



# Maplewood Mall unveils clean water features

September 2012

Shopping at Maplewood Mall is suddenly looking a lot greener.

Through the efforts of the Ramsey-Washington Metro Watershed District (District), Ramsey County, the city of Maplewood and the owners of Maplewood Mall, 375 trees and 55 rainwater gardens have been installed over the past three years to control stormwater runoff.

Of the total \$6.5 million project cost, 60 percent was funded through two grant sources: Clean Water Fund grants (from the Clean Water, Land and Legacy Amendment) through the Minnesota Board of Water and Soil Resources (BWSR) and U.S. EPA Section 319 grants through the Minnesota Pollution Control Agency.

The mall's parking lot now incorporates a whole new system of treatment technologies, specifically tree trenches designed to reduce the amount of runoff and pollutants reaching Kohlman Lake.



Cliff Aichinger, District Administrator, said the District learned runoff from roads and parking lots is one of the major contributors to polluting nearby Kohlman Lake, which is listed as one of the state's impaired waters.

"The District approached the mall's owners to see if a partnership could be established to retrofit the mall's parking areas," Aichinger said. "Capturing at least one inch of runoff would result in a large reduction in phosphorus entering Kohlman Lake."



Known as "vertical rain gardens," trees offer multiple benefits. When planted properly in urban environments, trees can capture rainwater and runoff. The solution is to design a system of underground reservoirs that provide water and good growing conditions for the trees but that also retain rain and melting snow so that it soaks into the ground instead of running off into storm sewers.

The trees at Maplewood Mall form rows between the parking lanes and are rooted in a special mixture of rock and soil that allows room for their roots to grow. Drainage features direct runoff from the parking lot into the infiltration trenches where some of the water gets absorbed by the trees, while the rest either soaks into the ground or is filtered and cleaned by the layers of rock before reaching the storm sewer system.

Another major part of the project was the expansion and reconstruction of the Mall

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# BWSR Featured Project

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entrance plaza. The existing main Mall entrance was expanded in size and includes a number of rain gardens and a large cistern that captures a portion of the runoff from the Mall roof. In addition, interactive educational features have been designed for visitors to help explain the impact of stormwater on the watershed and what individuals can do to help keep waters clean.

On Saturday, Sept. 15, the Ramsey-Washington Metro Watershed District is hosting an event to celebrate the accomplishments of the four-year project. From 11:00 a.m. – 3:00 p.m., a variety of events will take place, beginning with the Farnsworth School Marching Band, a ribbon-cutting ceremony and multiple speakers, followed by three hours of tours, interactive displays and activities. More information can be found at the District's website: [www.rwmwd.org](http://www.rwmwd.org).

## About this project

**Location:** Maplewood, Minn.

**Partners:** Ramsey-Washington Metro Watershed District, Ramsey County, the city of Maplewood and the owners of Maplewood Mall

**Project Timeline:** 2009-2013

**Project Costs / Funding Sources:** Of the total \$6.5 million project cost, 60 percent was funded through two grant sources: Clean Water Fund grants (from the Clean Water, Land and Legacy Amendment) through the Minnesota Board of Water and Soil Resources (BWSR) and U.S. EPA Section 319 grants through the Minnesota Pollution Control Agency.

**Measurable Outcomes:** The project was completed as designed and within budget. The stormwater features were tested and are performing as designed, reducing more than 20 pounds per year of phosphorus and nearly three tons of sediment per year from entering Kohlman Lake.

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