Hamilton County Soil and Water Conservation District
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Working to manage and promote the wise use of natural resources in Hamilton County since 1965.

Hamilton County Green Infrastructure Demonstration Project

In Hamilton County, stormwater pollution occurs when rainwater or snowmelt runs over impervious surfaces, picks up pollution such as salt, pet waste, automotive fluids, and fertilizer, and flows into storm drains that dump into rivers and lakes. Green infrastructure stormwater pollution prevention practices such as rain gardens, bioswales, and rain barrels can be efficiently and inexpensively installed to protect water quality and quantity, essential aspects of public health, a vibrant local economy, and a blooming ecosystem.

Rain Gardens

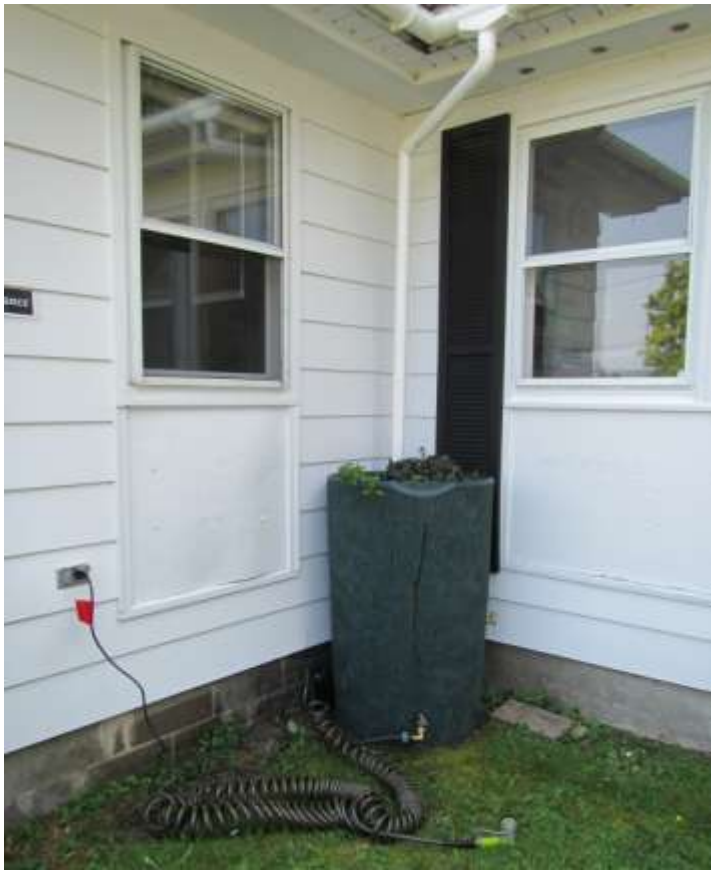
Rain gardens are landscaped depressions that capture and absorb stormwater from impermeable surfaces. Water is diverted from the District roof through an underground pipe into the rain garden. The rain garden infiltrates stormwater, and native plants and soil remove pollutants. This prevents stormwater pollution from flowing into a storm drain that eventually empties into a water body. Only native Adirondack plants were utilized in this rain garden. Invasive plants like purple loosestrife and yellow iris may be beautiful but reproduce rapidly to cause economic, ecologic, and societal harm. Additional benefits include preventing soil erosion, and providing superb habitat for butterflies, birds, and other animals. Rain gardens can easily be installed on a homeowner's property or at a municipal office to prevent stormwater pollution.

Bioswales

Bioswales are installed in new or existing drainage courses in an effort to reduce stormwater velocity and remove sediment, pollutants, and debris before the water is discharged into a surface water. At the District, an existing dirt drainage swale was remediated to include vegetation to illustrate its use and effectiveness at sucking up nutrients, reducing water velocity, and preventing erosion. This bioswale also traps sediment, preventing it from being discharged into the nearest storm drain. Flowering plants are a good option to plant in a bioswale on a homeowner's property because they help to soak up water and dry the area out. Municipalities will need to install check dams, or piles of angular rocks placed in a ditch at certain intervals to slow water velocity and allow sediment to settle. This helps to clean water before it enters a storm drain. A bit of maintenance is needed to periodically clean out the ditches with an excavator. A design plan is needed for correct check dam installation.

Rain Barrels

Rain barrels harvest rainwater from roofs and prevent stormwater pollution. This project demonstrates 2 ways to distribute water collected from the District roof via rain barrels. One rain barrel system harvests and stores water from the District roof and re-uses it to water the pollinator garden. An external electric pump sucks water from the rain barrel and pushes it through the garden hose. The pollinator garden is home to specific native flowers that attract butterflies, birds, flies, and bees. These pollinators make it possible for crops to grow and plants and flowers to flourish. The other rain barrel system harvests and stores water from the District roof and re-uses it to water the vegetable garden. The spigot is turned on and water is gravity fed from the rain barrel to the soaker hose. A soaker hose is used to prevent water that may be contaminated with wildlife feces from splashing onto vegetables. Homeowners can easily and inexpensively install rain barrels on their property to fill pools, water gardens, and wash cars, while municipalities can install larger cisterns to harvest greater volumes of water to reuse at their facilities.



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