

## What is Stormwater?

Stormwater is any water running off the land's surface after a rainfall or snowmelt event. Runoff is carried off hard (impervious) surfaces, into the storm sewer systems, and eventually into surface waters

## What is the problem?

Water running off impervious surfaces like rooftops, roads, and driveways does not absorb into the ground and causes flooding, increases erosion, and carries pollution

## What can you do?

The key to solving this problem is to stop water from running off your property. Run-off water that is stopped either soaks into the ground (infiltrates), evaporates, or can be collected for gardening or other purposes

## Informative Web Links:

### City of Burnsville - Water Resources Page

<http://www.burnsville.org/index.asp?nid=414>

### MPCA - Stormwater Program

[www.pca.state.mn.us/water/stormwater/index.html](http://www.pca.state.mn.us/water/stormwater/index.html)

### Friends of Bassett Creek - Rain Gardens

<http://www.citilink.com/~stack/rain/index.htm>

### Permeable Pavement Fact Sheet

[http://builditgreen.org/resource/index.cfm?fuseaction=factsheet\\_detail&rowid=16](http://builditgreen.org/resource/index.cfm?fuseaction=factsheet_detail&rowid=16)

### Michigan State University- Green Roof Program

[www.hrt.msu.edu/greenroof/](http://www.hrt.msu.edu/greenroof/)

### MN DNR- Native Landscaping

[www.dnr.state.mn.us/gardens/nativeplants/index.html](http://www.dnr.state.mn.us/gardens/nativeplants/index.html)

### Rain Barrel Information

<http://rainbarrelguide.com/>



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Ramsey-Washington Metro



The house drawing is a modification of original artwork by Dianne Hanson in *Green Spaces, Clean Waters* ©Tree Trust, 2005. Raindrop photo from the Water Erosion Prediction

Project: [http://soilerosion.net/doc/water\\_erosion.html](http://soilerosion.net/doc/water_erosion.html)

HARVEST  
YOUR

STORMWATER

SUGGESTIONS FOR HOMEOWNERS

## BASIC TECHNIQUES

### DOWNSPOUTS

*Direct water onto your lawn, allowing some roof runoff to spread across your lawn to infiltrate*

### RAIN BARRELS

*Capture water from your roof for later use*

*An 80 gal. barrel emptied regularly can capture 3,275 gal. of water per year from one side of a house*

*Gardeners favor rainwater for watering flowers and vegetables – it is oxygenated and un-chlorinated*

*The cost for a rain barrel: \$100 - \$200*

### TREES

*Catch water and help infiltration*

*A mature tree canopy will intercept 1,600 gal. per year*

*The cost of a 6 ft tree: \$50 - \$100*

### PRAIRIE PLANTS

*Their deep roots slow water runoff and increase infiltration and stabilize saturated soil*

*An additional 370 gal. would be infiltrated per year if you were to convert 1/2 of your lawn into prairie*

*The cost to seed a 4,500 sq. ft area: \$300  
Professionally installed: \$1,000*

### RAINWATER GARDENS

*Low areas designed to capture runoff from rooftops and driveways. Planting natives attracts wildlife.*

*A 100 sq. ft. garden can capture and infiltrate 9,000 gallons of water per year*

*Cost: \$300; Professionally installed: \$1,200*

## WHAT CAN YOU DO TO STOP RUNOFF?

**24 INCHES**—AVG. ANNUAL RAIN AMOUNT

**49,000 GALLONS** OF WATER WILL RUN OFF A RESIDENTIAL LOT- THIS IS STORMWATER

USING THE TECHNIQUES DESCRIBED, YOU CAN STOP AND INFILTRATE ROUGHLY

**33,000 GALLONS** OF WATER EACH YEAR, REDUCING STORM WATER RUNOFF BY **67 %**, THEREBY REDUCING FLOODING, EROSION, AND WATER POLLUTION



OVER TIME, **MILLIONS OF GALLONS** OF WATER CAN BE STOPPED AND INFILTRATED INTO THE GROUND IF EACH HOMEOWNER USES SOME OF THE LISTED TECHNIQUES

The figures provided are based on a typical residential lot in the Metro area. Average precipitation, lawn area, roof dimensions, and driveway length were used in determining runoff and gallons of water trapped. Cost estimates are from 2006 figures. The benefits of each technique will vary for every lot in the watershed.

Your project may be eligible for full or partial reimbursement through the City of Burnsville's Water Resources Enhancement Grant. Please contact Daryl Jacobson, Water Resources Specialist (952-895-4574) for details before beginning your project.

## ADVANCED TECHNIQUES

### PERVIOUS PAVEMENT AND PAVERS

*Special materials used to make driveways, sidewalks, and patios that allow water to seep through and infiltrate into the soil*

*A 1000 sq. ft. pervious driveway will infiltrate 12,100 gallons of water per year*

*Pavers are very attractive and can last up to 50 years*

*Average cost - professionally installed:  
Pervious pavers: \$10,500, Pervious asphalt: 14,000*

### GREEN ROOFS

*Hearty plants are established in a special media to produce vegetated roof covers*

*This is a new technology that is quickly expanding in the United States; a few demonstration sites are currently on display in the Metro area*

*A 620 sq. ft. green roof will capture and hold 6,500 gallons of water per year*

*Other benefits to green roofs include insulation, noise dampening, and an attractive landscape feature*

*Avg. cost - professionally installed: 620 ft<sup>2</sup> : \$13,600*

### RE-GRADING

*Changing the slope of the land to slow runoff and increase infiltration, installed to direct rainwater onto lawn, garden, and prairie areas. Sending water into areas with taller, deep-rooted vegetation will increase the rate of infiltration.*

*Consider changing the slope of newly installed driveways, patios, and sidewalks*