

## ROADS, ROOFS, RUNOFF AND RAIN GARDENS



Beautify yards, parking lots, or street right-of-ways by installing rain gardens. Rain gardens featured on this page manage runoff from roads, rooftops and parking lots. They add beauty to the landscape and reduce runoff and protect water quality.

1. Street runoff enters this rain garden through a curb cut. Streets generate most stormwater runoff in residential settings.
2. Downspouts direct roof runoff to this rain garden featuring a decorative rock border.
3. Bob Quinn's rain garden manages roof runoff. Bob promotes rain gardens during his broadcasts on 1040 WHO radio.
4. An existing landscaped bed is expanded by adding a rain garden in this yard to capture roof runoff.
5. This rain garden was installed at the Iowa Association of Municipal Utilities where rain garden training is held.
6. The City of Johnston installed this rain garden at city hall to manage runoff from the parking lot.



Rainscaping Iowa promotes methods and practices to create landscapes that protect and improve Iowa's water quality.

[www.rainscapingiowa.org](http://www.rainscapingiowa.org)



[iowaagriculture.gov](http://iowaagriculture.gov)



[polk-swcd.org](http://polk-swcd.org)



[iowastormwater.org](http://iowastormwater.org)

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# RAIN GARDENS

## WHAT IS A RAIN GARDEN?

A rain garden is a landscaped depression that captures rain water runoff from roofs, driveways, streets or compacted yards. Runoff captured in a rain garden is temporarily ponded, before percolating down through the soil.

## WHY INSTALL A RAIN GARDEN?

Installing a rain garden helps restore a landscape's ability to manage water more sustainably. Historically, the prairies and savannas of Iowa held and infiltrated most rainfall. Surface runoff was rare. Rainfall was absorbed and moved down through the soil to become groundwater flow. Cool, clean groundwater fed and maintained rivers, streams, wetlands and lakes.

Today, our impervious and compacted urban surfaces shed dirty runoff with almost every rain. This dirty runoff goes to receiving streams which causes water quality problems and contributes to flooding. Rain gardens help reduce runoff and help protect water quality. They are an attractive landscape feature that provides significant environmental benefits.

## DESIGNING A RAIN GARDEN

Rain gardens rely on natural soils that let water move into and through the soil below. Water captured in a rain garden should drain down in about 12 to 24 hours.

A rain garden will usually be about 10% of the size of the area that sheds runoff to the rain garden. Rain gardens generally pond water to a depth of about 6 inches.

Avoid utilities when installing a rain garden. Make sure the bottom of the rain garden is level from side to side and end to end. Keep rain gardens at least 10 feet away from buildings.

Refer to the Iowa Rain Garden Manual to design and install a rain garden. Download the manual from [www.rainscapingiowa.org](http://www.rainscapingiowa.org).



A multi-tiered rain garden treats roof runoff from a house in Ames. Be creative when planning rain gardens.



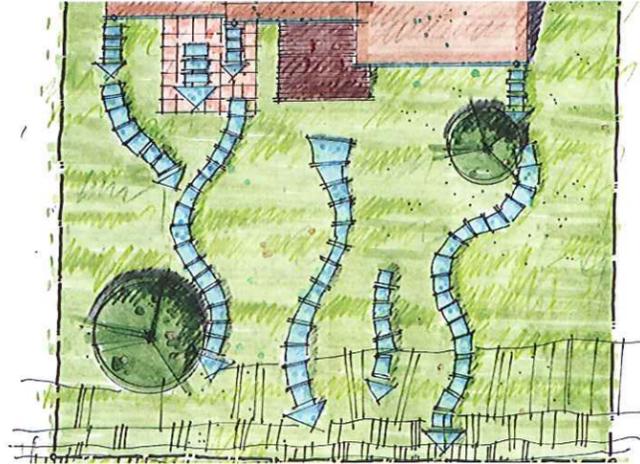
[www.rainscapingiowa.org](http://www.rainscapingiowa.org)



## PLANNING AND DESIGNING



Begin by assessing the site.



Know how water flows on your property.

Take time to plan your rain garden. Know how water moves on the landscape. Determine how much water will be directed towards the rain garden.

Be creative in coming up with a shape and layout. Make sure the rain garden will blend in and enhance the existing landscaping and buildings. Sketch out various renditions until a final plan is selected that will beautify the site and add value. Do this on your own or hire a professional Rainscaper to help plan your rain garden project.

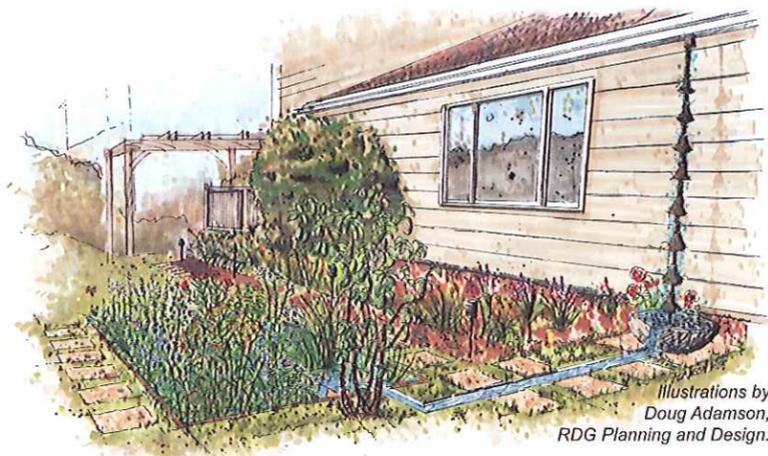
Use the Iowa Rain Garden Manual to be sure the rain garden is sized and installed appropriately and will drain adequately. A rain garden that doesn't function will not be an amenity.

With a good plan and design the next step is installation. If you're doing the installation be sure to think through the process and have all the tools and materials needed. Installing a rain garden is a lot of work. It is also a fun and gratifying project. Hire a professional Rainscaper to install the rain garden if you're not the do-it-yourself type.

Find a Rainscaper on the Rainscaping Iowa website at [www.rainscapingiowa.org](http://www.rainscapingiowa.org).



A birds eye view of the proposed rain garden.



A rendition of the finished rain garden.

Illustrations by  
Doug Adamson,  
RDG Planning and Design.

## INSTALLING YOUR RAIN GARDEN



1 Laying out the rain garden.



2 Rototilling to eliminate compaction.



3 Framing the rain garden.



4 Checking the ponding depth.



5 Mulched and ready for planting.



6 Downspout directed to rain garden.



7 Paul looks over his rain garden two months after installation.

Paul Miller installed a rain garden at his home in Johnston. A Landscape Architect helped plan and design the rain garden. The Miller's chose a square layout for their garden, to blend in with the existing patio, pergola, and house angles. The square flag stones create an attractive border. The diagonal edge softens the square layout and creates flow to the patio area.

Paul did the installation himself. He installed a wood frame to create a "level spreader" – a level edge for water to flow over when big rains occur. His rain garden is about 60 square feet in size to manage runoff from about 600 square feet of roof. Runoff from about 90% of rains will be captured and soak into the soil. Paul redirected the downspout to convey roof runoff into the rain garden.