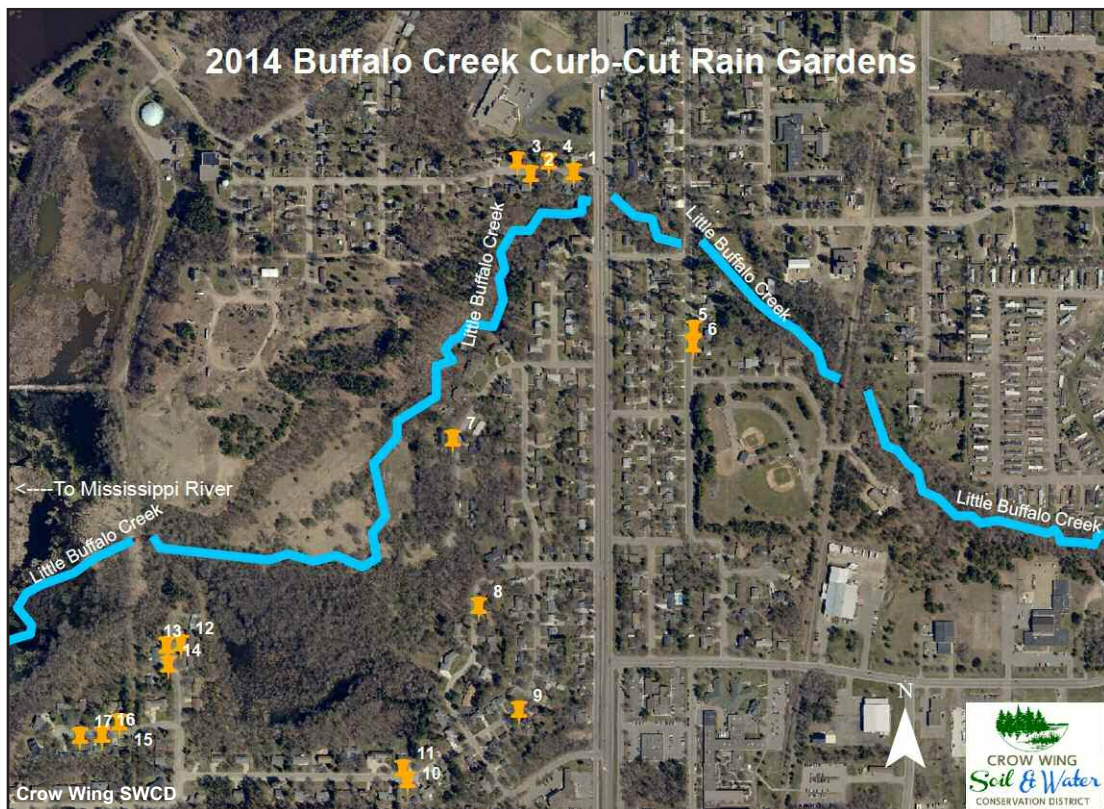


## Cities Make Progressive Efforts to Protect the Mississippi River

By Eleanor Burkett, University of Minnesota Extension, Brainerd Regional Office, 218-828-2326, burke044@umn.edu

Approximately 10% of the first 400 miles of the Mississippi River is owned by cities, whose infrastructure includes a lot of hard surfaces that reduce infiltration and increase the amount of stormwater runoff that carries pollution into the river. Local officials in communities along this corridor from Bemidji to Little Falls have questions about how they can protect and improve water quality. Specifically, they need to know the most cost-effective way to reduce polluted runoff into the Mississippi River in compliance with Minnesota state requirements.



Little Buffalo Creek watershed rain garden project: areas highlighted in yellow show rain garden project sites.

Crow Wing Soil and Water Conservation District (SWCD) contracted HDR Engineering, Inc. to help answer these questions for the City of Brainerd in 2012. They studied the Little Buffalo Creek Watershed, which runs through commercial, industrial, and residential areas of the city before it joins the Mississippi River. The study assessed soils, spatial data, and land use, and used local knowledge to identify areas ripe for pollution reduction practices. Prioritization of these practices was determined with a cost analysis that factored in construction, project life, and pollutant removal over the life of the practice. This study and the final report, which was funded through the University of Minnesota Central Region Sustainable Development Partnership, provided information that

city engineers and council members needed for choosing practices that were prudent and cost-effective.

As a result of this study, 17 filter gardens were planted in 2013 in the Little Buffalo Creek Watershed, reducing the amount of nutrients, sediment and stormwater runoff entering the river and creating habitat for birds, bees and other wildlife. The Clean Land and Water Legacy helped to fund these projects with a matching grant. SWCD partnered with the City of Brainerd, Central Lakes College, Crow Wing Master Gardeners, and landowners. For more information about this project visit: <http://z.umn.edu/cwswcdlittlebuffalocr>. The following year, a similar

study was done in the neighboring City of Baxter in the Whiskey Creek Watershed.

In 2014, the Mississippi Headwaters Board contracted with HDR Engineering, Inc. to assess water quality and stormwater runoff for Bemidji, Grand Rapids, and Little Falls. This created a consistent process and a decision-making tool for cities located on the first 400 miles of the Mississippi River corridor. A Clean Water Legacy grant application has been submitted by the Mississippi Headwaters Board to replicate this process for more cities within the headwaters region. ■