United States Environmental Protection Agency

This document is one of the project summaries from the EPA's Targeted Watershed Grants 2005 Annual Report published in December 2005. The reference number is EPA 840-R-06-001. You can find the entire document at **http://www.epa.gov/twg**.

# EPA'S TARGETED WATERSHED GRANTS 2005 ANNUAL REPORT

**December 2005**

# Ipswich River

MA

## WHY IS THIS WATERSHED SPECIAL?

The Ipswich River winds 45 miles from northeast Massachusetts to the Atlantic Ocean, where it becomes part of the 17,000-acre Great Marsh estuary ecosystem. The 155-square-mile watershed encompasses all or part of 22 communities and is a critical source of drinking water for over 330,000 residents and businesses. The river has been an economic and ecological asset within the area since before colonial times, supporting productive fisheries and shellfish beds, and, for more than a hundred years, it supported shipbuilding, tanneries, and textile mills.

## ENVIRONMENTAL CHALLENGES

The Ipswich River was designated by American Rivers as the third most endangered river in the nation because of its extremely low flows and extended periods of no flow.

- Eighty percent of the water pumped from the river and the aquifers within the watershed is shipped out of the basin as drinking water or wastewater, creating a large new outflow.
- Additionally, increasing areas of impervious surface from development cause flooding and erosion, degrade water quality, and prevent natural recharge to aquifers within the watershed.
- Low flows and increased nonpoint source pollution result in extremely low dissolved oxygen, high temperature, algal blooms, elevated nutrients and pathogens.
- Low and no-flow events and degraded water quality have led to repeated fish kills and near full replacement of river-dependent fish species with species associated with ponds and still water.

Marilyn McCrory of MA Department of Conservation and Recreation (foreground) during a site tour with EPA and the Ipswich River Watershed Association. (Sandra Fancieullo)

## RESTORATION ACTIVITIES

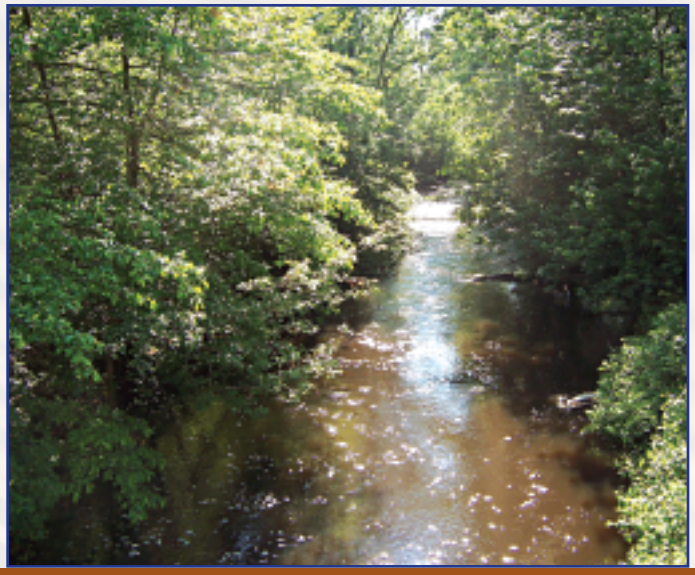
The Massachusetts Department of Conservation and Recreation will use its watersheds grant to address the impacts caused by extensive pumping for municipal water supply and land development. The project will:

- Quantify the benefit of specific low-cost, natural stormwater infiltration and recharge techniques, and water conservation techniques
- Quantify the potential impact of these techniques on a watershed-wide scale, through modeling
- Form the basis for local "water banks," and provide essential information to regulators to employ incentive-based trading mechanisms within permitting programs

## A STRONG PARTNERSHIP FOR CHANGE

The Massachusetts Department of Conservation and Recreation is supported in its project through the collaborative efforts of several groups:

- The Ipswich River communities of Reading, Wilmington, North Reading, and Topsfield
- The Ipswich River Watershed Association
- Rainwater Recovery Systems, LLC
- AquaSave
- The U.S. Geological Survey



View of Ipswich River from bridge. (Sandra Fancieullo)

"With many projects up and running, monitoring underway, and awareness and interest in what we're doing growing within the watershed, I feel very hopeful about advancing the understanding of and adoption of low-impact development and water conservation techniques, with noticeable benefits to the Ipswich River."

– Sara Cohen, Department of Conservation and Recreation, Grant Project Manager