



## Neighborhood Spotlight: Green Family



VADNAIS HEIGHTS – In a neighborhood that was historically wetland, drainage in yards and basements can be a challenge. The Green’s property also has medium to heavy clay soil that tends to retain water. It could be easy to be frustrated with all of that water, and send it away as quickly as possible. However with some careful planning and harnessing available resources, this project demonstrates a balance between practicality, aesthetics, and watershed improvement. By reducing stormwater runoff, less sediment and nutrients wash into the nearby wetland, which eventually connects to Vadnais Lake. This supports the wetland by keeping culverts clear, slowing the rate of sedimentation, preserving its storage capacity, and helping maintain a healthy interaction with groundwater.

Two infiltration basins in the garden receive water from both the roof and the basement sump pump. Downspouts from the roof direct runoff underground and into the sides of the garden, while the sump pump directs sump pump water into a dry creek (rock bed) and into the center of the garden. To accommodate extra water (especially with wet spring soils) two additional holes function like French drains to prevent the garden from having standing water for more than two days. The garden is built far enough away from the foundation to prevent additional saturation close to the foundation.

Raingardens range from simple to complex depending upon homeowner preference. The Greens opted for a diverse selection of plants that flower at various times of the year to help support pollinators. Cardinal flower, Culver’s root, and blue flag iris are valuable plants for pollinators, and do especially well with wet soils such as these.

The project cost was \$4,400, VLAWMO provided \$2,000 in cost-share funds.

# Raingarden Specs:

Installation: 2018

Project size: 1,080 ft<sup>2</sup>

Drainage area into project: 3,824 ft<sup>2</sup>

Basin depths: 18" and 24"

Stormwater volume reduction: 21,343 gallons/yr

Total phosphorus (TP) reduction: .053 lbs/yr – 18% of property drainage

Total suspended solids (TSS) reduction: 9.7 lbs/yr – 18% of property drainage

**Native plants:** Blue flag iris, New England aster, prairie smoke, false blue indigo, prairie dropseed, june grass, Culver's root, Pennsylvania sedge, big blue stem, spiderwort, nodding pink onion, yellow coneflower, smooth aster, black-eyed susan, cardinal flower, glossy black chokeberry

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# Raingarden Chat:

## What do you enjoy most about the raingarden?

We enjoy how much interest it adds to our yard. When we moved in 2 years ago, the area that's now the raingarden was a boring, flat piece of land. It looks so much nicer now! Before the project, there were also downspout extenders and a sump pump discharge sticking out into the middle of our yard. They were very long, unattractive, and even annoying to work around. We were able to bury the downspouts and send them and the sump pump discharge through a dry creek into the raingardens, which is a wonderful improvement.

## How has it changed your interaction with your yard?

Since this is the first year since we installed the project, it's been fun to see all of the new growth pop up. We've also been paying a lot more attention to our side yard, opposed to it being just vacant space. The project has also prompted me to appreciate and think more about native plants, with a possibility of adding a flower garden in the back yard.

## What's the most challenging part of the raingarden?

Identifying which plants are supposed to be there and which are weeds. We'll surely get better at that over time, but for now, we're still very new to gardening in general, so it's a bit of a challenge. The additional weeding does require us to spend more time doing yardwork for now, but the raingarden plants were selected and planted to fill in more over time, so time commitment should decrease. In the meantime, we're trying to get the bad plants out so that the desired plants get well established.

## What has surprised you as you've maintained the garden and watched it grow?

We have attracted hummingbirds, which is a great surprise! We love seeing the three B's that come to visit – birds, butterflies, and bees.

## What would you do differently if you created another garden?

We would have removed some of the clay that is in our yard and brought in some new compost soil for better infiltration. We had some challenges with plants drowning last fall when it wouldn't stop raining. At the time, there was sitting water for close to a week after a storm, and since we got so much rain, the basin was almost perpetually full. This spring, we dug additional drainage holes to help it out, and now the water soaks into the ground after about two days.

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