



# Water Quality Sustainability

by  
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# Why Are We Talking About Rain Gardens in the First Place?

The problem is that we have created landscapes that create stormwater, which is a pollutant

*. . . connection between land  
and water . . .*





*. . . connection between land  
and water . . .*





# What is a Rain Garden?



Photograph Courtesy of Rice Creek Watershed District.

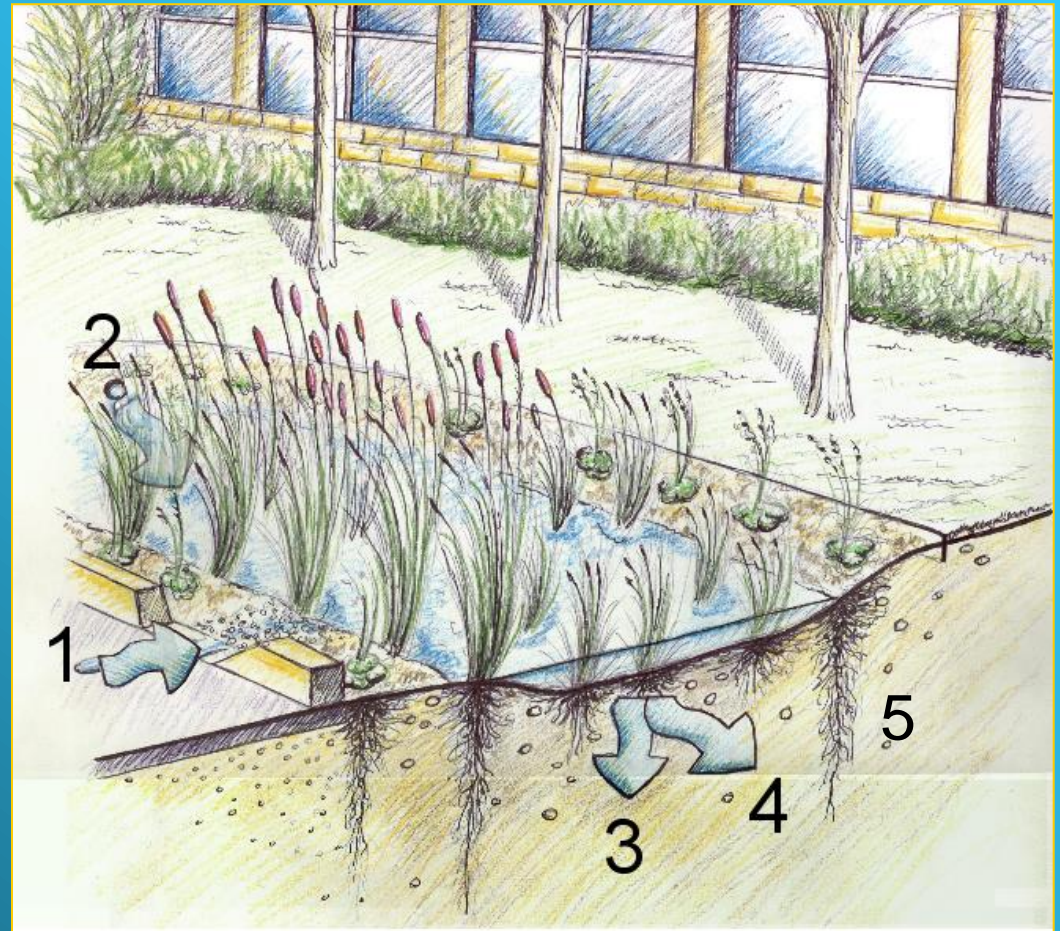


Photograph: Rusty Schmidt, URS Corp.

- A garden in a low spot
- Catching runoff from downspouts, driveways, parking lots, roads
- With deep-rooted plants that like water

# How do Rain Gardens Work?

- 1) Runoff from Parking Lot or Road
- 2) Runoff from Downspout
- 3) Infiltration
- 4) Slow & Reduce Runoff (Safe outlet for excess water)
- 5) Deep Roots Loosen Soil





# Burnsville, MN

## A Municipal Success Story



Barr Engineering Study; Presented By Rusty  
Schmidt, URS

# Burnsville, MN

Residential  
Neighborhood

Rain Garden Retrofits  
Long-Term Monitoring



AFTER



BEFORE



# Burnsville, MN

## Paired Study of Residential Street Runoff Control

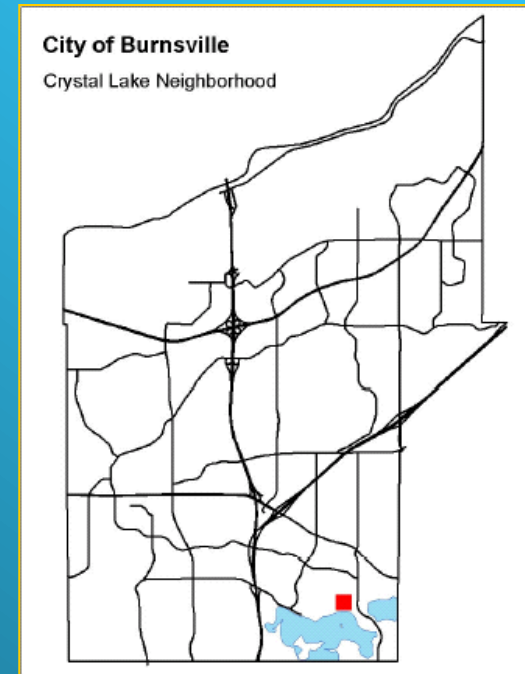
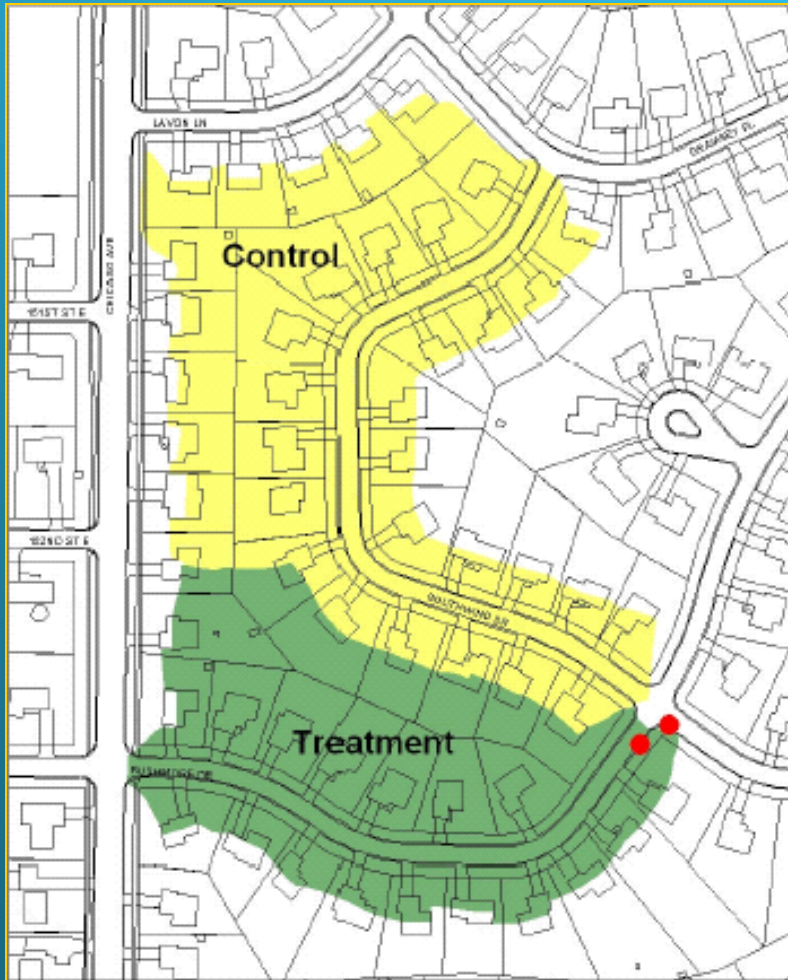


Diagram courtesy of the City of Burnsville, MN from their  
Burnsville Stormwater Retrofit Study

# Burnsville, MN



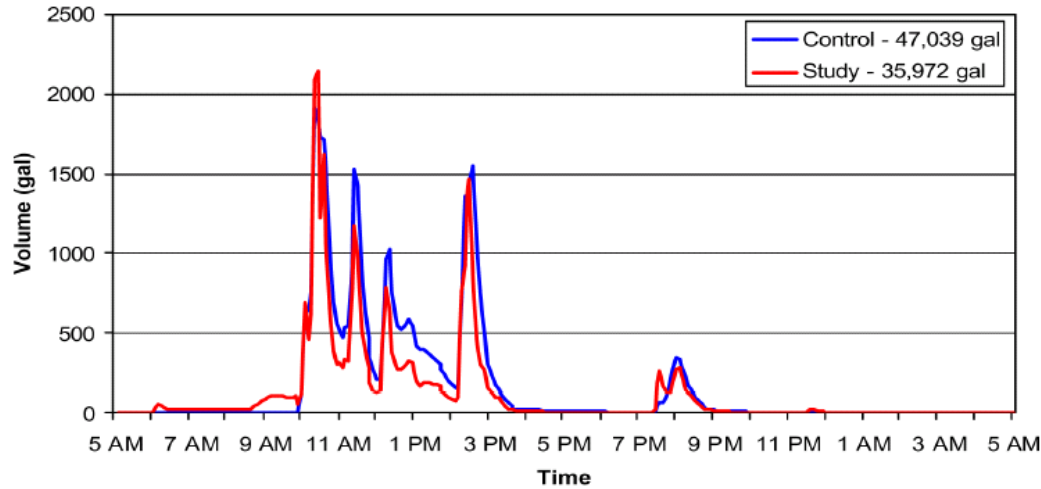
Diagram courtesy of the City of Burnsville, MN from their  
Burnsville Stormwater Retrofit Study



### Pre-Construction Runoff Data

June 6, 2003

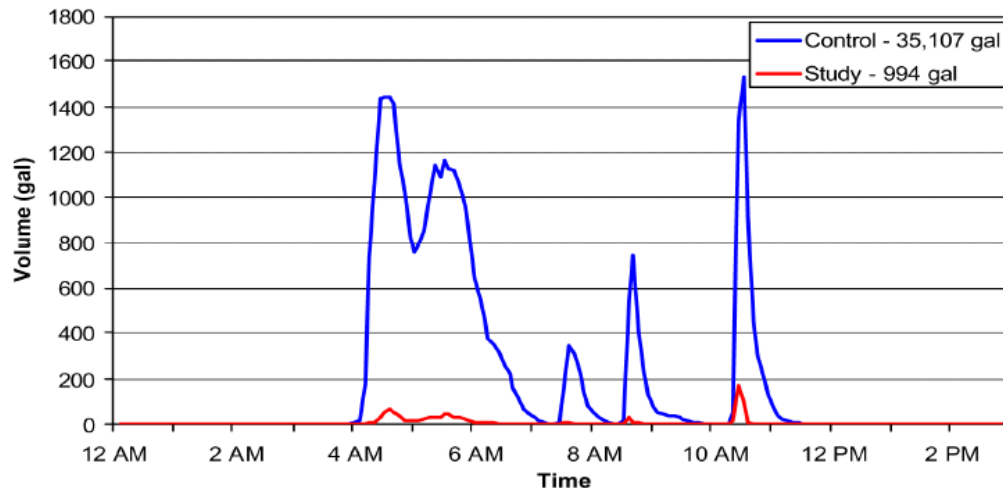
0.50" Rainfall



### Post-Construction Runoff Data

May 29, 2004

0.71" Rainfall



# Burnsville, MN

Blue: Control

Red: With Rain  
Gardens

Diagram courtesy of the City of  
Burnsville, MN from their Burnsville  
Stormwater Retrofit Study

# Burnsville, MN





City of Burnsville  
Designed by: Barr Engineering



8. 2. 2004



City of Burnsville  
Designed by: Barr Engineering



10. 4. 2004





Installation Day

*Before and after pictures*

Photo: Gregg Thompson





Year 5

*Before and after pictures*

Photo: Gregg Thompson





MAY 18 2001

*Examples of rain gardens*

Photo: Maryland

# Quick Video



Thank You!

