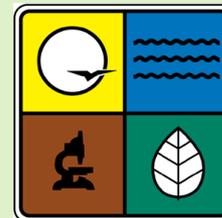


# Introducing Missouri Guide to Green Infrastructure

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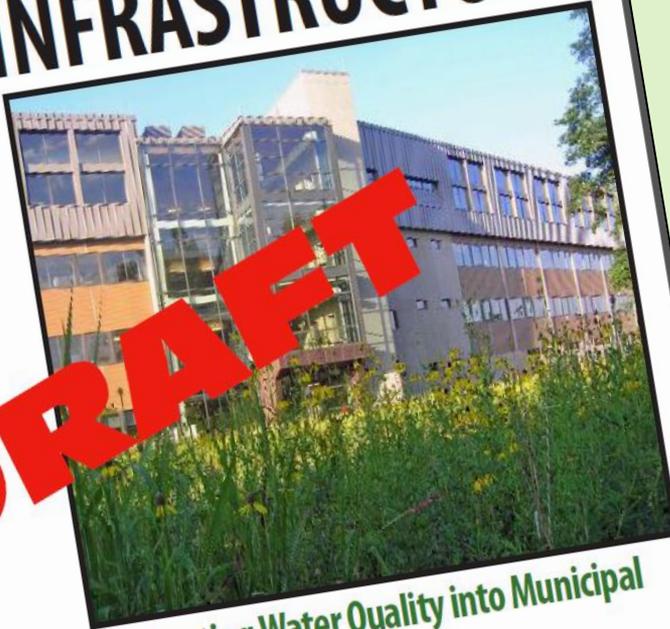
Ruth Wallace, Coordinator

Municipal Stormwater Program



**MISSOURI**  
**DEPARTMENT OF**  
**NATURAL RESOURCES**

# Missouri Guide to **GREEN INFRASTRUCTURE**



**Integrating Water Quality into Municipal  
Stormwater Management**



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

Any day now...

# Guide Purpose

- For municipalities and their development communities
- How to integrate green infrastructure into local development in a cost-effective manner to:
  - address community goals
  - aid stormwater compliance
- Funded by an EPA State and Tribal Assistance Grant

# Caveats

- Not a design manual
- Not a regulatory document

# **Table of Contents**

**Chapter 1: Introduction to Green  
Infrastructure**

**Chapter 2: Sustainable Site Design,  
Development Plan and Land Use Planning**

**Chapter 3: Green Infrastructure for MS4  
Post Construction Runoff Management**

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**Chapter 4: Integrating Green Infrastructure  
into Ordinances**

**Chapter 5: Green Infrastructure  
Implementation Methods**

**Chapter 6: Stormwater Control Measures:  
Strategies, Practices & Tools**

**Appendices et al**



St. Francois State Park, Big River  
Photo: Scott Meyer

# Important Dates

- Permit Application Deadline  
12-12-2012
- Next general permit scheduled  
to be issued June 13, 2013

# Regulations

- NPDES Regulations
  - 40 CFR Parts 9, 122, 123, 124 (**expected revisions to be proposed 2012**)
  - 10 CSR 20-6.200
- Regulated MS4s
  - Phase Is – 100,000+ pop/2000 Census
  - Phase IIs
    - 1,000+ within Urbanized Areas
    - 10,000+ outside Urbanized Areas

# Six Minimum Control Measures

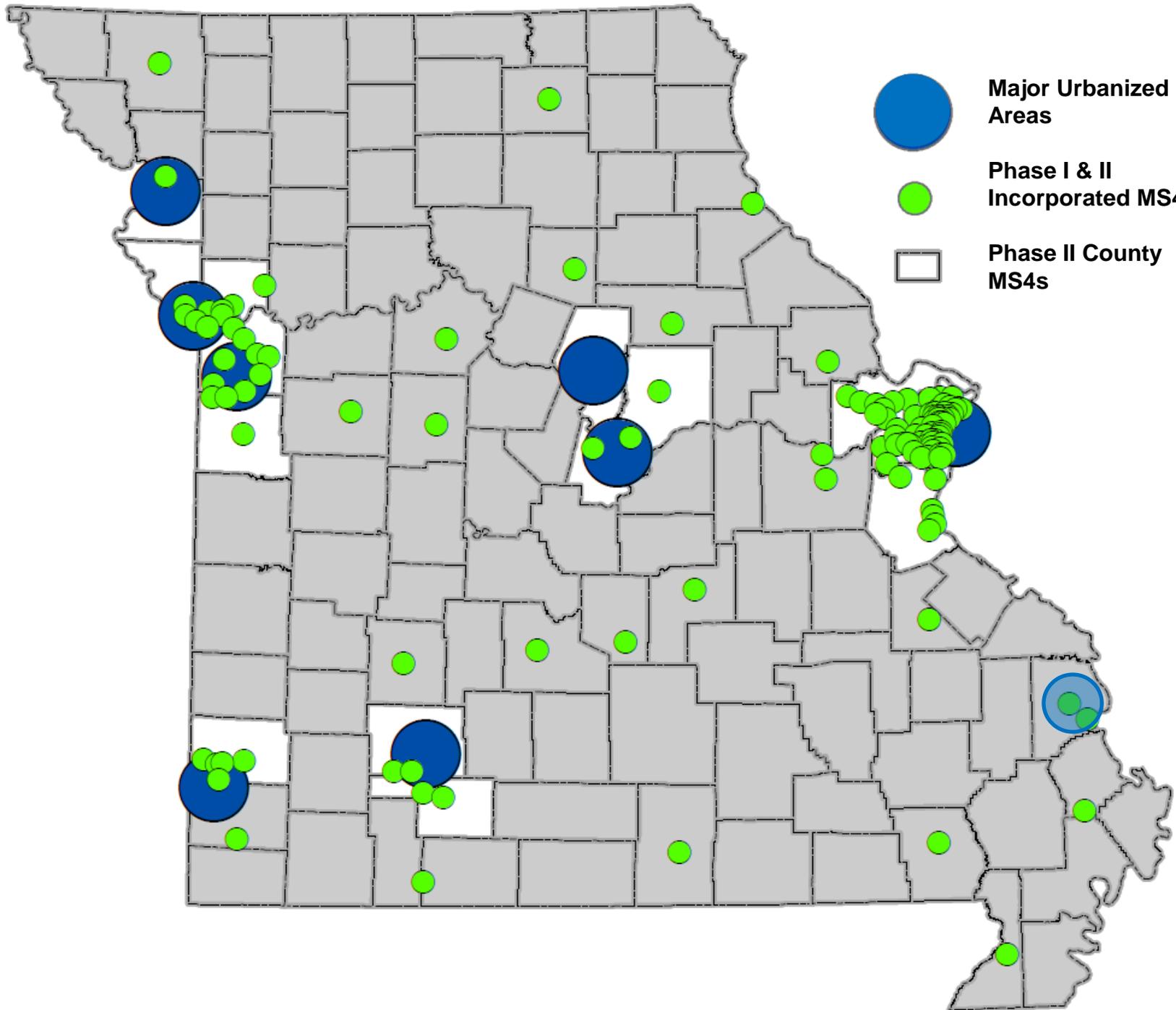
1. Public Education and Outreach
2. Public Involvement & Participation
3. Illicit Discharge Detection & Elimination
4. Construction Site Runoff Control
- 5. Post-construction Runoff Control**
6. Good Housekeeping & Pollution Prevention in Municipal Operations

**Missouri's Phase I & Phase II Storm Water Communities** *Revised January 6, 2012*

Arnold	Cole County	Harrisonville	Neosho	St. Charles County
Ballwin	Columbia	Hazelwood	Newton County	St. George
Battlefield	Cool Valley	Herculaneum	Nixa	St. John
Bellefontaine Neighbors	Cottleville	Holts Summit	Normandy	St. Joseph
Bel-Nor, Village Of	Country Club, Village of	Independence*	North Kansas City	St. Louis (MSD)
Bel-Ridge, Village Of	Crestwood	Jackson, City of	Northwoods	St. Louis County
Belton	Creve Coeur	Jackson County (Salem E)	Norwood Court, Town of	St. Martins
Berkeley	Crystal City	Jasper County	Oakland	St. Peters
Black Jack	Dardenne Prairie	Jefferson City	O'Fallon	Sugar Creek
Blue Springs	Dellwood	Jefferson County	Olivette	Sunset Hills
Bolivar	Des Peres	Jennings	Overland	Troy
Boone County	Duquesne	Joplin	Ozark	Town And Country
Branson	Eureka	Kansas City*	Pagedale	U.S. Medical Center for Federal Prisoners
Breckenridge Hills	Ellisville	Kennett	Parkville	
Brentwood	Excelsior Springs	Kirksville	Pevely	Union
Bridgeton	Farmington	Kirkwood	Platte County	University of Missouri-Col
Buchanan County	Fenton	Ladue	Pleasant Valley	Valley Park
Bymes Mill	Ferguson	Lake Lotawana	Poplar Bluff	Vinita Park
Callaway County	Festus	Lake St. Louis	Raymore	Warrensburg
Calverton Park, Village of	Florissant	Lakeshire	Raytown	Warson Woods
Cape Girardeau	Fort Leonard Wood	Lebanon	Republic	Washington
Carl Junction	Frontenac	Lee's Summit	Richmond Heights	Weatherby Lake
Cartersville	Fulton	Liberty	Riverside	Webb City
Carthage	Gladstone	Manchester	Riverview, Village of	Webster Groves
Cass County	Glendale	Marlborough, Village of	Rock Hill	Weldon Spring
Charlack	Grain Valley	Marshall	Rolla	Wentzville
Chesterfield	Grandview	Maryland Heights	Sedalia	West Plains
Christian County	Green Park	Maryville	Shrewsbury	Wildwood
Clarkson Valley	Greene County	Mexico	Sikeston	Winchester
Clay County	Greenwood	MoDOT	Springfield*	Woodson Terrace
Claycomo, Village of	Hanley Hills, Village Of	Moberly	St. Charles	
Clayton	Hannibal	Moline Acres	St. Ann	

\*Phase I Communities with populations of 100,000+ at the time of the 1990 census.

This list is subject to change upon official decennial census publication, redefinition of urbanized area boundaries, special designation or termination.





# **EPA Summary of State Stormwater Standards 6-30-2011**

- [http://www.epa.gov/npdes/pubs/sw\\_state\\_summary\\_standards.pdf](http://www.epa.gov/npdes/pubs/sw_state_summary_standards.pdf)



# MoDNR Stormwater Information Clearinghouse

DNR Stormwater Information  
Clearinghouse

<http://dnr.mo.gov/env/wpp/stormwater/sw-local-gov-programs.htm>

Guide to be announced on clearinghouse front page and posted on Local (MS4) Government page <http://dnr.mo.gov/env/wpp/stormwater/sw-local-gov-programs.htm#mcm5>



# **New EPA Green Infrastructure Web Page**

## **Home Page**

- <http://water.epa.gov/infrastructure/greeninfrastructure>

## **Modeling Tools**

- [http://water.epa.gov/infrastructure/greeninfrastructure/gi\\_modelingtools.cfm](http://water.epa.gov/infrastructure/greeninfrastructure/gi_modelingtools.cfm)



# Center for Neighborhood Technology

## National Stormwater Management Calculator

- <http://greenvalues.cnt.org/national/calculator.php>

**The Value of Green Infrastructure: A Guide to  
Recognizing Its Economic, Environmental and  
Social Benefits (in partnership with  American Rivers )**

- [www.cnt.org/repository/gi-values-guide.pdf](http://www.cnt.org/repository/gi-values-guide.pdf)

# Questions?



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