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**The Problem** *"You never miss the water till the well runs dry."*  
--Rowland Howard

The New England states historically have been blessed with plentiful rainfall and free-flowing rivers. However, over the past century, changing demographic patterns and antiquated laws and policies have combined to strain the region's water resources. The result is an increasing number of rivers with so little water that they no longer support aquatic life. Some literally run dry during the hot summer months.

New England's water management system was established in the mid-1800s, when water supplies were plentiful and industrial users in urban centers such as Boston, Providence and New Haven largely monopolized water demand. Since that time, water use in the region has largely remained constant. The pattern of that use, however, has changed dramatically. Over the past century, the region's population rapidly expanded into the suburbs and other previously rural areas. In response, domestic water use has surpassed industrial use as the largest consumer of water in the region.

New England has experienced a spider web pattern of regional population growth and development away from the places that the region's water supply system originally was designed to serve. This has led to the application of "quick-fix" solutions that cause groundwater depletion and the de-watering of small streams. These small headwater streams typically provide the cleanest and coldest water and support most of the region's native trout populations.

This demand by widespread residential users throughout the region is compounded by localized water needs. Ski resorts – particularly in Maine, New Hampshire and Vermont – use significant amounts of water for snowmaking during the winter months. Bottled water operations withdraw spring water throughout the year. Golf courses and cranberry, blueberry and potato farms increase their water use during the summer months when natural flows are at their lowest.

The result is too many dry river-beds and too much impaired habitat. Connecticut identified over 60 rivers and streams that suffered from "flow impairment" in 2004. Massachusetts lists over 160 rivers in its low-flow inventory. Vermont classifies over 50 rivers as altered by flow reduction; Rhode Island names over 35. These figures likely are conservative. If unused dams that slow and heat rivers and poorly designed road culverts that restrict streamflow were counted, the number of dewatered or flow-impaired waterways would run into the thousands.

## Recommendations

The patchwork of policies and laws that currently governs water withdrawals in New England does not protect the region's water resources. As the population continues to expand into rural and other low-density areas, pressure on small streams and their aquatic populations will only increase. In order to both provide drinking water resources for these communities and maintain the rivers and streams that support our quality of life, each of the New England states must reconsider its approach to surface water and groundwater withdrawals. The recommendations below provide guidance for a common path forward to sustain our communities and our waterways into the future.

- 1. Permitting Statutes** Each of the New England states should adopt new, or modernize existing, laws and policies that govern how water is used. Specifically:
- Groundwater and surface water withdrawals should be addressed in a single statute and given the same level of analysis and scrutiny.
  - A reasonable timetable should be established for bringing all existing or exempted diversions into compliance with new laws and regulations.
  - Permits should be appropriately flexible to respond to seasonal demand and supply differences, especially in hot summer months.
  - Permitting decisions should rely on modern scientifically-based streamflow standards.
  - Every statute should regulate interbasin transfers of water, taking into account the effects on both the donor basin and the receiving basin. Transfers should be approved only after all other available measures - including water conservation - have been implemented and appropriate streamflow levels are assured.
  - States should apply sensible allocation frameworks that prioritize essential uses such as supplying drinking water and protecting stream ecology.

**2. Streamflow Standards** States should adopt meaningful streamflow standards that protect aquatic life. These standards should be based on the natural variation in stream flows.

**3. Information** States should collect better data regarding the size and capacity of aquifers, water withdrawal rates, projected demand, and stream habitat. States should develop comprehensive databases and maps regarding existing groundwater and surface water sources. More streamflow gauges should be installed to provide information to support the development of more protective streamflow standards.

**4. Local Development Decisions** States should work with towns to ensure that local development decisions consider effects on watershed health. Local officials should coordinate with state water planning agencies to consider impacts of water use, wastewater disposal and effect of new imperviousness on streamflows.

- 5. Water Conservation** Each of the New England states should adopt a comprehensive program to create incentives or mandate water conservation by users and delivery efficiency by suppliers. Programs might include:
- Encouraging construction or acquisition of additional storage facilities.
  - Limiting leakage in pipes and unmetered water to no more than a 10% loss.
  - Establishing reasonable caps on per-day residential water use.
  - Establishing streamflow thresholds that trigger mandatory limits on nonessential outdoor water use, including lawn watering and irrigation.
  - Implementing a water conservation pricing structure and billing program.
  - Other water conservation activities such as leak detection programs, increased education and recycling of gray water.

**6. Absolute Ownership** The common law of absolute ownership - which allows a landowner to withdraw the groundwater below his property, regardless of the impact on other water users or surface flows - should be overturned by statute in those states where it remains in effect.

## Water Policy in the New England States

New England's current patchwork of laws and policies is incapable of managing our water resources to prevent dry riverbeds. The New England states have been slow to respond to water scarcity and the region's rapidly changing pattern of water use. In fact, the Connecticut Department of Environmental Protection has publicly acknowledged that the state's existing legal, planning and institutional mechanisms are incapable of addressing long-term water allocation problems or protecting the state's streams. Approximately 87% of all water use in Connecticut is exempt from any kind of environmental review. As the table below demonstrates, the New England states vary significantly in their respective policy responses to the growing challenge of water withdrawals.

**Overview of Water Withdrawal Policies in the New England States**

	Permitting Statute for Surface Water Withdrawals	Permitting Statute for Groundwater Withdrawals	Streamflow Standards	Interbasin Transfer Review	Water Quality Standards Contain Explicit Reference to Flows	Water Conservation Standards
CT	Light Green	Light Green	Medium Green	Light Green	White	White
MA	Light Green	Light Green	Light Green	Dark Green	White	Dark Green
ME	White	White	Medium Green	White	Medium Green	White
NH	White	Dark Green	Medium Green	Light Green	Dark Green	White
RI	White	White	Light Green	White	Dark Green	White
VT	White	Medium Green	Dark Green	White	Dark Green	White

**Key:**

- Adequate legal instruments currently exist in the state.
- Policy or legal instruments are under development.
- The state exempts a large number of water users from a statute or addresses the issue only indirectly or via an unenforceable policy.
- No statewide policy or legal instrument exists.