



## Groundwork Lawrence Works to Restore the Spicket River in Massachusetts

Stormwater overflow from sewers and a widespread littering problem impact the health of the Spicket River in Lawrence, Mass. These issues have led the public to believe that the water in the Spicket River is dirty and unhealthy. In fact, the health and water quality of the Spicket River is currently unknown. Information collected from a community-based water sampling project will be used to establish water quality baseline measures. The results of the water sampling project will clarify the major issues affecting water quality in the river and lay the groundwork to begin restoration efforts.

**ABOVE:** A GWL MassLIFT AmeriCorps member performs sampling to create a water quality baseline.

In June 2012, *Groundwork Lawrence (GWL)* was awarded a \$60,000 grant from the U.S. Environmental Protection Agency (EPA) through the *Urban Waters Small Grant program* to provide water quality testing and determine baseline measures in the Spicket River.

GWL is a nonprofit organization committed to improving the environment, economy, and quality of life in Lawrence, Massachusetts. Many of GWL's projects and programs are closely connected to the Spicket River and have provided a natural progression for GWL to get involved in the restoration project.

### Project Highlights

GWL will:

- Bring together the "Spicket River Restoration Partnership" (SRRP), a community-based partnership committed to engaging the community and restoring the Spicket River.
- Recruit citizen volunteers to collect and test water samples.
- Establish a water quality baseline to give the city an idea of the true health of the river and provide a starting point for a restoration plan.
- Identify areas where pollution enters the river from sewers and streets and rebuild areas of concern.

Through community involvement events and programs, GWL has inspired Lawrence residents to take pride in their community and take care of their surroundings. With support from the EPA Brownfields Program, GWL spent the past decade transforming vacant and rundown lots along the river's bank into community parks and gardens. Every year GWL engages the entire community in the Spicket River Cleanup. Since the cleanup began in 2002, GWL has involved more than 5,000 local volunteers in clearing 113+ tons of trash and 590+ tires from the banks of the Spicket River.

## Building Partnerships to Strengthen Capacity

As a first step, GWL and the City of Lawrence applied in 2010 to have the Spicket River labeled as a priority project by the *Massachusetts Department of Ecological Restoration (DER)*. Spicket River was selected as a priority site, securing up to \$40,000 per year from DER towards restoration. Establishing strong partnerships is critical to the success of any community improvement project and is an efficient way to fill gaps in resources and expertise. Because GWL's projects have traditionally focused on rebuilding the land along the river bank, they partnered with watershed organizations that could educate GWL staff about river restoration.



**ABOVE:** The Ferrous Site, pictured here, is one of the six sites the volunteer crew will sample. Tires and trash are common throughout the stretch of the Spicket River that flows through downtown Lawrence.

The *Merrimack River Watershed Council, Inc. (MRWC)* will provide a plan for water quality testing, evaluate the data collected and conduct *E. coli* sampling. DER and partners will help GWL study the data and identify improvement solutions.

For many years, the *City of Lawrence Department of Public Works (DPW)* has supported GWL's community projects and events. In partnership with SRRP, DPW will help identify the location of pipes and sewers that discharge stormwater into the river. GWL and the city will have monthly meetings to talk about the project's status and next steps.

## Volunteer "Citizen-Scientists" Help Discover the True Health of the Spicket River

Using outreach tools like flyers and social media, GWL recruited the Volunteer River Restoration Corps (volunteer corps) to help determine the water quality of the Spicket River. GWL staff taught the volunteer corps about watershed issues

and how to properly collect water samples. The volunteer corps will meet monthly from April through November 2013 to sample six different sites along a three mile stretch of the Spicket River that flows through the center of Lawrence.

GWL considered many factors when selecting the location of the six sites, including safety and ease of access to the river bank, and the spacing between sites. The volunteer corps will also participate in stream restoration which will help create stable habitats for aquatic life, improve water quality, and prevent loss of land.

## Measuring Progress

GWL will use several data points to gauge the success of the water quality monitoring and restoration project, including:

- A report prioritizing the factors to help improve water quality of the Spicket River
- The number of community outreach materials created
- A map showing areas of sewer and pipe discharges into the river
- The creation of a community-based partner program that will promote pollution prevention and river restoration projects
- The collection of data to develop a river restoration plan so that the Spicket River can sustain fish, plants, and wildlife

## Establishing a Water Quality Baseline

With data from the water monitoring project, GWL will inform city departments of water quality issues and propose solutions to improve the health of the river. The volunteer corps will measure many water quality factors, including temperature, pH (the measure of how acidic/basic water is), and dissolved oxygen. GWL has received additional funding to test heavy metals and is consulting with EPA and city partners on how to best complete this testing. Knowledge from this study can also influence the proposed stormwater infrastructure the city is planning to make over the course of the next decade. GWL will get the results to community members through their website, the local newspaper, bilingual radio announcements, and the water bill mailing list, which goes out to every land owner in the city.