



JOE ROSSI, PIONEER PRESS

Jason Breczinski of Mike's Lawn and Landscape cuts away the curb as part of the process of setting up rain gardens. Rushmore Drive in Burnsville will get a new curb that lets water flow into the rain garden in the background.

Regulating the rain

Minnesota's 10,000 lakes have a friend in biologist Leslie Yetka, who believes simple landscaping can solve a complex pollution problem.

BY BOB SHAW
Pioneer Press

If lakes could cheer, 10,000 of them would applaud Leslie Yetka.

She has persuaded homeowners in Burnsville to join a block-long experiment, a series of "rain gardens" in their front yards. Experts say the rain gardens are the best hope for ending storm-water runoff — the worst pollution problem for the state's lakes and rivers.

If the idea catches on, the goal of pure, clean lakes within cities will become more than just an environmentalist's dream.

"It's very exciting," said Yetka, a water specialist for the city of Burnsville.

But it doesn't look exciting. Shivering in the chilly wind on Rushmore Drive on Monday, she gazed at a series of 15-foot oblong patches, lined with stones, mulch and flowering perennials.

Nice landscaping, yes, but the salvation of Minnesota's lakes?

The excitement happens when it rains. Then, runoff collects in the gardens and seeps gradually into the

ground, replenishing the sagging groundwater levels. Without the gardens, the rain would carry pollution directly into lakes and rivers.

Beginning this week, the gardens will clean up even more pollution. On Monday, Yetka walked past a screaming concrete saw that was cutting away the curbs so that all runoff in street gutters would flow into the rain gardens.

When that is done, said Yetka, most rainfalls won't add a single drop of pollution from the neighborhood to nearby Crystal Lake.

Such rain gardens have been used before, but Yetka is apparently the first to put them into an existing neighborhood without tearing up the streets — and the first to make the gardens attractive.

The Minnesota Pollution Control Agency has given its seal of approval to the Yetka-esque gardens.

About 40 percent of Minnesota's lakes and rivers are polluted, according to preliminary results of a water quality survey by the agency. Runoff is responsible for 86 percent of pollution.

Agency officials point out that there are many ways groundwater runoff can be reduced in new construction — by making streets narrower, say, or installing water-permeable driveways.

"But (the rain gardens) are one of the better things to do in a retrofit situation," said Mike Findorff, senior engineer for the agency's Stormwater Technical Assistance Unit.

Yetka began her quest for cleaner water three years ago, when she took on a problem that had stymied envi-

Rain gardens

(continued)

ronmentalists for generations.

The villains are well known. The worst offender is phosphorous, which fertilizes lawns and has the same effect on lake weeds. Lake plants flourish, sucking oxygen out of the water when they decompose. Fish often die as a result.

Phosphorous also comes from airborne dust, along with mercury and sulfur from coal-fired power plants. "When the rain dries on your car, and you see that dust, that is pollution," said Yetka.

Such rain is purified when it seeps into the ground, but when it hits streets and driveways, the water is funneled into lakes and rivers.

Other pollution contributors are cars. Gas, oil, rubber dust from tires or copper from brake linings can ride rainwater onto your favorite beach.

The pavement causes another problem, said Fred Rozumalski, an ecologist and landscape architect who worked on the project. When heavy rain drains from paved areas into a lake, water levels may rise by a foot rather than a few inches. That erodes shoreline, kills shoreline plants and rinses more phosphorous into the water.

How can anyone cure pollution from a thousand sources?

Yetka was determined to persuade homeowners that they should recycle groundwater — just as they recycle cans and bottles.

She obtained a \$117,000 grant from the Metropolitan Council,



JOE ROSSI, PIONEER PRESS

Hoping to find a way to cleanse storm-water runoff led biologist Leslie Yetka to rain gardens. The water specialist for the city of Burnsville obtained grants and persuaded homeowners to allow the 15-foot oblong patches to dot the block.

then \$30,000 more from Burnsville. She hired Rozumalski, who works for Barr Engineering, to design the gardens — a foot below the level of the street and lawns, filled with plants picked for the wet conditions.

The gardens are designed to handle 1 inch of rain — or the first flush of pollutants off the land, Yetka said. The water can get up to a foot deep, and usually drains within two hours.

Making the gardens attractive was another challenge.

"It's this Midwestern thing about neatness," said Rozumalski. "You can grow pot in your basement, beat your dog, but if your lawn is OK, you are a good person."

So, in addition to flowering plants, he put stonework and edging into the designs.

"I think they are breathtaking, myself," said Mike Tix of Mike's Lawn and Landscape, who installed many of the gardens. Even though the ground itself was a foot below the lawns, the 3-foot tall plants make an attractive mound of color, he said.

"You are going to see people who really care about lakes jumping in and saying, 'This is a great idea,'" said Tix, who calls Yetka an environmental pioneer.

Paul Mayer, who lives at Rushmore and South Wind Drive, said he was thrilled when the city installed the rain gar-

den in his front yard. "The design of this makes all the sense in the world," said Mayer.

But the future of rain gardens depends on the question: Is this an environmental trend or another utopian dream? Would homeowners such as Mayer pay for them without city subsidies?

"That is a good question," said Mayer, after a long pause. Depending on the cost, he said, "My hunch is yes."

One good sign: His brother, two houses away, wasn't eligible for the program, and is reportedly jealous of his rain garden.

Bob Shaw can be reached at bshaw@pioneerpress.com or 651-228-5433.