

# IPSWICH RIVER

THREAT: GROUNDWATER PUMPING AND EXCESSIVE WATER CONSUMPTION

## SUMMARY

Because of excessive groundwater pumping and municipal water consumption, especially in the summer, portions of Massachusetts' Ipswich River run dry every year. If the state of Massachusetts fails to enforce existing regulations and act on opportunities to improve water conservation in the coming months, the Ipswich faces a future in which it will more frequently resemble a dirt road than a river.

## THE RIVER

The Ipswich River drains a 155-square-mile watershed on the coastal plain of northeastern Massachusetts. The spring-fed river winds more than 40 miles through maple forests, swamps, and rapidly urbanizing areas from its headwaters to the Atlantic Ocean. Captain John Smith, an early explorer, praised the Ipswich River for its abundant runs of smelt, herring, shad, Atlantic salmon, and other species.

Those fisheries were largely decimated by

three fish species that can tolerate these harsh conditions — redbfin pickerel, American eel, and pumpkinseed.

Despite the river's failing health, several rare and endangered species still call the Ipswich home, including the bridle shiner, least tern, piping plover, and four species of salamanders. Massachusetts' Great Marsh embraces the mouth of the Ipswich, and is an important stopover for migratory birds along the Atlantic Flyway. Shellfish beds in the Ipswich estuary produce the well-known Ipswich clams and other valuable shellfish.

## THE RISK

Due to excessive municipal water withdrawals and excessive pumping of nearby groundwater, the Ipswich is widely regarded as the most flow-stressed river in the Northeast. More than 330,000 residents and thousands of businesses withdraw up to 35 million gallons per day from the Ipswich River. Because two-thirds of these consumers live outside of the Ipswich River basin, between 20 and 25 million gallons never return to the Ipswich River watershed, producing a major water deficit.

Municipal withdrawals in the basin dewater the river in two ways: By intercepting groundwater that would otherwise flow into the river, and by sucking water out of the river directly. This causes the river to actually flow backwards in some locations, as water is pulled upstream. Water levels throughout the basin are perpetually low in the summer, and some stretches of the river run dry every single year, resulting in fish kills and other ecological damage.

The Ipswich River and several of its tributaries are listed as "impaired waters" by the Massachusetts Department of Environmental Protection (DEP), which cites low flows, high nutrient concentrations and counts of disease-causing bacteria. Low levels of dissolved oxygen in the summer make the river unsuitable for most aquatic life, and may contribute to elevated levels of the toxin methyl mercury.

These problems are compounded by the fact that the Massachusetts DEP is not satisfying its responsibility under the Water Management Act to "ensure an appropriate balance



U.S. GEOLOGICAL SURVEY

PORTIONS OF THE IPSWICH RIVER RUN DRY EVERY YEAR.



IPSWICH RIVER WATERSHED ASSOCIATION

dam construction in the 1800s. In more recent years, excessive withdrawals of the river's water for municipal consumption regularly leave portions of the river dry, while other reaches are plagued with low water levels, unnaturally high temperatures, and low levels of dissolved oxygen. Brook trout and fallfish have largely disappeared from the upper basin, and the Ipswich is currently dominated by just

among competing water withdrawals and uses, as well as preservation of the water resource itself.” The Department has yet to complete a review of water use permits that was due in 1999, allowing continued water withdrawals without regard to the consequences for the river system.

In September 2002, all-time lows were noted on stream gauges in the river. Flows had fallen to less than 1 percent of the recommended levels. Much of the upper Ipswich River more closely resembled a dirt road than a river. Adding insult to injury, there was documented use of the riverbed as a trail by off-road vehicles, inflicting damage to the riverbed itself.

### WHAT CAN BE DONE IN THE NEXT 12 MONTHS

The outlook for the Ipswich is bleak unless the state of Massachusetts takes action now to reduce consumption and leave more water in the river. As a first step, Massachusetts Governor Mitt Romney should direct the Massachusetts DEP to complete its overdue review of water withdrawal permits. The agency should ensure that water users meet stringent permit conditions that comply with the state’s Water Management Act and the anti-degradation provisions of Massachusetts’ water quality standards.

The next step toward returning flow to the Ipswich River is for municipalities to act on a proposal from the Ipswich River Watershed Management Council to adopt more effective water conservation measures. These include prohibiting lawn watering and limiting the use of certain wells during extreme low-flow periods, and reducing the amount of water “exported” from the basin via sewers. The Council also recommends capturing roof drainage in cisterns for irrigation use, and altering the region’s storm sewers to increase groundwater recharge. Water conserved through these measures should be left in the river.

The third step is for the Massachusetts legislature to pass S. 2040/H. 2211 — “An Act



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Establishing a Water Resources Conservation and Efficiency Program” — in the upcoming session. This legislation would give priority to the Ipswich River in a new statewide program that provides funding, technical assistance, and guidelines to improve water efficiency.

**MASSACHUSETTS IS NOT ENFORCING THE TERMS OF ITS PERMITS TO TAKE WATER FROM THE RIVER.**

### CONTACTS

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**FOR MORE INFORMATION OR TO TAKE ACTION:**  
[WWW.AMERICANRIVERS.ORG/MOSTENDANGERED/IPSWICH2003.HTM](http://WWW.AMERICANRIVERS.ORG/MOSTENDANGERED/IPSWICH2003.HTM)



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