

Land Use and Watershed Impacts on Stormwater Runoff



Presentation for the Urban County Council
October 9, 2012

Presentation Topics

1. Stormwater's Impact on Streams
2. Green Infrastructure and Low Impact Development
3. MS4 Permit and Consent Decree Requirements for Green Infrastructure
4. Stormwater Quality Projects Incentive Grant Program

Evolving Solutions for Stream Impairments

Control Flooding

- Detention and Retention Ponds



Prevent Pollutants from entering Stormwater

- Industrial Facility Regulation
- Spill Prevention
- Street Sweeping



Remove Pollutants in Stormwater

- Best Management Practices (BMPs)
- Catch basin filters, oil/water separators



Retrofits with Green Infrastructure Low Impact Development

What is Low Impact Development & Green Infrastructure?

Mimics stormwater runoff patterns of pre-development

Permeable Pavements, Infiltration BMPs, Vegetated Roofs,
Rainwater Harvesting


EVAPO-TRANSPIRATE

INFILTRATE

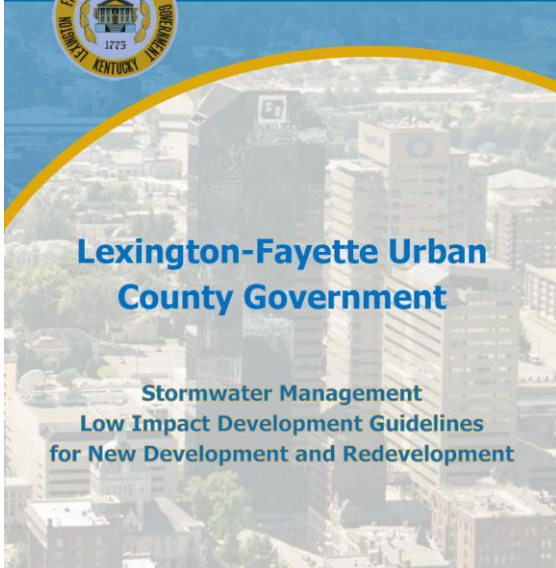


RE-USE





Version: September 2012



Lexington-Fayette Urban County Government

**Stormwater Management
Low Impact Development Guidelines
for New Development and Redevelopment**


Consent Decree & MS4 Permit Requirements

- ❖ Text revisions to Subdivision Regulations in 2010 to remove barriers to green infrastructure
- ❖ Develop LID guidelines by Sept. 2012
- ❖ \$230,000 on Green Infrastructure Projects within 5 years as a Supplemental Environmental Project

Green Infrastructure Consent Decree SEP

- Spend \$230,000 by Jan. 2016 on green infrastructure projects
- DWQ submitted 4 pending Incentive Grant projects as fulfillment of SEP
- EPA complimented program as "innovative" and accepted projects
- 2 projects completed totaling \$293,090
- SEP Completion Report submitted June 2012

SEP Completion Report






Appendix J-2
Green Infrastructure
Supplemental Environmental Project

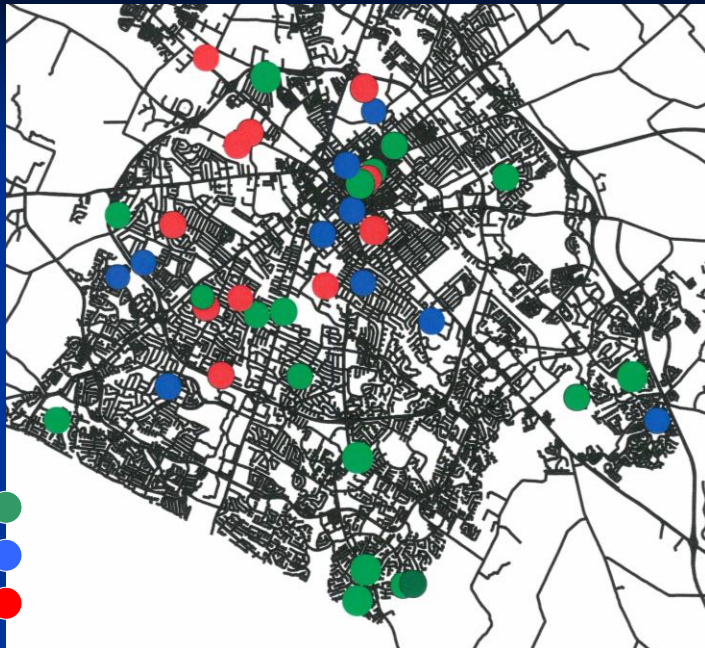
June 29, 2012

Stormwater Quality Projects Incentive Grant Program

- Funded by 10% of Water Quality Management Fee
- Administered through Div. of Water Quality
- *Water Quality Fees Board* selects grants
- Class A (Neighborhood) and Class B (Education & Infrastructure)
- Financial assistance for projects that:
 - ✓ Improve water quality
 - ✓ Reduce stormwater runoff
 - ✓ Educate or involve public
- Cost share is required

50 Incentive Grant Award Recipients

- 25 Neighborhood 
- 12 Education 
- 13 Infrastructure 



Gardens of Hartland HOA Rain Garden



Colony Four Community Association Channel Erosion Repair off of Parkers Mill



BEFORE



AFTER

Participating Neighborhoods/HOAs

- Andover Estates
- Autumn Ridge
- Colony Unit Four
- Eastland Parkway
- Gainesway
- Gardens of Hartland
- Hartland
- Lansdowne
- Martin Luther King
- Meadowthorpe
- North Limestone
- Spindletop
- Southern Heights
- WGPL
- Woodfield Homes

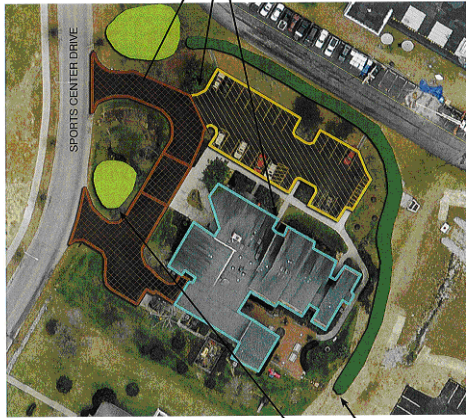


Education Grant Participants

- Universities (Transylvania and University of Kentucky)
- Fayette County Public Schools
- Non-Profits
- Telecommunication Companies (WLEX, WKYT)



Infrastructure Grants



PROPOSED RAIN GARDENS (2)
PROPOSED BIOFILTRATION SWALE

RONALD MCDONALD HOUSE
LFUCG Incentive Grant Application



Consent Decree Green Infrastructure SEP Projects

- **Coca-Cola Refreshments USA, Inc. - \$189,090 grant**
- **AIE Properties (Ross Tarrant Architects) - \$109,000 grant**

These projects were undertaken in connection with the settlement of an enforcement action under the Clean Water Act, United States et al. v. Lexington-Fayette Urban County Government, brought on behalf of the U.S. Environmental Protection Agency. These projects includes “green infrastructure” components for management of wet weather flows in urban areas of Fayette County, and have been identified as a “Supplemental Environmental Projects” required by the Consent Decree entered on January 3, 2011 between the United States of America and the Commonwealth of Kentucky and the Lexington-Fayette Urban County Government.

**Coca-Cola Refreshments – Leestown Road
10,000 gallon Rainwater Harvesting Tank**



**Coca-Cola Refreshments – Leestown Road
Re-use: Battery Filling, Truck Wash, Toilets**



**Coca-Cola Refreshments – Leestown Road
Bioretention Facility**



**Ross Tarrant Architects – Old Lafayette Ave.
Pervious Concrete Parking Lot Retrofit - BEFORE**



Ross Tarrant Architects – 101 Old Lafayette Pervious Concrete Parking Lot Retrofit - AFTER



Stormwater Quality Projects Incentive Grant Program

FY 2011 – FY 2013 Highlights

- 109 applications received
- 50 grants awarded to date for \$2,674,043
- EPA's Green Infrastructure office visited in Sept. 2011
- EPA and State complimented program
- Other communities looking to copy Lexington's program
- High community participation and positive feedback
- Mechanism to meet future MS4 Permit requirements

Upcoming with
FY2013 Program

Selected Grants to
Council for award
in

October 2012
through
February 2013



Questions?

