



Native Plants for Rain Gardens



Sneezeweed

Helenium autumnale

Ht: 36" Flower: Yellow Bloom: August-September
Habitat: Full sun to part shade. Wet to moist soils.

Fox Sedge

Carex vulpinoidea

Ht: 24" Flower: Green Bloom: May-June
Habitat: Full sun to part shade. Wet to moist soils.



Blue Flag Iris

Iris versicolor

Ht: 36" Flower: Blue Bloom: June-July
Habitat: Full sun to part shade. Wet soils.

Indiangrass

Sorghastrum nutans

Ht: 60" Flower: Amber Bloom: July-September
Habitat: Full sun to part shade. Moist to dry soils.



Blue Lobelia

Lobelia siphilitica

Ht: 30" Flower: Blue Bloom: July-October
Habitat: Full sun to part shade. Wet to moist soils.

Marsh Milkweed

Asclepias incarnata

Ht: 36" Flower: Purple Bloom: June-August
Habitat: Full sun to part shade. Wet to moist soils.



Golden Alexanders

Zizia aurea

Ht: 36" Flower: Yellow Bloom: May-July
Habitat: Full sun to part shade. Wet to moist soils.

Cardinal Flower

Lobelia cardinalis

Ht: 36" Flower: Red Bloom: July-October
Habitat: Full sun to part shade. Wet to moist soils.



Joe Pye

Eupatorium maculatum

Ht: 36" Flower: Purple Bloom: July-September
Habitat: Full sun to part shade. Wet to moist soils.

Soft Rush

Juncus effusus

Ht: 36" Flower: Brown Bloom: July-August
Habitat: Full sun to part shade. Wet to moist soils.



Native Plants for Rain Gardens



Big Bluestem

Andropogon gerardii

Ht: 72" Flower: Purple Bloom: July-September
Habitat: Full sun to part shade. Moist to dry soils.

Bottle Gentian

Gentiana andrewsii

Ht: 24" Flower: Blue Bloom: August-October
Habitat: Full to part sun. Wet to moist soils.



Northern Blazing Star

Liatris ligulistylis

Ht: 36" Flower: Purple Bloom: July-August
Habitat: Full to part sun. Wet to dry soils.

Boneset

Eupatorium perfoliatum

Ht: 36" Flower: White Bloom: June-August
Habitat: Full sun to part shade. Wet to moist soils.



Sweet Grass

Hierochloa odorata

Ht: 24" Flower: Green Bloom: May-June
Habitat: Full sun to part shade. Wet to moist soils.

Metro Conservation Districts

Anoka Conservation District
1318 McKay Dr. NE, Suite 300
Ham Lake, MN 55304
763-434-2030
www.anokaswcd.org

Carver Soil & Water Conservation District
11360 Highway 212 Suite 6
Cologne, MN 55322
952-466-5230
www.co.carver.mn.us/departments/LWS/swcd.asp

Chisago Soil & Water Conservation District
38814 Third Ave.
North Branch, MN 55056
651-674-2333
www.chisagoswcd.org

Dakota County Soil & Water Conservation District
4100 220th St. West, Suite 102
Farmington, MN 55024
651-480-7777
www.dakotaswcd.org

Hennepin Conservation District
417 North 5th St., Suite 200
Minneapolis, MN 55401
612-348-9938
www.hcd.hennepin.mn.us

Isanti Conservation District
380 South Garfield St.
Cambridge, MN 55008
763-689-3224
www.isantiswcd.org

Ramsey Conservation District
1425 Paul Kirkwold Dr.
Arden Hills, MN 55112
651-266-7270
www.co.ramsey.mn.us/cd/index.htm

Scott Soil and Water Conservation District
7151 West 190th St., Suite 125
Jordan, MN 55352
952-492-5425
www.scottswcd.org

Sherburne Soil & Water Conservation District
14855 Highway 10
Elk River, MN 55330
763-241-1170 Ext. 3
www.sherburneswcd.org/index.html

Washington Conservation District
1380 West Frontage Road, Hwy. 36
Stillwater, MN 55082
651-275-1136
www.mnswcd.org

Wright Soil and Water Conservation District
311 Brighton Ave. South, Suite C
Buffalo, MN 55313
763-682-1970
www.wrightswcd.org

RAIN GARDENS

Treating Runoff at the Source



Conservation Starts at Home

What property owners can do

Prepared by the





Rain Gardens

Urbanization has greatly increased the amount of impervious surfaces (streets, roofs, compacted lawns), creating an overload of stormwater runoff. Rainwater that once infiltrated into the ground now flushes quickly through storm sewers and into our lakes and streams. Runoff events transport large amounts of sediments, excess nutrients and other pollutants, leading to a deterioration of water quality, along with increased flooding and erosion.

Rain gardens are shallow depressions that collect stormwater runoff and allow it to soak into the ground thereby reducing erosive flood waters, capturing pollutants, and replenishing drinking water supplies. They are typically planted with a selection of low maintenance wildflowers, grasses, shrubs and trees, and are an attractive addition to your home landscape. Rain gardens are designed to only have standing water for a maximum of two days following a rain event. Mosquitoes require 5-7 days to complete their breeding cycle, so properly functioning rain gardens will not increase mosquito populations. In Anoka County's sandy soils, many rain gardens are dry three hours after the rain ends.

There are generally two categories of rain gardens: downspout and curb-cut, depending upon the primary source of runoff treated. Curb-cut rain gardens are generally more effective because they have the potential to capture and treat larger volumes which is already destined to be discharged into a lake, stream or wetland whereas downspout water may infiltrate into yards without being detained by a rain garden.



Downspout Rain Gardens

One significant source of impervious surface associated with residential areas is roof tops. Runoff from roof tops can be captured through downspout rain gardens. The gutters and downspouts can be directed into a rain garden located in your yard to intercept water before it reaches the storm sewer system. Doing so can reduce downstream flooding, erosion, and non-point source pollution. Downspout rain gardens can be designed and installed by individual homeowners, following the procedures described in this brochure.



Curb-Cut Rain Gardens

The roadside curb and gutter system that channels rainwater quickly from your neighborhood can be disconnected with a curb-cut that directs rainwater from the street into a depressed rain garden. Rainwater captured in the rain garden returns to the natural hydrologic cycle and reduces downstream flooding, erosion, and non-point source pollution. An individual curb-cut rain garden may only treat a small portion of urban runoff. However, multiple curb-cut rain gardens in one area can often treat the majority of runoff. Curb-cut rain gardens require professional design and installation. Interested homeowners in areas with a storm sewer system, ideally near storm drain inlets, should contact the Anoka Conservation District for assistance.



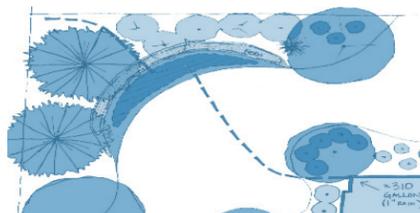
Rain Guardian Pretreatment Chamber (Curb-Cut)

The Anoka Conservation District developed Rain Guardian pretreatment chambers to capture sediment and debris from runoff before it enters the garden. Sediment and debris can diminish the effectiveness of your garden by decreasing the infiltration capacity and stressing the plant community. The chamber is placed at the rain garden inlet and simplifies routine maintenance, while extending the longevity and functionality of your rain garden.



Planning (Downspout)

- Map your property. Note topography, buildings, existing vegetation and other features. Determine where existing runoff flows.
- Calculate the area of the impervious surface that drains to each downspout or runoff point.
- Design your rain garden in the area that captures the most runoff, placing it at least 10-15' from any basements.
- Make your rain garden about 10% of the size of the area it receives runoff from, and 6-9" deep.
- Create a shallow swale or run drain tile from your downspouts to the rain garden to ensure the stormwater is captured.
- Plan for a controlled overflow for large storm events.
- Choose a variety of native perennials for your rain garden, depending on soil and light conditions. Include at least 40% grasses and sedges to provide support for flower stems and interesting textures.



Excavation (Downspout)

- Locate utilities before you dig (Gopher One-Call - 651 454 0002).
- Remove existing vegetation by using a sod-cutter, digging by hand, or applying an herbicide such as Round-Up®.
- Some of the following steps may vary when incorporating retaining walls into your plan.
- Dig a shallow depression (6-9" deep at the center) with gently sloping sides.
- If clay or heavy soils are present you may need to over-excavate 12-18" and backfill with a lighter soil mixture (75% sand, 25% compost).
- Place excavated soil on the downhill side to create a small berm. The berm should be slightly lower than the rain garden inlet to allow for a controlled overflow.
- Cover the berm with erosion control blanket to hold the loose soils in place while plants become established.
- Spread 2" of shredded hardwood mulch over the entire planting area. Woodchips tend to float and should be avoided.



Planting (Downspout and Curb-Cut)

- Seedlings can be planted from mid-May to mid-September. Summer plantings may require frequent watering.
- Plant seedlings 12" apart with more flood tolerant species toward the bottom and drought tolerant species toward the top.
- Plant species in large clusters to provide more visual impact.



Maintenance

Downspout and Curb-Cut

- Your rain garden will require some maintenance for at least the first two years.
- Ensure that your rain garden receives at least one inch of water per week for the first 2 months. If watering is needed, give your garden one good soaking each week.
- Lightly weed your rain garden once a month. Leaving plant tags next to your plugs or purchasing a plant ID book may help in determining which plants are desirable.
- Remove leaves that accumulate in the garden in the fall to ensure they don't create an impermeable mat.
- Dead plant material can be removed in the spring to allow more room for new growth. Many native species have strong stems and will stay standing even after a snowfall. Allowing the year's growth to stand over winter adds visual interest and increases wildlife habitat.
- As the shredded hardwood mulch biodegrades, additional mulch should be added to maintain approximately 2" of coverage.

Curb-Cut Only

- Remove sediment and debris from the Rain Guardian pretreatment chamber periodically depending upon storm intensity and frequency to ensure optimal functionality.
- Spray filter using a garden hose to remove sediment and debris build-up to ensure the chambers dries out between rains.
- Place markers by the inlet to alert snow plows to the presence of the rain garden and pretreatment chamber. Depressions like rain gardens seem like good places to pile snow but doing so can damage the Rain Guardian pretreatment chamber.



Technical Assistance

Expert assistance may be available through Anoka Conservation District to homeowners interested in decreasing the quantity of urban storm water run-off reaching our aquatic resources. Assistance includes on-site consultations, project design, cost estimation, and guidance throughout project installation and maintenance.



Cost-Share Grants

Cost-share grants may be available through Anoka Conservation District for the installation of rain gardens. Grants may cover a substantial portion of installation costs on projects that will provide the greatest benefits for treating urban storm water run-off.