IPSWICH RIVER WATERSHED ASSOCIATION
REGIONAL NET ZERO WATER USE POLICY

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Context

For many years, the Ipswich River has had the distinction of being the most flow-depleted river in Massachusetts due to water withdrawals, drinking and wastewater exports to outside the watershed, and land use which prevents the natural recharge of groundwater. The river suffers from perennial low flow conditions particularly in the summer and during droughts; this low flow challenges the reliability of our public drinking water supplies, as well as negatively impacting the river and its ecosystem.

Recently, the Commonwealth of Massachusetts determined a mandatory Safe Yield* for all the rivers in the state including the Ipswich River. "Safe Yield" is defined by the State as the amount of water that can be removed from the watershed without risking the reliability of water supplies and the health of the ecosystem. For the Ipswich River watershed, *the amount of water determined to be the Safe Yield is below the amount of the existing approved public water withdrawals from the watershed.* As a result of this Safe Yield determination, any future additional water use in the Ipswich River watershed must remain under the current approved totals. Communities that depend on the river for their drinking water need to plan for a future with a limited water supply.

Net Zero Water Use Policy

Due to the critical importance of the river to our communities and its limited water supply, it is the position of the Ipswich River Watershed Association that every new development or redevelopment project that utilizes water from the Ipswich River watershed does not increase water use above existing levels, resulting in "net zero" water use. We recommend that all cities and towns using the Ipswich River for their water supply adopt a Net Zero Water Use Policy, minimizing new water demand when approving projects on both public and private water systems.

Background

The Ipswich River Watershed includes all or part of 21 communities in northeastern Massachusetts. The watershed provides drinking water to approximately 330,000 people and 20,000 businesses every day, inside and outside the watershed. Following a hiatus after the financial crash in 2008, development is once again increasing rapidly in the region, causing new water demand to increase. Until less damaging alternative water sources are developed, any new development must not increase existing water demand. A series of recent studies** conducted by the Ipswich River water supply communities demonstrate the severity of the challenge and concluded:

- The majority of the public drinking water sources in the watershed rely on winter and spring replenishment, which is increasingly unpredictable due to changing weather patterns.
- An estimated 75% of the Ipswich watershed's water withdrawals are exported, either as wastewater flow, or for potable water use, outside of the watershed. Therefore, return flows that would otherwise help to replenish the river and its groundwater are minimal.

- Over the next 20 years, the population of the Ipswich watershed is estimated to increase by about 5% and climate trends are forecast to reduce summer flows even further and increase the risk of drought, which are likely to place additional pressures on local water supplies.
- Development trends across the region show a proliferation of private wells for both residential uses and irrigation. These private wells impose additional pressure on the water supply.

Minimization Strategies

Given these risks, the time has come to minimize the impact of new development on our limited regional water supply. Fortunately, there are a multitude of strategies available today that can realistically minimize water demand associated with new development.

1. We can minimize new water use by implementing enhanced water conservation practices and regulations, including requiring ultra-efficient fixtures, indoor water conservation, and minimizing non-essential water use such as outdoor irrigation.
2. Developers can offset new water use by paying a fee into a "water bank" equal to or greater than the new demand in other parts of town. This bank can fund such efforts as repairing leaks, upgrading outdated systems, adopting private well by-laws, and implementing the enhanced water conservation practices.
3. We can develop land in a way that minimizes its impact on the water balance, exporting less water out of the watershed so it can be recycled within the watershed as nature intended.

Tools and Resources

The Ipswich River studies** conclude that over the longer term we'll need to reduce water use overall by enhancing comprehensive water conservation strategies across the region and/or pursue alternative sources. To assist communities with developing the program and regulations to implement a Net Zero Water Use Policy, the Ipswich River Watershed Association is working with state and regional partners and communities to develop a comprehensive set of tools to support water neutral growth. Our Municipal Services Program is a resource to the 13 cities and towns that depend on Ipswich River water to help institute these practices. The investment in time and resources will be well worth making to protect the river and increase the resiliency of our water supplies for the future.

For more information, please contact:

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*Safe Yield defined: https://www.mass.gov/service-details/sustainable-water-management-initiative
**Ipswich Basin water studies:
https://www.danversma.gov/ipswich-basin-water-management-act-planning-grant-final-report/