

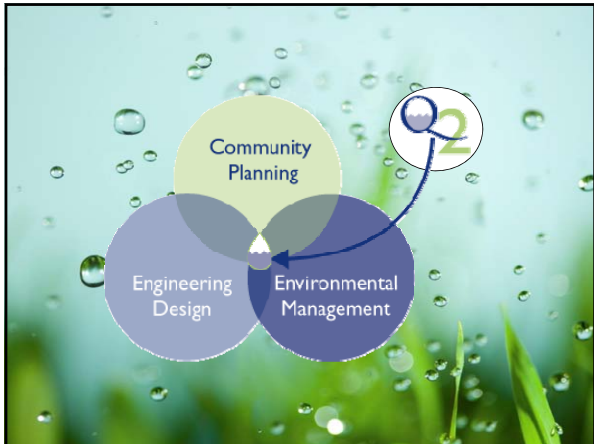
Kansas City Regional Watershed Management

Stormwater Solutions Tour

GreenWay Alliance
Regional Economic Area Partnership

October 14, 2010





Q2 - Regional Watershed Management Philosophy

- Stormwater Design and Engineering
- Stream Buffers and Setback Ordinances
- Water Quality Best Management Practices (BMP)

= **Multiple-Benefit Solutions: Recreation, Economic Development, Quality of Life**

Stormwater Design and Engineering

- Design With Natural Hydrology
- Limit Runoff Rate and Volume
- Protect Natural Streams
 - Stream stability assessment and guidance
 - Outfall and stabilization design
 - Stream buffers and setback ordinances

Stream Setbacks

- Separate Streams and People
 - ■ Minimum: 40 to 120 feet from top of bank
 - Some communities protect floodplains and steep slopes, and vegetation
- Protect Infrastructure, Inhabited Structures, Habitat, and Connections
- Create Amenities, Provide Recreation and Enhance Economic Development

Kansas City, Missouri

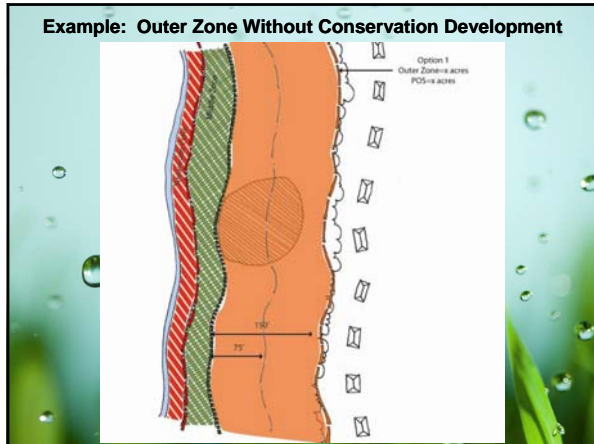


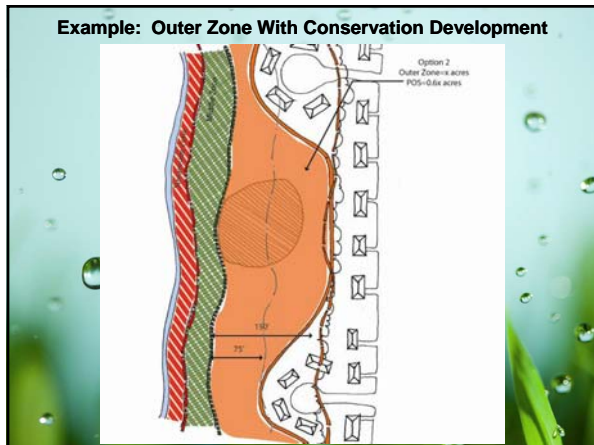
Floodplain and Mature Riparian Vegetation

Kansas City, Missouri



Middle (Green) and Outer (Orange) Zones





Water Quality BMPs

- Prevent Runoff Through Preservation and Restoration of Native Vegetation
- Infiltrate or Filter Near the Source
- Provide Treatment with Detention

= Mimic Natural Hydrology

- 40-Hour Release Rate for Detention BMPs

Types of BMPs



Rain Garden: Black & Veatch - Kansas City, Missouri

Types of BMPs



Residential Rain Garden - Merriam, Kansas

Types of BMPs



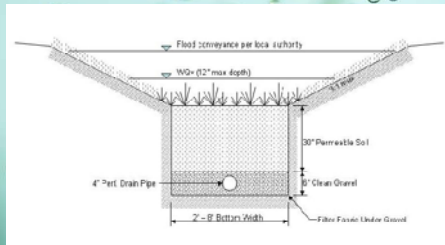
Permeable Paving: Oregon Trail Park, Olathe, Kansas

Types of BMPs



Permeable Paving: Tuilleries – Kansas City, Missouri

Types of BMPs

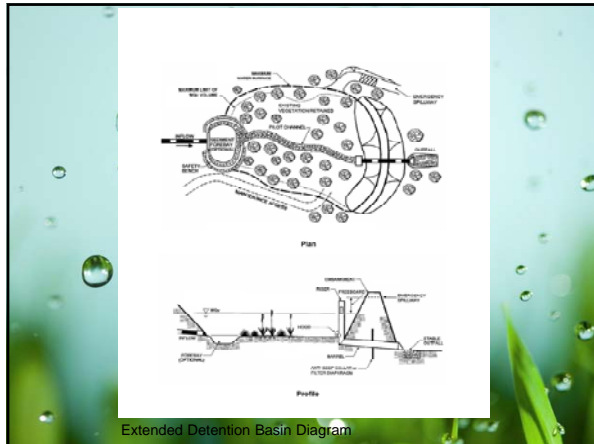


Bio-swale Diagram

Types of BMPs



Bio-swale: Nazarene Headquarters – Lenexa, Kansas



Extended Detention Basin Diagram

