

Two Acts Relative to the Repair, Removal and Replacement of Dams – Senate Bills Nos. 533 and 546

**Testimony of Laura Wildman, PE
Director of River Science for American Rivers¹,
before the Massachusetts Legislature's Joint Committee on Environment,
Natural Resources & Agriculture**

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Good afternoon Chairpersons Resor and Smizik, Vice-Chairpersons Pacheco and Kocot, and members of the committee. I am Laura Wildman, Director of River Science and water resources engineer for American Rivers, a national conservation organization dedicated to protecting and restoring healthy natural rivers for the benefit of people, fish, and wildlife. I specialize in river restoration and dam related issues and have managed the northeast region of American Rivers for the past six years, which includes an office in Northampton, Massachusetts.

Founded in 1973, American Rivers has more than 65,000 supporters across the country, and works in partnership with more than 4,000 river and conservation organizations, many of which reside here in Massachusetts. I am here today to testify in support of Senate bills numbered 533 and 546, both Acts Relative to the Repair, Removal and Replacement of Dams, with the suggested modifications detailed below.

Dams cause some of the most harmful impacts to fish and wildlife of any human action in rivers.

- Dams block the movement of fish to and from their native spawning grounds, causing many fish populations to crash, such as the majestic Atlantic salmon that once thrived in Massachusetts.
- Dams cause increases in water temperature and decreases in water oxygen that can wipe out native populations of the critters that had lived for thousands of years in our rivers.
- Dams drown the living space of creatures that normally live in flowing water such as the beautiful native brook trout that is sought after by many folks who fish in Massachusetts rivers.
- Dams throw off the natural balance of a healthy river, such as the timing of high and low flows, and sediment and nutrient transport. These imbalances can significantly disrupt a river's ability to sustain itself.

But dams are also hazardous to humans:

- Dams threaten homes and businesses downstream. I am certain that this committee does not need to be reminded of October 2005 when downtown Taunton was evacuated under threat of failure of the Whittenton Mill Dam.
- Many small dams cause dangerous flow conditions. Last year a teenager drowned after falling in the water while trying to walk across the Bondsville Dam in Palmer, Massachusetts. This is the same dam where another teenager drowned 15 years earlier in 1991. And these are dams that do NOT provide power, do NOT protect people from floods,

¹ As of January 2009, Laura Wildman is no longer with American Rivers.

do NOT supply water to the region. In fact, the Bondsville Dam is not even considered a dam under Massachusetts' current dam safety definition. Unfortunately, these are not isolated incidents.

- Dams create collection areas for toxins that are the relics of our industrial past. As a result, some of our rivers are being used as unregulated hazardous waste storage facilities. Many of the dams holding back this hazardous waste are rapidly deteriorating due to lack of maintenance – posing serious risks to both human and environmental health.

It is with these issues in mind that American Rivers strongly supports proposed language in both bills to make dam removal a viable option in the General Laws governing dam safety for the Commonwealth [per Section 3 of both bills]. Dam removal is the ultimate dam safety action. A dam that no longer exists can no longer pose a threat. Dam removal creates a win-win-win situation - for the environment, for public safety, and for dam owners struggling with continual maintenance and liability.

- American Rivers supports the proposed language in both bills to include of environmental safety when conducting dam safety assessments [per Section 3(e) of bill 533 and 3(b) of bill 546]. Such an action would make Massachusetts a national leader in ensuring both public safety and environmental safety.
- We support increasing the level of fines that can be assessed by the Office of Dam Safety, as proposed in both bills [Section 4 of both bills 533 and 546]. Currently, the maximum fine is often cheaper to pay than making a dam safe. This fine increase will finally require dam owners to take responsibility for their potentially hazardous structures – structures from which they reap private benefits at the expense of resources and safety held in the public trust.
- American Rivers supports improvement of the Commonwealth's dams database, as proposed in both bills [per Section 5 of both bills]. The current database lacks significant information and lags behind the more complete databases of surrounding states. We support improving the dams database with key recommendations:
 - Updating the database cannot be a one time action. It must be updated annually or more frequently, especially when a dam's hazard classification changes because of downstream development.
 - Both the Office of Dam Safety and the Riverways Program must have the staffing and resources necessary to complete the important tasks in these bills, and to augment the outstanding work that both programs already accomplish.
 - The definition of "dam" in the Commonwealth must be revised. We support bill 546 on this point. The current definition of "dam" is a poor reflection of the public safety hazard posed by dams under 25 feet in height. For instance, the current definition would not include Taunton's Whittenton Mill Dam, unless the Commissioner of DCR chose to list it.
- American Rivers supports making capital funds available for dam repair and removal, as proposed in bill 533 [per Section 5(f) and (g) of bill 533]. Our recommendations on this point are that:
 - Dam repair funds should be in the form of a loan. Dam owners reap private benefits from dam ownership. Private owners should be required to pay back public funds that are used toward private benefits.

- Dam removal funds to private owners should be in the form of a grant requiring a match. Dam removal projects result in sustainable improvements to public trust resources and eliminate hazards to public safety.
- Dam removal funds to public dam owners should be in the form of a grant without the need for a match.

Finally, regarding proposed language in bill 533 to identify sites for hydropower [per Section 5(h) of bill 533], American Rivers recommends that only certain sites should be considered -- existing hydropower dams with the potential to expand capacity, large dams that currently serve a publicly valuable purpose such as water supply or flood control, and sites that could generate hydropower without construction of a new dam. Our recommendation is based on the following reasons:

- The amount of power can be generated, and generated cost-effectively, by increasing the efficiency of existing hydropower facilities is far more that provided by building new dams or retrofitting a large number small aging dams.
- Retrofitting an existing dam to generate power is more cost-effective in the long-term at large dams that currently provide flood control or water supply.
- And, innovative technologies allow for turbines that can generate power without new dams such as dam-free turbines in rivers, or turbines within existing wastewater treatment plant pipes and water supply pipes. These technologies should be investigated and where appropriate, implemented.

In closing, as the City of Taunton and the Whittenton Mill Dam were capturing the national spotlight in the storm of October 2005, hundreds of lesser noticed dams throughout the region were crumbling, usually without the knowledge of the people living in harms way downstream. In the two big storms of October 2005 and May 2006, 408 dams overtopped, were damaged, or breached in New Hampshire, Connecticut, and Massachusetts. **FOUR HUNDRED AND EIGHT.** There are more than 3,000 dams in Massachusetts, many of which are in poor, rapidly deteriorating condition. No one wants to hand these loaded guns to our future generations. American Rivers strongly supports this proposed legislation, which represents an important step to proactively address the challenge of dam safety, public safety and environmental health in Massachusetts.

Thank you for the opportunity to testify on this important issue. I would be happy to answer any questions you might have now or in the future.