

## FACTS ABOUT THE DAM REMOVAL PROPOSAL OMITTED FROM THE TOWN FAQ

### Q: Would removing the dam actually result in a free-flowing river?

A: Simply put – No. **No alternative under consideration results in a “free flowing” Oyster River as long as the upper dam that creates the Oyster River Reservoir remains.** The upper dam is not going away as it is integral to the Durham/UNH water supply and UNH just completed a new multi-million dollar water treatment plant at the reservoir. Water withdrawal from the reservoir in dry years significantly reduces river flow in August and September, including extended periods where no water at all flows over the upper dam (data from USGS and Durham DPW). With climate change we can expect more frequent droughts, and water needs will expand with proposed new development downtown and elsewhere in the community. **What is the carrying capacity of a river whose water flow is choked off for five days in a row as in 2020, or 23 days in a row as in 2016?** Beyond low seasonal flow volumes, Durham DPW has confirmed that the river “restoration” design as proposed by VHB consists of a 600’ channel lined with stone riprap extending from the current dam site to approximately the Milne Sanctuary. This is not hospitable habitat, nor is it a “free river taking its natural course” as dam removal advocates suggest.

### Q: What recreational uses would be lost if the dam is removed?

A: For generations Durham kids and grown-ups have canoed, kayaked and fished on the pond and backwater in the summer and skated and XC skied there in the winter. Unlike other water bodies in town (Oyster River Reservoir, Town Reservoir, tidal portion of the river) the pond and backwater are within easy walking distance for kids from three neighborhoods: Faculty, Laurel Lane and Foss Farm. The pond and backwater are readily accessible to the broader public via the Milne Sanctuary. The Town has done little to maintain or improve existing public access at the Sanctuary, but could easily do so.

### Q: What ecological communities currently exist in the Pond and Backwater that would be adversely impacted by dam removal?

A: The Mill Pond and backwater support a diverse community of fish, frogs and toads, turtles, muskrats, beavers and waterfowl. Native fish include bass, pickerel, perch, pumpkinseeds and others. Direct observations from previous drawdowns and projections from the town’s consultants (VHB) suggest that what will be left of the pond following dam removal will be so shallow and narrow during late summer low flow periods that it will be poorly suited to support any of these freshwater species. **NH Fish and Game** currently lists most of the pond above the Milne Sanctuary in the **highest value habitat category in the NH Wildlife Action Plan**. Dam removal will have a major negative impact on the existing freshwater wildlife, reducing freshwater habitat by more than 87%. This decrease would be higher still during low summer flows.

### Q: What species of anadromous fish are intended to be helped by dam removal?

A: Currently, there are three species of fish migrating into the Mill Pond System: juvenile American Eels, Alewives and Blueback Herring. The target for restoration seems to be Blueback Herring, but the story keeps changing. American Eel habitat would be limited to above Thompson Lane following dam removal. Blueback Herring prefer running water to spawn and do so above Thompson Lane, which will not be affected by the Mill Pond Dam either way. Alewife spawn in quiet sections of ponds, and **with elimination of the pond and backwater there would be no such habitat left for Alewife to spawn.** While adult Herring (Alewife or Blueback) enter the river, spawn and leave in late spring, their young remain in fresh water until the fall. With the backwater gone, late summer low flows due to excessive withdrawal from the upper reservoir would leave little habitat for offspring of a larger herring run. Just before the Town Council vote several organizations wrote a letter asserting with no backing data that Rainbow Smelt were actually the target species for restoration; though Smelt were not referenced at all in the consultant report and are no longer referenced in the Town’s FAQ.

**Q: What is the historic significance of the Mill Pond Dam?**

A: Located in Durham's Historic District the Mill Pond Dam is listed on the State's Register of Historic Places. It has been determined eligible for individual listing on the National Register of Historic Places (NRHP) based on both its role in local and state history and its engineering design. Review by the NH Division of Historic Resources also found the structure rated highly on all seven measures of historic integrity considered on the NRHP: location, workmanship, design, feeling, setting, association and materials. Attempts to remove of the dam will trigger a rigorous Federal Section 106 Review to justify the destruction of such an important historic structure. The consultant and the Town FAQ both misrepresent the significance of the dam by focusing solely on the engineering design, then asserting that stabilization would change that design and negate its significance.

**Q: If the various historic, recreational and freshwater ecosystem values described above are sacrificed in pursuit of improving a herring run on the Oyster River, how many herring should we anticipate?**

A: No straight answer to this question has been provided to date. After questioning, the consultant and fisheries managers gave three examples of rivers in Massachusetts and Connecticut they claimed were analogous to the Oyster River in length and flow. What they didn't explain was that each of these river systems includes substantial ponds or lakes that serve as their primary spawning habitat for Herring. The consultant also neglected to mention that, given this pond habitat, the primary herring species on each river according to MA and CT fisheries agencies is Alewives rather than Bluebacks. These river system ranged from 7 to 27 times the habitat size of the Oyster River, so are analogous in neither size nor target species. **The Exeter River, which has also been cited as a comparison, has nearly five times the flow of the Oyster River and far more than five times the river mileage (including the Exeter and Little Rivers and Great Brook) that was opened up when the Great Dam was removed in Exeter in 2016.**

**Q: Will an improved herring run on the Oyster River have a meaningful impact on the Gulf of Maine?**

A: Herring runs have been declining in the Gulf of Maine and the demand for herring is growing as lobster bait and as bait for recreational fishing. In addition, the National Marine Fisheries Service emphasizes the idea that increased herring populations will help to restore groundfish populations, though other factors also impact groundfish. Given the very short length of the river below the upper dam (which lacks a fish ladder), and seasonal extreme low water flows, the likelihood of major increase in herring return seems limited.

**Q: How will the cost of dam stabilization compare to dam removal for a typical Durham taxpayer?**

A: The Town's consultant estimates in the Town's FAQ handout that the 30 year life cycle cost of dam stabilization will be \$1.39 million, with analogous cost for dam removal of \$1.46 million. In other words \$70,000 less for stabilization. While the town continues to cite the high cost of dredging, that is not on the table as it is assumed to not be permissible. According to the Town Assessor's Office, the total cost to the taxpayer of a 10 year bond of \$1 million is approximately \$0.80 per \$1,000 of assessed value. For the owner of a home assessed at \$350,000 **the cost of bonding to remove the dam would be approximately \$41/year versus \$39/year** for stabilization and maintenance. Slightly cheaper to stabilize, but basically a wash.

Removal advocates assert grants are available to cover up to 60% of the cost of removal. This would mean a savings from removal to the median homeowner of only \$25/year for 10 years to pay off a bond even with grant funding. Given the 30 year lifecycle that these costs represent though, that cost should be amortized over 30 rather than 10 years, making the **cost difference to stabilize the dam only about \$8/year**. In addition, the new Federal infrastructure bill provides for Federal grant funding for dam stabilization in some circumstances, and historic preservation **grants are available through LCHIP** and elsewhere. While the consultant used a 30 year period for lifecycle costs it is also worth considering the current dam has lasted over 100 years.