

Stormwater in Saint Anthony: From Elusive to Targeted

Have you ever considered stormwater a pollution? The EPA and MN Pollution Control Agency say that stormwater is one of the trickiest environmental challenges we face today, because it's the epitome of "out of sight, out of mind". When it rains, everything already on the streets gets washed into the nearest storm drain. This includes auto leaks, break dust (toxic metals), litter, excess phosphorous and harmful organisms from pet waste. From the storm drain it's transported directly to the nearest lake or stream, where it can also contributes to erosion due to high, concentrated flows. The tricky part is that no one actually sits and watches the water flow... it happens gradually and slyly. Many folks are surprised at just how much water slips by under our noses.

To illustrate the concept by the numbers, one 3,000 ft² parking lot drains 2,287.24 gallons of water with 1.25" of rain. For the same amount of rain, a typical single-family home (2,392 ft²) can generate up to 1,823.67 gallons of runoff. Even an 800 ft² patch of turf grass over St. Anthony's clay soil (Class D soil) can shed up to 61 gallons from the same 1.25" of rain. Much of St. Anthony's runoff flows to Silver Lake, Long Lake (Northern St Anthony) or to the Mississippi (Southern St Anthony).

Once the water is running along the street, it picks up a bundle of contaminants that professionals call "gunk". Silver Lake is an example of a local water body that is considered impaired by the Minnesota Pollution Control Agency, largely due to phosphorous in stormwater (leaves, grass clippings, sediment). Note that leaves falling into lakes naturally are important to grow essential bacteria for the lake's food chain (sort of like butter on a cracker: the cracker/"leaves" are needed to hold the bacteria/"butter" that microorganisms feed on). However, it's the excess leaves draining in from several blocks away that cause an overabundance in nutrients. To decrease the amount of stormwater pollution coming into lakes and rivers, and to help MN stay up on its water quality standards, we can all pitch in a little to make a big difference.

Raingardens are a great way to make a difference in urban water quality from your own yard or apartment complex. The purpose of a raingarden is to capture and clean water before it gets to the storm drain, so that storm water is less severe for lakes and rivers. The bowl-shaped garden collects stormwater and all of its contaminants to filter and infiltrate it, sparing it from the lake or river. Layers of rich soil, mulch, and the strong root structures of native plants all contribute to the process. Rainbarrels are a quick method to store water as well. But beyond installation projects, simply sweeping, raking and bagging leaves around your driveway, curb, and nearest stormdrain can make a difference that adds up.

While increasing the amount of water going into the ground is important to stabilize groundwater flow, St. Anthony's heavy clay soil prevents most raingardens in this area from infiltrating much water into the soil. However, we can still build raingardens to filter water that comes off the street before it gets to a lake or river. Curb-cuts, catch basins, or over-flow routes are common techniques to compensate for such dense clay soil.

Saint Anthony overlaps two different watershed districts: Mississippi Watershed Management Organization (MWMO) to the South and Rice Creek Watershed District to the North. Both watershed districts support residents to take action in stormwater pollution with cost-share programs. You can apply for a project and receive 50% cost-share- up to \$2,000 or \$5,000, depending on which watershed you fall under. Each watershed has periodic application deadlines throughout the year, so start early to be sure to fit into their annual budgets! Watershed districts work in conjunction with county conservation representatives to plan, design, and implement your project. Your first contact depends on your watershed:

- Mississippi Watershed Management Organization: Submit a letter of interest under the Mini-grant application found on their website www.mwmo.org
- Rice Creek Watershed District: Contact Ryan Johnson from Ramsey County Conservation District 651-266-7275 -or- ryan.johnson@co.ramsey.mn.us
-

-Nick Voss, Sustainability intern for the City of Saint Anthony