



Energy Plus gets A+ retail store uses new pervious surface for Miller Hill parking lot

One year after re-engineering their parking lot run-off in the Miller Creek watershed, Energy Plus gives the project high marks. This is one of the first projects in the northland to use pervious concrete as part of their drainage solution. Energy Plus owner John Bergstrom says the parking lot drains much faster and more thoroughly with the strip of pervious concrete.

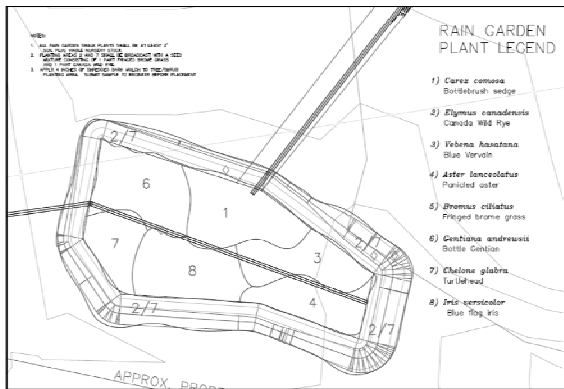
“The water goes away, the rain garden fills up, the plants grow. Things appear to be going swimmingly!” says Bergstrom.

For the Energy Plus project, Conservation District engineer Keith Anderson designed a trough of porous concrete along the naturally occurring valley of the lot. This is a coarse concrete mix, bedded on 18 inches of crushed rock and drainage pipe. It requires some extra know-how to finish the material, but wasn't prohibitively expensive to Bergstrom.

Since Miller Creek is impaired for elevated water temperatures, it's important to direct, slow and filter runoff between impervious asphalt and the creek. At Energy Plus, after some infiltration, water moves along the porous trough to a rain garden.



The pour shows the special concrete mix being laid in the trough; water which doesn't infiltrate directly down is carried through drain pipes to the rain garden.




A well-engineered plan from the Conservation District contributed much to this project's success.

This is one of the few pervious surface projects undertaken voluntarily and at the owner's expense. Bergstrom recommends the option for “those with the disposition for a higher budget,” who focus on long-term green benefits as opposed to short-term costs.

“We like to do whatever we can for the environment,” he says. “Hopefully the water goes away slowly enough and cold enough to benefit Miller Creek.”

The rain garden is planted with native, water-loving species like bottlebrush sedge, wild rye, turtlehead and blue flag iris. Twice during the summer of 2010, youth from the Minnesota Conservation Corps weeded the garden, to make sure invasive species don't crowd out the natives.

If you're shopping for a wood stove this winter or are just in the neighborhood, look for the special drainage strip in the Energy Plus parking lot. Next spring, see their rain garden come to life, just at the base of the Energy Plus signposts.

For more information about pervious surface options and rain gardens, call the South St. Louis Soil and Water Conservation District at 218-723-4867. 



Water temperature study on schedule for Spring 2011

The Miller Creek TMDL Study (Totals Maximum Daily Load) for water temperature is on schedule to be completed in summer of 2011. Public comment will be solicited in April or May. Then, the fun *really* begins.


Quick Review: TMDL Plans are essentially water “clean up” plans for waterways that have been placed on Minnesota’s Impaired Waters List because a certain pollutant or stressor is keeping them from meeting their designated uses. Most Minnesota waterways must be fishable and swimmable, including Miller Creek.

Although it may be fun to take a summer dip in Miller Creek as it flows through Lincoln Park, Miller Creek’s most important use is fish habitat, specifically, its designation as brook trout habitat. But brook trout—unlike us—is a coldwater species.

Miller Creek is ‘impaired’ by excess water temperatures in part because the creek runs through heavily developed areas such as the Miller Hill Mall. Heavy, summer rains travel across hot asphalt parking lots as runoff and directly into the creek, often without being treated (given an opportunity to cool down).

Today: Data collection for water temperatures is complete. From two dozen sampling spots, we tested temperatures at 15-minute intervals over three summers. This winter SWCD staff will work with scientists from the U of M’s St. Croix Falls Laboratory to determine Miller Creek’s ‘allowable heat input’. That means, how much heat can be allowed to transfer into the creek from warm stormwater runoff or atmospheric heating (direct sunlight hitting the water) before the trout begin to be affected.

Over the next few months we will write and submit the draft TMDL Study to the MPCA (Minnesota Pollution Control Agency). In April or May, a public comment period will open for 30 days on the TMDL Study. Although this is a technical document, as residents of the watershed your comments will be most welcome.

Coming Summer 2011: After the Final TMDL Study, the cities of Duluth and Hermantown—along with officials at St. Louis County, Lake Superior College, NRRI, MNDOT (all entities that are within the Miller Creek watershed), and you!—will plan solutions. 

facebook.com/southstlouisswcd.org

facebook:

www.southstlouisswcd.org

website:

info@southstlouisswcd.org

email:

(218) 723-4731

fax:

(218) 723-4867

phone:

South St. Louis
SOIL & WATER CONSERVATION DISTRICT
215 North 1st Avenue E, Room 301
Duluth, Minnesota 55802

