

Letting nature run its course: *a case for natural stream flow*



© Jerry Monkman

Our rivers, streams, lakes and wetlands provide clean drinking water for millions of residents and offer countless opportunities for recreation.

Massachusetts waterways also generate millions of dollars in tourism revenue and support globally important freshwater communities.

Rare species - like the shortnose sturgeon and riverine clubtail dragonfly - thrive in our rivers, while eastern brook trout make their home in headwater streams.

However, these rivers, streams and lakes are threatened, and with them the ability to adequately meet our long-term water needs and to protect the array of aquatic species that rely on these waters to survive.

The rich biodiversity of our freshwater systems depend on a river's natural flow pattern, with its seasonal highs and lows and with the changes from wet years to dry years. Water withdrawals, dams, development and wastewater and stormwater systems have altered the natural flows, putting the health of our freshwater resources at risk.

By managing impacts to water flow, we can meet our needs while maintaining healthy and natural freshwater systems.

LEGISLATION AT A GLANCE

Massachusetts has the opportunity to improve the condition of the state's rivers and streams and meet the needs of communities.

An Act to Protect Rivers and Streams will:

- Continue to allow water suppliers to meet the fresh water needs of our communities.
- Develop standards to ensure adequate water flow and water levels for fish and other species' survival.
- Protect water resources for recreation and tourism, which generate millions of dollars in revenues each year.
- Make the environmental review process more predictable for both the applicant and the state.

Facts About Our Waterways:

- Massachusetts has 160 "flow-impaired" rivers and streams, where harm to fish and other freshwater species has been documented.
- Currently, state water management laws do not require the development of standards to protect water level and flows. Standards will help ensure consistent protection of rivers, streams and lakes across the state.

Rivers experience low and high flows naturally, but our actions are impacting these processes and the wildlife that rely on them:

When low flow is natural:

Fish can still move up/downstream to feed
Water quality is maintained
Aquatic prey benefits birds

When low flows are too low:

Fish do not survive to reproduce
Important habitat areas are lost
Bird prey vanishes

When high flows occur naturally:

Fish are cued to migrate and spawn
Plant seeds sprout in sediment left by floods
Birds feed in food-rich floodplains

When high flows are reduced or stopped:

Fish lose habitat and cues essential to life cycles
Vegetation encroaches into river channels
Changes in plant diversity impact birds

Communities, planners and water suppliers work hard to supply safe and clean water to meet our water needs. However, it is currently not clear how communities and water suppliers should include the needs of fish, birds and other species in their plans.

The state needs reasonable standards that define how much water should be left in our rivers and streams to protect freshwater species, while ensuring water quality, recreational opportunities and the needs of future generations.

Streamflow standards will establish a set of specific criteria to help guide how rivers are managed. Such standards will:

- Account for differences in rivers and water resources as well as the natural variations in water levels during different seasons and different years
- Recognize that essential human needs are given the highest priority while providing consistent protection for natural resources
- Continue to make certain that other critical needs, such as flood control and recreation, are met

Reliable scientific approaches for establishing these standards exist. Massachusetts has already invested in much of the science needed to establish them. Other New England states - Connecticut and Maine - have enacted similar legislation.

We urge the Legislature to support the Act to Protect Rivers and Streams for the benefit of the Commonwealth's people and waterways.



The Ipswich river runs dry in summer © Ipswich River Watershed Association

Charles River Watershed Association • The Connecticut River Watershed Council
Environmental League of Massachusetts • Housatonic Valley Association
Ipswich River Watershed Association • Mass Audubon • The Nature Conservancy
Taunton River Watershed Alliance • Trout Unlimited