

**Wet Weather Team
Group Exercise
For the Wet Weather Team Meeting on August 2, 2007**

Opportunities and Challenges Associated with Green Infrastructure

This document describes a “homework assignment” to prepare for a group exercise at the August 2nd Wet Weather Team meeting on the topic of green infrastructure in Louisville/Jefferson County. The document begins with background information on the work the Green Infrastructure Team is doing and its relation to MSD’s Wet Weather Consent Decree obligations, describes the purpose of the assignment and exercise, provides examples of green infrastructure opportunities and challenges, and ends with the worksheet for the assignment. Please complete the enclosed worksheet and bring it with you to the Wet Weather Team meeting on August 2, 2007.

Background

The Green Infrastructure Team has been asked by MSD to initiate a broad study of potential green infrastructure opportunities that would benefit the Louisville/Jefferson County community at large in more effectively managing its precipitation and water resources. This green infrastructure effort would reach beyond the scope of MSD’s Consent Decree, in that it may involve actions that are not completely within MSD’s responsibilities for controlling sewer overflows and/or activities that may extend beyond the time frames indicated in the Consent Decree. Nevertheless, MSD anticipates that green infrastructure will serve an important role in augmenting the Wet Weather Plan and ensuring that the community’s resources are used cost effectively to improve water quality.

In response to new directives from the highest levels of USEPA, MSD is exploring the potential of incorporating green infrastructure elements into its Wet Weather Plan for control of water quality issues associated with combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), and storm water runoff. Although it is recognized that conventional engineering solutions such as high rate treatment, sewer separation, tunnels, and remote storage facilities represent the core elements of the long term control plan, the trend nationally is to supplement these “conventional” engineering solutions with green infrastructure. Green techniques such as vegetated roofs, porous pavements, wetlands, rain gardens, infiltration chambers, and increased greenspace present an opportunity to provide the community with multiple benefits. In addition to reducing storm water runoff which minimizes the frequency, duration and volume of CSOs, green infrastructure can also:

- reduce the pollutant loading to the sewer system;
- provide wildlife habitat;
- connect greenspaces throughout the community;
- improve community beautification efforts;
- reduce heat island effects;
- restore or improve the health of natural systems such as riparian corridors; and
- improve air and water quality.

When considering the role of green infrastructure in the long term control planning process, it is important to consider the costs and benefits of green alternatives in determining the relative magnitude of the community’s commitment to these practices.

Homework Assignment

As discussed at the June 21st Wet Weather Team meeting, we will be conducting a facilitated discussion at the August 2nd Wet Weather Team meeting regarding the opportunities and challenges associated with implementing a green infrastructure program in Louisville/Jefferson County. This program is expected to reach beyond the scope of, but at the same time, augment MSD's Wet Weather Plan.

Purpose

The purpose of this exercise is to share your local insight and perspective with the Consultant Team regarding green infrastructure. Our primary goal is to explore techniques that minimize the entry of stormwater runoff into the sewer systems. This will be accomplished in a variety of ways ranging from the construction of green components such as a biofiltration chambers and rain gardens on individual lots, to broader and more long range solutions such as urban reforestation. Additionally, we expect the green infrastructure plan to identify projects and programs that directly relate to compliance with the terms of the Consent Decree as well as initiatives that go beyond the jurisdiction of MSD, but would be good for the community as a whole. The secondary goal of the green infrastructure initiative is to establish a well connected system of green infrastructure that maximizes the benefits received by the community. The value in this exercise is that each member of the Wet Weather Team will view these issues from a different perspective.

When considering opportunities and challenges associated with developing a green infrastructure plan, some of you may choose to focus strictly on a neighborhood scale, while others may choose to focus on more regional issues. Although we welcome as much input as possible, we do not expect any individual to generate responses to all the categories that we have identified. In fact, one or two well thought out comments from each member of the Wet Weather Team will be considered success.

Examples

The following are some examples of opportunities and challenges, some of which were presented at the last meeting.

■ Opportunities

- Connect Cherokee and Seneca Park with the waterfront
- Restore CSO 127 meander
- Convert Eva Bandman Park into restored wetlands
- Restore wetlands at quarry areas between Grinstead and Payne
- Detention pond at Beechwood Village entrance
- Park-like wet detention area at St. Matthew's Park
- Restore South Fork between I-264 and Eastern Parkway
- Rain barrel program

■ Challenges

- Land/Easement acquisition
- Ownership and maintenance
- Public Awareness
- Cost
- Regulatory Compliance
- Schedule
- Local soils for infiltration

In preparation for the discussion at the Wet Weather Team meeting, we would like you to focus your identified opportunities and challenges in terms of the physical scale of the proposed projects and/or initiatives using the following categories of scale:

- a) Component (an example would be a pocket wetland)
- b) Site/parcel (a site can include multiple components)
- c) Neighborhood
- d) Watershed
- e) Regional

As you go through this exercise, we also ask that you consider the following issues:

- Long term ownership and maintenance.
 - MSD owns and operates
 - MSD partners with other entities
 - Incentivized activities (stormwater credits, tax incentives)
 - Private facilities – detention/retention
 - Homeowner techniques – rain gardens, rain barrels
- Quantification/Measurement of Performance.
 - Well established techniques with predictable short-term results
 - Well established techniques, but unproven voluntary participation
 - Projects that require many years to realize benefits (e.g. urban reforestation)
 - Unproven technologies
 - Regional policies with anticipated, but not quantifiable committed results
 - Behavior modification resulting from sustained education programs

Structure of the Exercise at the August WWT Meeting

The exercise will begin with a presentation on opportunities identified at previous Wet Weather Team meetings, and a discussion of the challenges anticipated by the Green Infrastructure Team. Wet Weather Team members will then be asked to share some of the opportunities and challenges they identified in the homework assignment with the group. The exercise will conclude with an opportunity to bring up any additional opportunities and challenges.