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The City of Superior
is in the spotlight for
its pollution prevention
and stormwater
management efforts.

SPREADING THE WORD ABOUT STORMWATER POLLUTION

Kari Jacobson-Hedin

When research assistants from the City of Superior come for a visit, expect to get wet. And muddy. You might even be asked to stick your head and shoulders in a barrel, handle bugs with long legs and lug bags of rocks. It is all for the good of Lake Superior.

Wisconsin identifies stormwater as the leading cause of water quality impairment for Lake Superior, and the City of Superior is in the spotlight for its pollution prevention and stormwater management efforts. The City's Environmental Services Division (ESD) Stormwater Education Program provides Superior residents of all ages the opportunity to participate in hands-on projects that teach ways to prevent stormwater pollution. Activities include planting rain gardens, stenciling storm drains, recruiting volunteer stream monitors and selling rain barrels.

Sixth-Graders Soak Up Science—and Learn How to Plant Rain Gardens. About 125 sixth-graders from Superior Middle School recently spent the entire year immersed in rain gardens. Rain gardens are *mini wetlands* that collect stormwater and allow it to soak into the ground where contaminants are removed and groundwater reserves are slowly recharged. Rain gardens differ from normal gardens in that they are bowl-shaped and contain native plants that can withstand the fluctuations of wet and dry periods.

Teachers Pat O'Connell and Becky O'Brien partnered with ESD research assistants Kari Hedin and Amber Westerbur to get students involved in the entire process of creating rain gardens. Each activity carried a message about stormwater pollution and the role of rain gardens.

In October 2005, students designed their gardens on paper and held class-wide votes for their favorite designs. They transferred these designs to the grounds of the Middle School by spreading landscape fabric over areas where rainwater naturally collects. In winter, they chose plants using a computer program that allowed them to create virtual gardens, and they grew native seedlings from seeds collected by Ms. Hedin.

Once the five rain gardens were dug out, they helped back-fill them with rocks, sand, peat, compost and mulch—a wet and muddy process! Everything came together in June 2006 when the students planted hundreds of native seedlings. Over their ensuing years at the middle school, they will be able to point out the beautiful blooming gardens that they helped create, and it will remain fresh in their minds that they, too, can keep Lake Superior clean.



Dump No Waste – Drains to Lake! These were the words shouted far and wide by Superior’s fifth-graders as they walked City streets using their traffic cones as megaphones. They spread this message in another way—by stenciling storm drains around their school in May 2006. Nearly every fifth-grader from Superior’s six schools participated in the stenciling, and approximately 735 drains were stenciled.

Keeping Current on Northern Wisconsin Streams. Visitors to Amnicon State Park in May 2006 were not enjoying a lazy lunch as they sat at picnic tables under the shade of pine trees. They were trying to determine whether the macroinvertebrates in the trays were mayflies or stoneflies. These types of macroinvertebrates caught in the Amnicon River would tell these volunteer monitors something about water quality.



They also strapped on waders and climbed in the river to learn how to measure dissolved oxygen, temperature, water clarity, water flow and habitat condition. The University of Wisconsin Superior-Extension (UWEX) Program and the ESD coordinated the stream monitoring program by recruiting and training volunteers and helping them find wadable monitoring sites on rivers from Superior to Ashland.

“Monitoring is an important way to obtain baseline and trend data, especially in streams where little is known about water quality and habitat condition,” said Sue O’Halloran of UWEX.

“Consistent monitoring information is needed to make informed resource decisions,” said Scott Toshner, Wisconsin Department of Natural Resources fisheries biologist. “It will help us protect areas with good water quality and point out areas where additional management efforts should be made by our agency.”

After a season of monitoring, volunteers will submit their data to an online statewide database managed by Wisconsin Water Action Volunteers. Their hope is to continue this monitoring program and get a clear idea of the water quality of northern Wisconsin streams.



From Pickles to Rainwater. “Time to do the rain barrel reach!” announced Kari Hedin as she reached waist-deep into an empty rain barrel to secure a spigot with a washer and locknut. Afterward, rain barrel workshop participants approached her and fellow research assistant Amber Westerbur to ask if they could get help securing the spigots on their barrels.

They had just learned how rain barrels can keep rainwater from becoming polluted stormwater runoff and are excited to take their rain barrels home. The recycled plastic barrels that once carried pickles from Greece now serve as catch basins for water running off the roofs of hundreds of Duluth and Superior homes. Approximately 420 rain barrels have been sold since 2005.

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On the Cover

Recreational sailors enjoy Lake Michigan
near downtown Milwaukee.





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