



Commonwealth of Massachusetts

RIVERWAYS PROGRAM

Building Partnerships, Protecting Rivers

Mill River Restoration Project Public Questions

January 2007

The following questions have been collected and condensed from questions asked at public meetings. They are presented here to provide important background on the Mill River Habitat Restoration Project.

What is the purpose of the Mill River Habitat Restoration Project?

The Southeastern Regional Planning and Economic Development District (SRPEDD) and the Massachusetts Riverways Program are leading a partnership of local, state, and federal organizations to restore river habitat, provide fish passage, and improve public safety on the Mill River in Taunton. While the ultimate goal is to improve fish habitat by reconnecting the upper reaches of the Mill River with the Taunton River and Narragansett Bay, the project is taking a holistic look at the restoration of an urban river. This includes looking at flooding and safety issues, historic issues, recreational opportunities and contaminated sediments. We expect to be working within the constraints of an urban setting and a legacy of industrial uses of the river.

Why focus on the Mill River?

The Mill River is a tributary to the Taunton River. The Taunton River is one of the highest quality coastal rivers in New England. It is the longest undimmed coastal river in New England and it has excellent habitat for all life stages of fish. It has no barriers to ocean fish that travel up river to spawn in its tributaries. The Mill River has great habitat restoration potential not only for migratory fish but also for other plants and animals that depend upon healthy river systems. With upstream spawning areas in Lake Sabbatia and Winnecunnet Pond, restoration of an annual migration of 100,000 herring is possible. In addition, recreational and scenic amenities for the City of Taunton can be greatly enhanced by river restoration. Finally, the evacuations and flooding of October 2005 and the current dam safety order on the dam at Lake Sabbatia have highlighted safety issues resulting from aging dam infrastructure.

Why is the emphasis on dams?

Dams can have many ecological impacts on rivers. They can block fish and other aquatic species from moving throughout a river system to access spawning sites and other critical habitats. Dams can hold back and cause the build-up of sediment, woody debris and other materials that would have naturally been distributed throughout the river, playing important roles in providing nutrients and habitat for plants and animals downstream. Dams interrupt natural flows and create pond-like impoundments. Impounded waters tend to be warmer than naturally flowing rivers, forcing many native river species out because they can't live under those conditions. Dams can also flood wetlands, floodplain forests and other ecosystems that naturally occur along the river's edge and serve valuable purposes. When dams no longer serve their original purpose and become a financial and safety liability for their owners, dam removal is often a good choice for

economic as well as environmental reasons. Given the number of dams constructed through our history, free-flowing rivers are relatively underrepresented in New England. Dam removal is a proven technique to restore river habitat.

What is the status of the project so far?

Project partners are conducting a study examining the feasibility of restoring the Mill River to a natural, free-flowing state. Several Citizen Advisory Committee and public meetings have been held in order to update the community and provide a forum for comments and questions.

What options are being considered for dams on the Mill River through the feasibility study?

In general, project partners are looking at the feasibility of removing or providing fish passage at the State Hospital Dam, West Britannia Dam, and Whittenton Mill Dam. Partners are also investigating the status quo or “do nothing” option for each of the three dams.

Why does the study not focus on getting fish into Lake Sabbatia and rebuilding Morey’s Bridge Dam?

The mission and funding of each of the project partners is to restore connectivity or fish passage to rivers. Under Massachusetts state law, repair is the responsibility of the dam owner. Given the importance of Lake Sabbatia to the City and its residents, and its place in the ecology of the Mill River system, project partners are working with the dam owner, Mass Highway and other agencies and offering ideas on how fish passage can be incorporated into plans for rebuilding that dam. For more information about the responsibilities of dam owners, please see the Massachusetts Department of Recreation and Conservation Dam Safety Regulations at <http://www.mass.gov/dcr/pe/damSafety/index.htm>

Is electric generation feasible at Morey’s Bridge Dam?

Taunton Municipal Light and Power is looking at this now as part of an analysis of replacement alternatives for the dam.

Is restoring the water level at the Whittenton Mill Pond being considered as one of the alternatives?

Water levels in the Whittenton Mill Pond dropped after the 2005 failure of the Whittenton Dam, Water levels dropped again after the drought conditions coincided with construction of the coffer dam at Morey’s Bridge Dam. An option that could raise water levels in the Whittenton Mill Pond and provide fish passage is being analyzed and will be included in the final report for the feasibility study.

Does the Whittenton Mill property need the impoundment for its fire protection? If so, what should the level be?

The project engineers are discussing this with City officials. A summary will be presented in the feasibility study report.

What value does the Whittenton dam have now vs. when it was built? Would it be of more value to the community and environment if it were removed?

The value of a dam can be estimated in terms of economics (does rebuilding and maintaining the dam produce enough economic value to make it economically feasible OR is it more cost-effective in the long-term to remove it?); public safety (is the dam ageing, hazardous or likely to increase downstream flooding?); environmental effects (how does the dam damage the natural resource); liability (does the dam act as an attractive nuisance? are people likely to swim near it? Could its failure damage downstream property?); and the perceived or real value of an impounded versus free-flowing river. For communities, it is helpful to have the opportunity to compare the costs and benefits of dam repair versus dam removal. For the ecological resource, dam removal may be the best choice.

Who will decide which option is chosen for any particular dam?

Maintenance, repair, replacement or removal of any dam is ultimately the responsibility of the dam's owner. In addition, under Massachusetts state law, a dam owner may be liable for damage to life or property resulting from the operation, misoperation, or failure of a dam. Thus, the final decision for repair or removal of any dam thus rests with its owner. Results of the feasibility study are being provided to the dam owners for their information.

How will the availability of funding affect which option is chosen?

Work on a dam – whether it involves repair, replacement or removal – is expensive. A number of funding sources (federal, state, foundation and non-profit) are available to help pay for alternatives such as dam removal or fish passage that restore ecological values. Options that restore the highest degree of natural ecological function will be most likely to receive such funding. The simple reconstruction of a failed dam would not be a candidate for this type of funding. Depending on the private dam owners' need for and interest in funding assistance, this could be a significant factor in determining which options they choose.

What is known about the dam owners' concerns, comments and opinions so far?

We are currently working with each dam owner to provide information on project alternatives and to get their feedback. We are optimistic that continued work with them will reveal viable alternatives that work for all parties.

How do fish use fish ladders? How do they find them?

Fish ladders are designed to allow certain species and life stages of fish to move upstream past an obstruction such as a dam. Each fish species has unique needs for upstream passage in terms of water depth, water velocity, and slope. A fish ladder is designed and engineered with specific flow velocities and depths that will attract and enable the fish species of interest to use it. Usually the fish ladder must have strong water flow coming out of it; this is what attracts the fish. Fish ladders tend to be single-species and single life-stage – this means that only one kind of fish will use the ladder, and it must be of a certain age and size. In addition, fish ladders do not have 100% efficiency; not all fish will choose to use the ladder. And finally, fish ladders must be maintained to ensure that they are functioning correctly.

Information from the American Rivers web site indicates that attempts to restore fish passage by constructing rock ramps or bypass channels are not always successful. In some cases, the rocks used to construct the ramp shift, preventing the structure from working properly. How often does this occur and what plans do you have to maintain these structures?

Fish passage structures are not as effective as full dam removal for restoring rivers and providing river access to a wide range of species. Fish ladders are species and life-stage specific. A particular rock ramp may work well for river herring, for example, but not for smelt. If full ecosystem restoration is desired, dam removal is by far the best option. When that is not feasible or practical, natural fishways provide better access for a variety of species. Any maintenance requirements would be the responsibility of the dam owner.

Will fish die if they can't get into Lake Sabbatia?

Currently, river herring make their way into the Mill River to spawn and stop at the dam at the Taunton State Hospital. The dam blocks their upstream passage, and they are unable to reach potentially productive spawning habitat such as Lake Sabbatia and Winnecunnet Pond. When fish reach a barrier, they must drop their eggs, turn around and head back out to sea. Though they don't die, their reproductive success is likely diminished.

Have there been any studies of Lake Sabbatia to see if it can sustain a new fish population?

In its fisheries atlas for the Taunton River watershed, the Massachusetts Division of Marine Fisheries has identified Lake Sabbatia as suitable alewife (herring) spawning habitat. The Department of Environmental Protection and Taunton Municipal Light and Power recently announced they intend to complete a new management plan for Lake Sabbatia Lake, which may yield additional information.

What will happen with the thousands of pounds of concrete removed from the current sites (State Hospital for example) where spillways now exist? Will it end up in our landfill? Who will get it?

This will be determined in later stages of the project. All material would be responsibly disposed of. If the material is not contaminated it could possibly be recycled (reused or incorporated into pavement, for example).

Are there examples of successful dam removal projects?

In addition to national examples from some of the partners and from the consulting firm, Riverways has collaborated with dam owners, towns, local organizations, state, and federal agencies on a number of successful dam removal projects. You can learn more about those projects on our website.

<http://www.mass.gov/dfwele/river/programs/riverrestore/riverrestore.htm>

In your presentation, you indicated the build up of silt behind dams is a bad thing. Will the river also accumulate silt?

Build up of silt behind dams can be a problem because its weight can threaten the structural integrity of the dam. It also can contain accumulated contaminants that could be suddenly released in the event of a failure or flood. When dams are removed or repaired, there is an opportunity to address these problems, including the proper disposal of any contaminated materials. A naturally flowing river will not accumulate silt. A properly designed river restoration will be self sustaining and fine materials will travel downstream to the mouth of the river. Part of what rivers do is to transport sediment from the upper to lower watershed. This sediment is important because dams prevent this from happening, which is why they (and not the natural river bed) trap sediment.

Why might people be nervous or uneasy about removing dams that are no longer serving their original intent?

Dams and the mill ponds behind them are a familiar part of the New England landscape. Change can be difficult, and people are often more comfortable with what they know. People may have concerns about losing things they like about the existing dams and ponds, and may be uncertain about what the restored free-flowing river will look like or how it will affect them. It can also be frustrating that, while dams shape the landscape for a lot of people, responsibility and decision-making authority for them rests with their owners.

Will the value of property along the Mill River increase or decrease if a free-flowing river is restored? Are there studies that show that property owners who live along restored rivers have a better resale value?

Property values are affected by many market forces and are difficult to predict. Real or perceived flood risk from being downstream from a dam could adversely affect property values, while frontage and views of a mill pond might positively affect values. Some evidence suggests that shoreline frontage along mill ponds does not notably increase property value compared to frontage along un-dammed rivers. A study conducted by the University of Wisconsin found that while removing a dam does little harm to property values in the short term (two years), in the long run, removal helps increase property values. Depending on how an abutter's deed is worded, he or she may own the land to the historic centerline of the Mill River, in which case they might see less of their land underwater. Abutters may wish to research their deeds to clarify exactly how they would be affected.

Will tax assessments for Mill River abutters change if dams are removed and shorelines move?

Tax assessments are set at the discretion of the local assessor's office, but by state law are required to be set in accordance with market values. River front landowners may wish to check their deeds to verify the actual legal boundary of their property, and make sure this is accurately reflected in the assessor's records. Landowners who feel that Assessors records inaccurately reflect the extent or value of their property are entitled to seek an abatement.

Is there an estimated time frame for action on this project?

We are currently working on the final report for the feasibility study and alternatives analysis which should be completed by spring 2008. Once alternatives are chosen, design and permitting may take up to two years and be followed by construction.