

## **Raingardens continue to work throughout the winter**

Many now realize the benefits of raingardens from improving water quality and recharging groundwater through the filtering of runoff to reduce pollution to receiving waterbodies, to reduce the potential for home flooding, and the creation of wildlife habitat for birds and butterflies.

But did you know that raingardens work throughout the winter as well?

During 2008, the Washington Conservation District, local watershed organizations and the county created more than 50 new raingardens in Washington County. Big Marine Park alone is home to a dozen new raingardens, strategically spread throughout the park to capture dirty stormwater from rain and melting snow and soak it into the ground before it reaches the lake. Other raingardens, in sizes large and small, can be found at homes, parks, municipal buildings and churches throughout the east metro area.

In the summer, these gardens bloom vibrantly, attracting birds, bees and other pollinators. Even in the fall, many of the gardens retain their color, as late blooming asters turn purple and prairie grasses burn red and orange. What happens in January, though, when these raingardens lie two feet under the snow?

Most raingardens feature plants native to Minnesota, which are well adapted to our seasonal changes. Some people use cultivated varieties of Minnesota natives in their raingardens, and these plants usually survive the winter as well. During the winter, the plants may appear brown and dead, but underground the root systems are still alive, feeding off stored energy from the summer and fall. Above ground, the seed heads and stalks provide food and shelter for birds and hibernating insects. Minnesota plants can remain dormant for months during the winter, but when spring arrives, the roots soon begin to grow again and the new year's flowers and leaves are usually bigger and healthier than the year before.

New research now shows that most raingardens continue to absorb water even in the winter. A joint project conducted by the Washington Conservation District, Dakota Soil and Water Conservation District, Ramsey Washington Metro Watershed District and Emmons and Olivier Resources, Inc. tracked four raingardens over the course of three winters. Field staff used monitoring equipment to measure infiltration rates in the gardens throughout each winter and simulated large snowmelts by periodically flooding the gardens with 200-6,000 gallons of water.

The study found that three of the four raingardens infiltrated water into the ground 85 percent of the time. The fourth raingarden, which rarely infiltrated water during the winter, also performed poorly during the summer due to faulty design and construction. Of the three functional raingardens, all three tended to stop infiltrating when air temperatures were well below freezing for extended periods of time and all were flooded beyond capacity for brief time periods during the spring when there were large quantities of melting snow.

We don't often think about water quality during the winter, when our lakes are frozen under layers of ice, but snow comprises almost 20 percent of the annual precipitation here in Minnesota. During warm or rainy winter days, snow melts rapidly. Streets are often at their dirtiest in the winter, and melting snow can quickly carry salt, dirt and litter from our streets to our streams. The more water that soaks into the ground in raingardens and native habitat, the less runs off into our favorite lakes and rivers.

During the upcoming winter months, we can dream about the gardens and trees we'll plant when spring arrives. Meanwhile, rest assured that 50 new raingardens are hard at work in Washington County, even in the winter.

The Comfort Lake – Forest Lake Watershed District has small cost-share grants available for projects such as raingardens and shoreline buffers. To learn more about raingardens or the CLFLWD cost-share program, please contact Randy Anhorn, Administrator/Limnologist at the CLFLWD office at 651.209.9753 or [randy.anhorn@clflwd.org](mailto:randy.anhorn@clflwd.org).