



## **Restoration Season in Review 2014**

### **Restoration and Monitoring**

Common issues for watercourses in the Dartmouth area are often rooted in commercial and residential development, which can leave streams channelized, straightened and shallow, with diminished riparian vegetation. These alterations disrupt the natural function of the stream and its natural habitat by impeding fish passage, increasing water velocity, decreasing light levels, increasing water temperatures and altering water chemistry, which stresses fish and can lead to lethal and sub-lethal effects on populations.

To mitigate these issues, Clean's Watershed Restoration Team - with mentorship and support from the NSLC Adopt-a-Stream program – installed in-stream structures (digger logs, deflectors, bank stabilizations), created step pools, removed debris and a dam, planted trees in riparian zones, surveyed fish species, and conducted fish habitat assessments, fish crossing (culvert) assessments and water quality monitoring in Dartmouth watersheds throughout the summer.

Degraded habitat from urbanization and channel modification was addressed by installing 3 digger logs with deflectors and 2 bank stabilization measures in Ellenvale Run, planting approximately 400 trees in Ellenvale Run and Russell Lake Brook, surveying 10 culverts for fish passage connectivity, maintaining previously installed structures in Ellenvale Run, Cherry Brook and Hornes Brook, and conducting 36 debris removals in Ellenvale Run, Smelt Run, Bissett Lake Brook and Hornes Brook. Baseline water quality data continued to be collected in all the streams we have worked in to gauge the impacts of our restoration work and observe any drastic changes in water quality in any of our watercourses. Fish sampling was conducted by the restoration team as well as by students at Dalhousie who conducted fish census' of all the lakes in our watersheds and some of the streams to help determine of the presence/abundance of fish species in our watercourses.

### **Outreach**

Clean engaged and educated the public on the importance of watershed/stream health. Clean hosted five tree planting events, planting over 2400 trees in Dartmouth and Halifax, restoring over 2000 m<sup>2</sup> of riparian area and educating nearly 160 participants about the importance trees plays in an urban setting, particularly near watercourses.

The team also organized a stream clean-up at Ellenvale Run with The Portland Estates Hills' and Resident's Association and staff from the Atlantic Superstore to clean a kilometer of shoreline area.

Furthermore, two outreach events targeted youth from Auburn High who removed Japanese Rose, an invasive plant along Ellenvale Run, as well as a YMCA day camp where youth learned about the restoration work we do and performed stream surveys and fish monitoring.

The watershed restoration team also engaged with the public by giving an urban watershed presentation at MTRI, a presentation for the PEHRA AGM, a presentation for the Rotary Club, a presentation and facilitation of Dalhousie University Field Methods in Fish Ecology course, interpretive information walks with Brownies groups, and an information booth at Dartmouth Farmer's Market, North Preston parade and Bluenose Marathon.

### **Volunteers**

All of the work that was accomplished this season would not have been possible without the help of our volunteers. Notably, the Watershed Restoration Program was fortunate enough to have the assistance of three long term volunteers, Robin McCullough, Jeremy Whetmore, and Jessica Corkum. They helped in many efforts, such as installing digger logs, conducting fish habitat and culvert assessments, removing debris, performing monthly water quality monitoring and helping out at community outreach events. They have collectively donated over 360 hours to Clean and their support and dedication to us and the environment is greatly appreciated.