



UMD RAIN GARDEN
223 West College St.
Duluth, MN 55812

For more information,
call (218) 726-8262
or visit the Land + Water section
of www.d.umn.edu/sustain



FACILITIES
UMD
MANAGEMENT University of Minnesota Duluth
Facilities Management
constructed this rain garden.

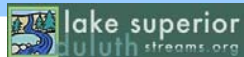
UMD is a founding
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Rain Garden design by



For information about building a rain garden
in your yard, visit the home and garden
section of www.lakesuperiorstreams.org



University of Minnesota Duluth RAIN GARDEN Self-Guided Tour



Welcome to the UMD Rain Garden!

The UMD Rain Garden was built to help protect Oregon Creek by slowing, cooling and filtering the run-off water from the adjacent parking lot. It was designed and engineered as a bioretention pond and is composed of plantings, a drain tile system, and a water level control system.

1 Welcome Signs

Overview

The UMD Rain Garden is divided into four major plant zones.

Ornamental zone: The burst of colors beyond and to the right of the interpretive signs

Woodland zone: Directly in front and partially hidden from view

Wetland zone: To your left and beyond the grassy mound

Dry zone: Higher edges of the garden

Plants

To the right of the interpretive signs, near the driveway, are colorful ornamental plants like Daylilies, Sedum 'Autumn Fire,' and some cultivated native plants such as Sneezeweed 'Mardi Gras' and Winterberry 'Red Sprite'.

Did you know?

The rain garden can hold 60,000 gallons of water, or 88% of rainfall from a 1" rainstorm.

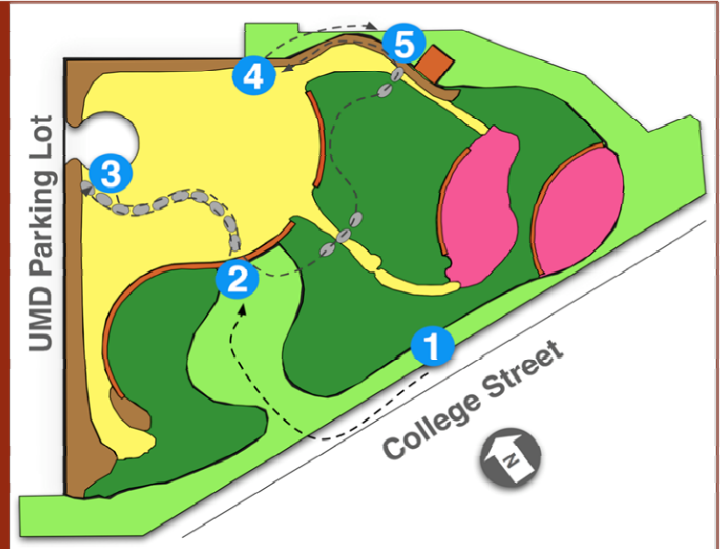
TOUR STOPS

- 1 Interpretive Signs
- 2 Grassy Mound
- 3 Sediment Basin
- 4 Water Control Structure
- 5 Brick Patio

GARDEN ZONES

- Dry Zone
- Wetland Zone
- Woodland Zone
- Ornamental Zone
- Grass Areas
- Tour Path

*Should you prefer to start the tour at the brick patio, please refer to the stops in this guide in reverse.



2 Grassy Mound

Look left: Storm water from the parking lot flows first into the sediment basin, a 12-inch deep circular trap made of concrete. The sediment basin acts as a first filter for debris and litter. Sediment sinks to the bottom of the basin and excess water runs over its flat edges to flow over the wetland zone.

Plants in the wetland zone have a high tolerance for water. Many are native to this region, while others have been cultivated from native plants or are non-native perennials. Native plants are an important part of a sustainable landscape design.

Did you know?

Plants in the UMD Rain Garden are suited for wet areas and can tolerate salts; an important quality when they are filtering snow melt run-off from the parking lot.



Winterberry Red

3 Sediment Basin

Follow the stepping-stones on your left to view the sediment basin more closely. After this, return to the grassy mound via the stepping-stones, and then walk left through the woodland zone to the water level structure.

4 Water Level Structure

The water level structure acts as a dam and regulates the depth of water in the subsurface of the rain garden. The water level is raised each spring by placing dividers in the structure to hold back the stormwater runoff within the drain tile. The drain tile then acts as an underground irrigation system for the plants to use during dry periods. The water level is reduced each fall by removing the divider, to prevent the drain tile from freezing.

Why isn't there standing water in the rain garden? Because standing water could breed mosquitoes, the water level is set below ground level so that any excess water overflows into the Oregon Creek storm sewer. Walk now to the brick patio.

Did you know?

The rain garden cools, filters, and slows down stormwater runoff; reduces sediment and other pollutants, providing cleaner water flows to Oregon Creek.

5 Brick Patio

Look around at the many varieties of plants including trees, shrubs, ferns, flowering plants and grasses. Pussytoes and Virginia Strawberries form the groundcover. You will also find Bracken Fern and Asters.

Plants in the narrow strip of dry zone on your left have Yarrows and Black-Eyed Susans, which were chosen for their ability to thrive in dry conditions.

From this point, notice the transition from native and cultivated plants in the wetland zone to colorful ornamental plants in the ornamental zone near the interpretive signs.

Did you know?

Stormwater from the south portion of campus flows into Oregon Creek, while the north portion flows to Tischer Creek, a sensitive trout stream. Both creeks flow into Lake Superior.



Photo by Anne Rittgers

Runoff fills the sediment basin, then flows into the wetland zone

UMD Rain Garden: At a Glance

- 1/3 acre in size
- Handles stormwater from 2.5 acres of Parking Lot B
- Slows, cools, and cleans stormwater-processes vital for the health of surrounding streams
- Native plants require minimal maintenance
- First of its size in Northern MN

A changing landscape

Over the years, plant populations in the rain garden have moved to find the microenvironment best suited for their needs. Some plants disappear and reappear again as seeds germinate and conditions change. Insects and birds frequent the area as the plants provide shelter and food.

Maintenance of this area includes removal of trash and grit in the sediment basin and unwanted tree seedlings and invasive plants, such as quack grass, dandelions and tansy.

The Rain Garden will always be a work in progress as nature takes its course and plants do what they do best--fit into the ecosystem.

In 2010, the water level structure was raised to encourage plants that flourish in a wetter environment.

Thank you for taking the UMD Rain Garden Self-Guided Tour! Please keep this brochure or leave it in the drop box at Stop 1 or 5.



Photo by Kristi LeMair

Stepping-stones create a path between the woodland and ornamental zones