasonal time period and energy level to reach their spawning area, the dam has a negative impact on these populations depending on the year. Species such as American shad are well documented in large numbers below the dam but not above it, likely due to their difficulty of moving through constricted openings and faster water. Fish passage improvements at the Head Tide Dam would improve access to over 66 miles of spawning and rearing habitat for sea-run fish.

Desired Outcome: All species of migratory and resident fish will have safe and timely upstream and downstream passage through the Head Tide site throughout the year. This will provide the opportunity for all these species to take full advantage of all river habitats and to increase in numbers over time for the benefit of the human and natural communities. It is the hope of this committee that any fish passage improvements at Head Tide will lead to restoration efforts elsewhere on the river and in the watershed.