Welcome

May 20, 2011

Communities of the Future Advisory Committee Meeting

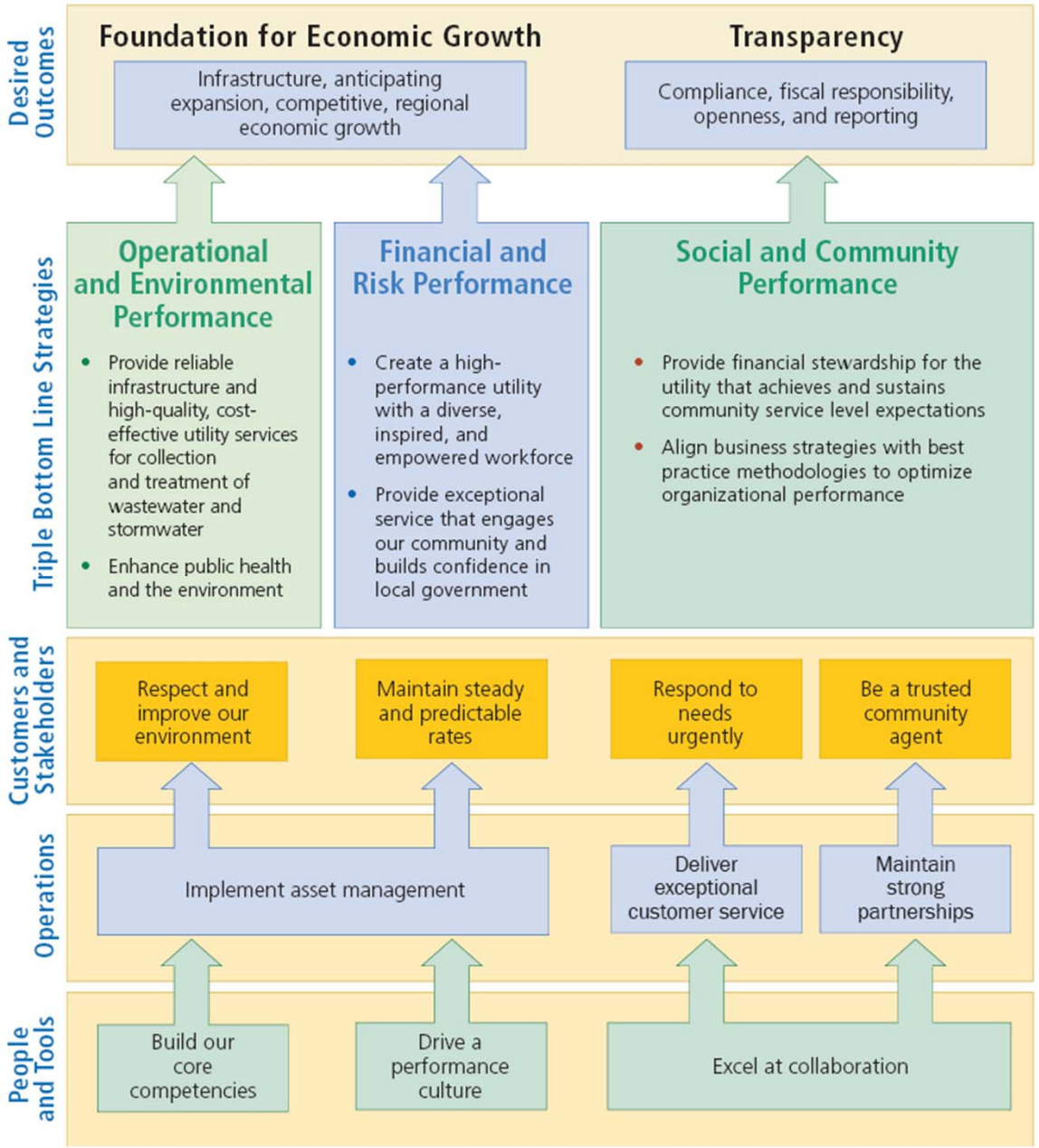
METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Agenda

- MSD Update on Progress update on Lower Mill Creek Watershed
  - Outreach and Engagement
  - Meeting updates: USEPA Region 5 and Ohio EPA
- LMCPR Alternative: Progress update on Source Control
  - Introduce Preliminary SWEPs for Kings Run, Bloody Run
  - Update on West Fork, Lick Run
- Future Community Engagements
  - Planning for Lick Run Design Workshops
  - West Fork Open House
  - Kings Run, Bloody Run Advanced Planning
- USEPA Strategic Integration Plan

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

MSD's Strategy Map is Built on the Triple Bottom Line



Context
Source Control

Guerley Road & Sunset Avenue

Lick Run Watershed

HELP SHARE CONTENT SUBSCRIBE ADVERTISE CLASSIFIEDS JOB

CINCINNATI.com
A GANNETT COMPANY

News Sports Entertainment Living Business

Sign up Log in MORE: NKY.Com Cincinnati USA Metromix MomsLikeMe

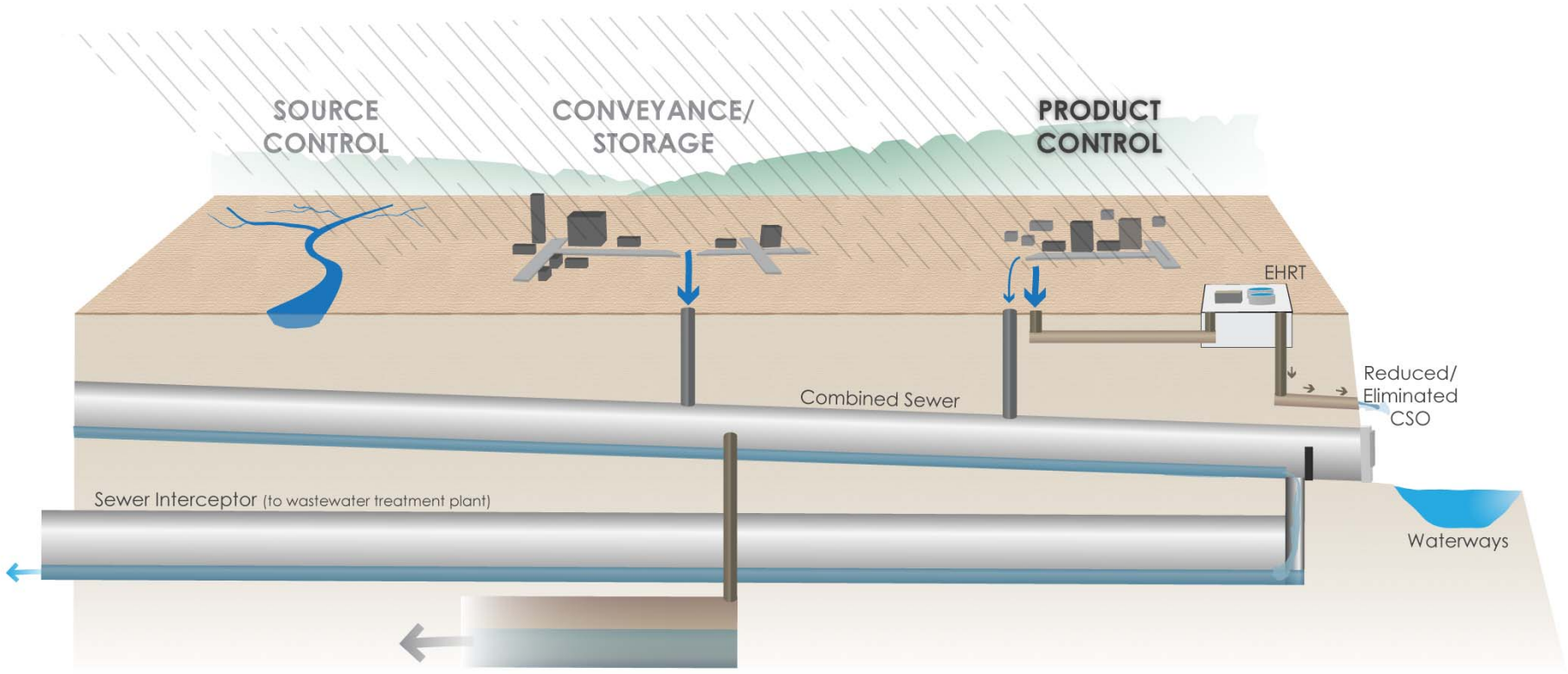
April 19, 2011

Men rescue driver from high water

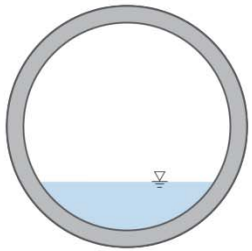
12:41 PM, Apr. 19, 2011 | 5 Comments

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

MSD's Wet Weather Strategy



Hydraulic Grade Line inside sewer



Context
Communities of the Future

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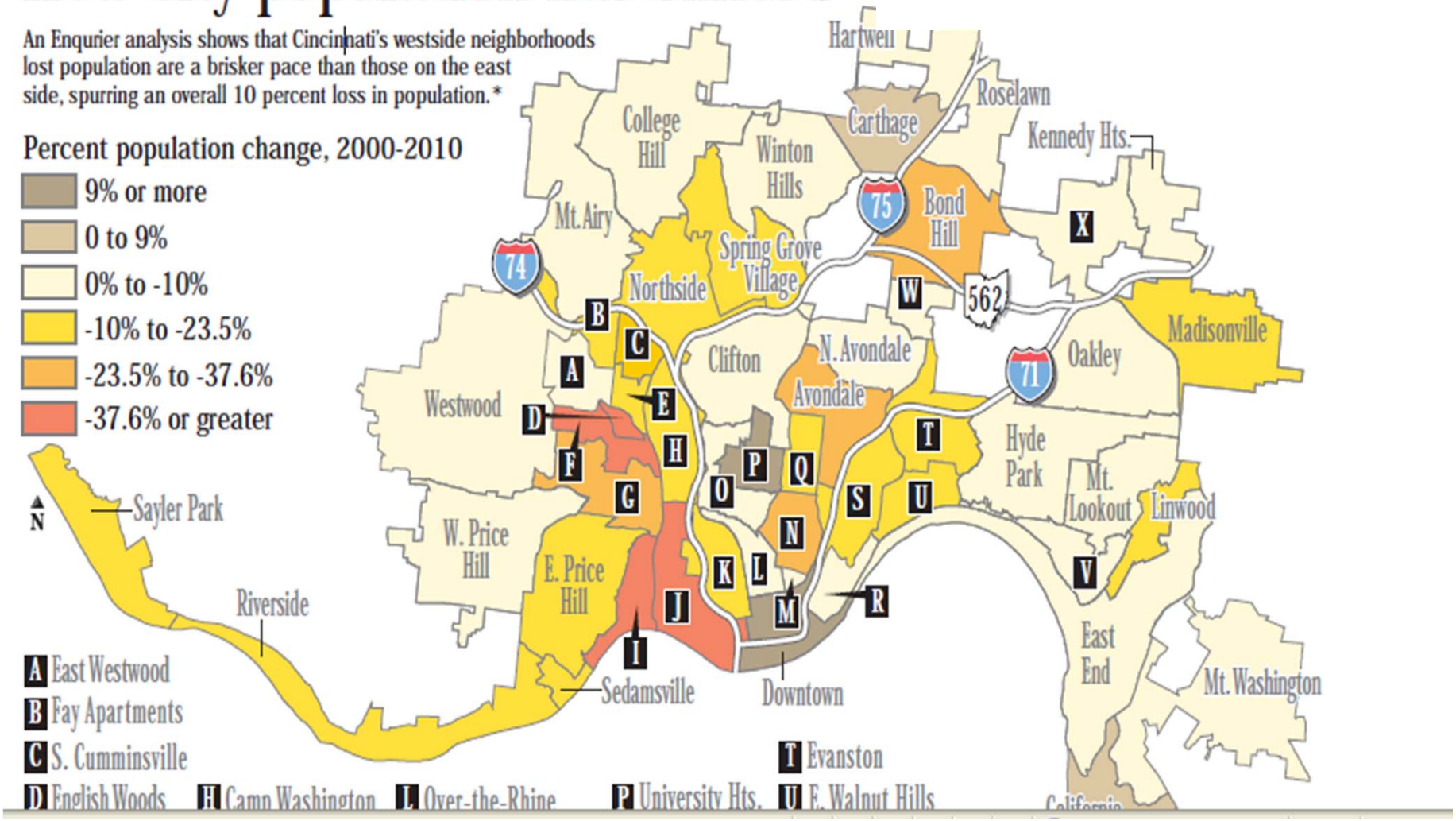
How city population has shifted

April 7, 2011

An Enquirer analysis shows that Cincinnati's westside neighborhoods lost population are a brisker pace than those on the east side, spurring an overall 10 percent loss in population.*



Context
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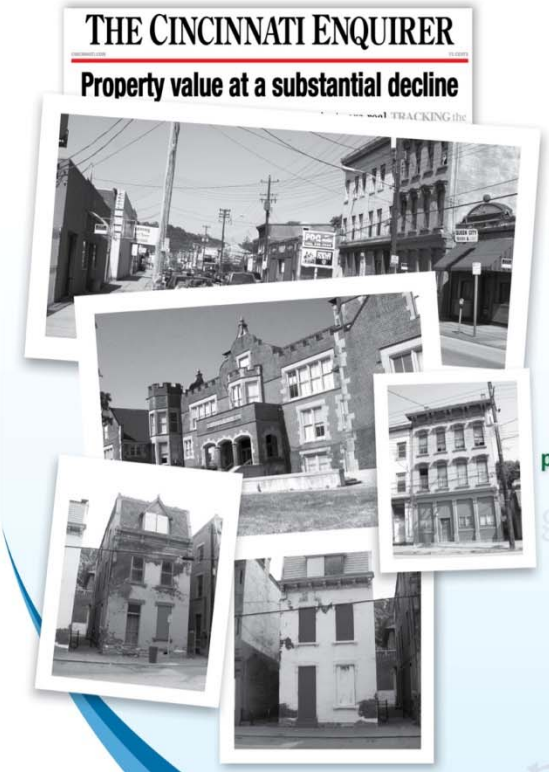
April 21, 2011

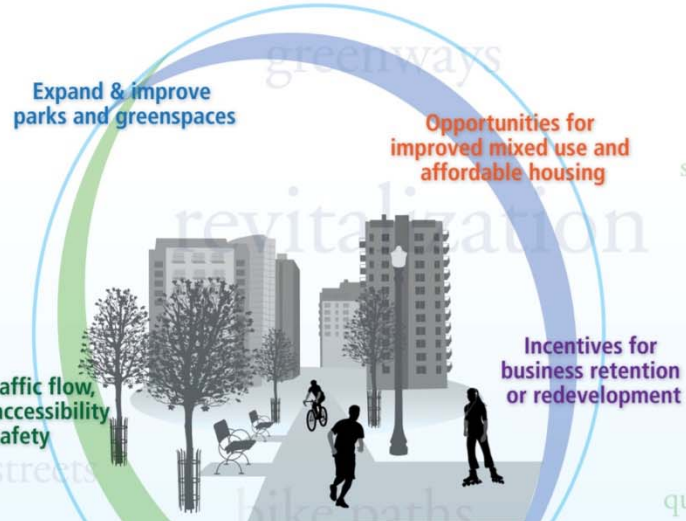
Hamilton County property values drop $5B

Current Conditions in the Community

Leverage MSD's Investment

Community's Vision for the Future





MSD

Metropolitan Sewer District

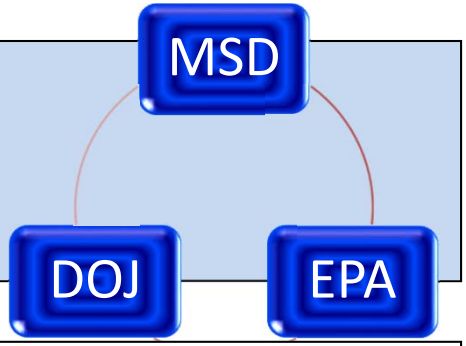
Investment to reduce sewer overflows and meet federal mandates

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

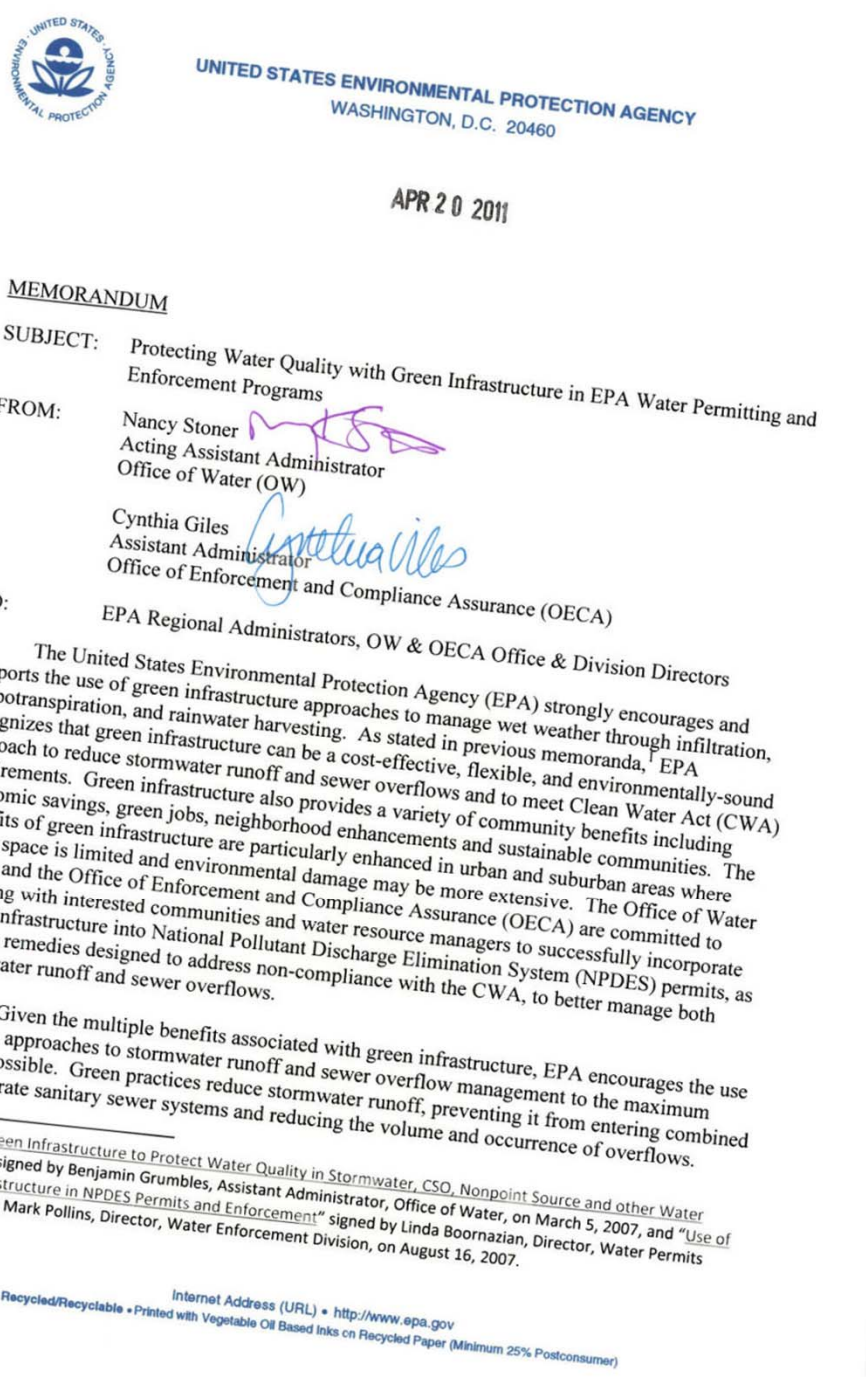
The “Getting to Yes” Pipeline

Communities of the Future

USEPA Region 5 Meetings - Update
LMCPR Alternative



January 2011 - Chicago	April 2011 - Cincinnati
•LMCPR alternatives discussion •Agreed that sustainable infrastructure is viable source control MSD and USEPA in alignment on concept USEPA and DOJ seek clarity that current approach for green is more fitting to meet MSD needs •USEPA interest in Lick Run as test case for national model •Agreed to meet in Cincinnati to "ground-truth" the concept & technical details	•Detailed Source Control discussion •Concurrence to refine current model by using more dynamic tools and updates •Follow up meeting w/ technical review of model updates: June 2011 •Technical discussion of Lick Run watershed and strategic separation •Overview of West Fork Sustainable Infrastructure • Tour of Lick Run Watershed to "ground truth" current conditions & assumptions



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 20 2011

MEMORANDUM

SUBJECT: Protecting Water Quality with Green Infrastructure in EPA Water Permitting and Enforcement Programs

FROM: Nancy Stoner
Acting Assistant Administrator
Office of Water (OW)

Cynthia Giles
Assistant Administrator
Office of Enforcement and Compliance Assurance (OECA)

TO: EPA Regional Administrators, OW & OECA Office & Division Directors

The United States Environmental Protection Agency (EPA) strongly encourages and supports the use of green infrastructure approaches to manage wet weather through infiltration, evapotranspiration, and rainwater harvesting. As stated in previous memoranda,[1] EPA recognizes that green infrastructure can be a cost-effective, flexible, and environmentally-sound approach to reduce stormwater runoff and sewer overflows and to meet Clean Water Act (CWA) requirements. Green infrastructure also provides a variety of community benefits including economic savings, green jobs, neighborhood enhancements and sustainable communities. The benefits of green infrastructure are particularly enhanced in urban and suburban areas where green space is limited and environmental damage may be more extensive. The Office of Water (OW) and the Office of Enforcement and Compliance Assurance (OECA) are committed to working with interested communities and water resource managers to successfully incorporate green infrastructure into National Pollutant Discharge Elimination System (NPDES) permits, as well as remedies designed to address non-compliance with the CWA, to better manage both stormwater runoff and sewer overflows.

Given the multiple benefits associated with green infrastructure, EPA encourages the use of green approaches to stormwater runoff and sewer overflow management to the maximum extent possible. Green practices reduce stormwater runoff, preventing it from entering combined and separate sanitary sewer systems and reducing the volume and occurrence of overflows.

[1] "Using Green Infrastructure to Protect Water Quality in Stormwater, CSO, Nonpoint Source and other Water Programs" signed by Benjamin Grumbles, Assistant Administrator, Office of Water, on March 5, 2007, and "Use of Green Infrastructure in NPDES Permits and Enforcement" signed by Linda Boornazian, Director, Water Permits Division and Mark Pollins, Director, Water Enforcement Division, on August 16, 2007.

Internet Address (URL) • http://www.epa.gov
Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 25% Postconsumer)

April 20, 2011 USEPA Memo

Office of Water
Office of Enforcement & Compliance Assurance

"Cincinnati's 2004 consent decree (CD) … opportunities to incorporate green infrastructure solutions by substituting "green for grey" on a project by project basis.

- ***"The city is currently evaluating potential green infrastructure projects and has a three year study and detailed design period to examine green solutions in the Lick Run Watershed, in Mill Creek Valley on the west side of Cincinnati.***

- ***"One promising project in the Lick Run drainage area, a corridor that includes an environmental justice community, would remove storm water flows from the combined sewer system and create a new above-ground drainage feature with surrounding park land. "***

“Project Groundwork Partner” Designation

OBJECTIVES

- To recognize stakeholders whose support is important to the successful approval and implementation of the Lower Mill Creek/Lick Run alternative.
- To formalize partnerships with community groups, critical property owners, and businesses within the Lick Run watershed.
- To provide a value proposition for those stakeholders by offering recognition for their commitment to the Project Groundwork principles and the enhancement of quality of life in their community.

PROJECT GROUNDWORK
your pipeline to clean water
PARTNER

Partnership Designation Criteria

Partners agree with the following Key Principles critical to the success of Project Groundwork:

- Environmental and Public Health protection is essential to the quality of life of communities, and reducing combined sewer overflows is critical to that protection.
- Economic Revitalization is a cornerstone of strong communities, and Project Groundwork can be a catalyst for business growth and job creation.
- Social and Recreational Opportunities add value to local communities and connect citizens with their natural environment.

Partners agree to support MSD in its efforts to successfully gain approval for Project Groundwork, and to work within their local watershed to ensure its principles are fulfilled.

PROJECT GROUNDWORK
your pipeline to clean water
PARTNER

PROJECT GROUNDWORK
your pipeline to clean water

PARTNER

- **MCRP** - Developing school based program to educate and train school students on value and use of natural resources, water management
- **St Francis Court Apt** – Allowing the use and demonstration of bioinfiltration solution on site that provides community amenity that creates greater value and benefit for public education
- **LISC/CBI** – Leadership in developing a community outreach/organizing effort to help catalyze resources and collaboration around the concept of communities of the future
- **City Planning Dept** – Commitment to develop and support tools, incentives and strategies to support sustainable infrastructure
- **Parks Board** –Develop and install practices on properties and create new partnerships for expanding knowledge and opportunities

Lick Run Watershed
Outreach Efforts to Date

- Open House January 2011
  - Postcard invitations to watershed residents/businesses
  - Attended by 120 community representatives, 50% representing the watershed communities.
- Feedback from the workshop was positive overall:
  - More than 30 expressed interest to participate in design workshop.

INSERT PHOTO

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Lick Run Watershed
Outreach Efforts to Date

- Mailings:
  - May 2011 letter mailed to every property owner within the Lick Run watershed and corridor – approximately 6,500 - providing an update on the project and a point of contact.
- Feedback from the letters was positive overall:
  - More than 100 phone calls and emails received & responded to (to date).
  - Most were interested in learning more about the project and whether it would impact them.

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Lick Run Watershed
Outreach Efforts to Date

- Since July 2010, MSD meets one-on-one with property owners and residents in the area who request additional information, and has maintained an ongoing dialogue with these individuals.
- MSD has attended the March and April meetings of the South Fairmount Business Association, making presentations and directly responding to questions and concerns.
  - MSD has also offered to meet regularly with a core committee of 2-3 members of this group to ensure they are kept up-to-date between meetings.

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www.projectgroundwork.org/lickrun

- Offers information specific to South Fairmount and Lick Run
- Can be accessed at the community's convenience
- MSD has developed a Lick Run FAQ that will be posted on the website soon

Lick Run Watershed
Outreach Efforts to Date

- **Community Newsletter Updates**: Project update articles are placed in the South Fairmount community newsletter and have been since **spring 2010.**
- An **MSD representative attends each meeting** of the South Fairmount Community Council to answer questions and provide project updates.
  - June 14, 2011 Presentation to Community Council
    - Inform & Influence Committee to Present with MSD
    - Kick off of design workshops

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Direct community involvement in designing the vision

- Beginning in July 2011, MSD will conduct a series of three interactive Community Design Workshops.
- Workshops give community members an opportunity to provide specific input on proposed project concepts.
- Workshops ensure all voices within South Fairmount and Lick Run Watershed are heard and can offer direct feedback on how the area may be transformed by the alternative solution.

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Public Involvement in Historic & Cultural Section 106 Review

Establishes a process for public involvement triggered by Federal Action or Funding

- Guarantees a process for input
- Framework for consultation
- Lead Federal Agency
- "Consulting Parties"

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Public Involvement in Historic & Cultural Section 106 Review

Lead Agency: HUD

Who are Consulting Parties in Section 106?

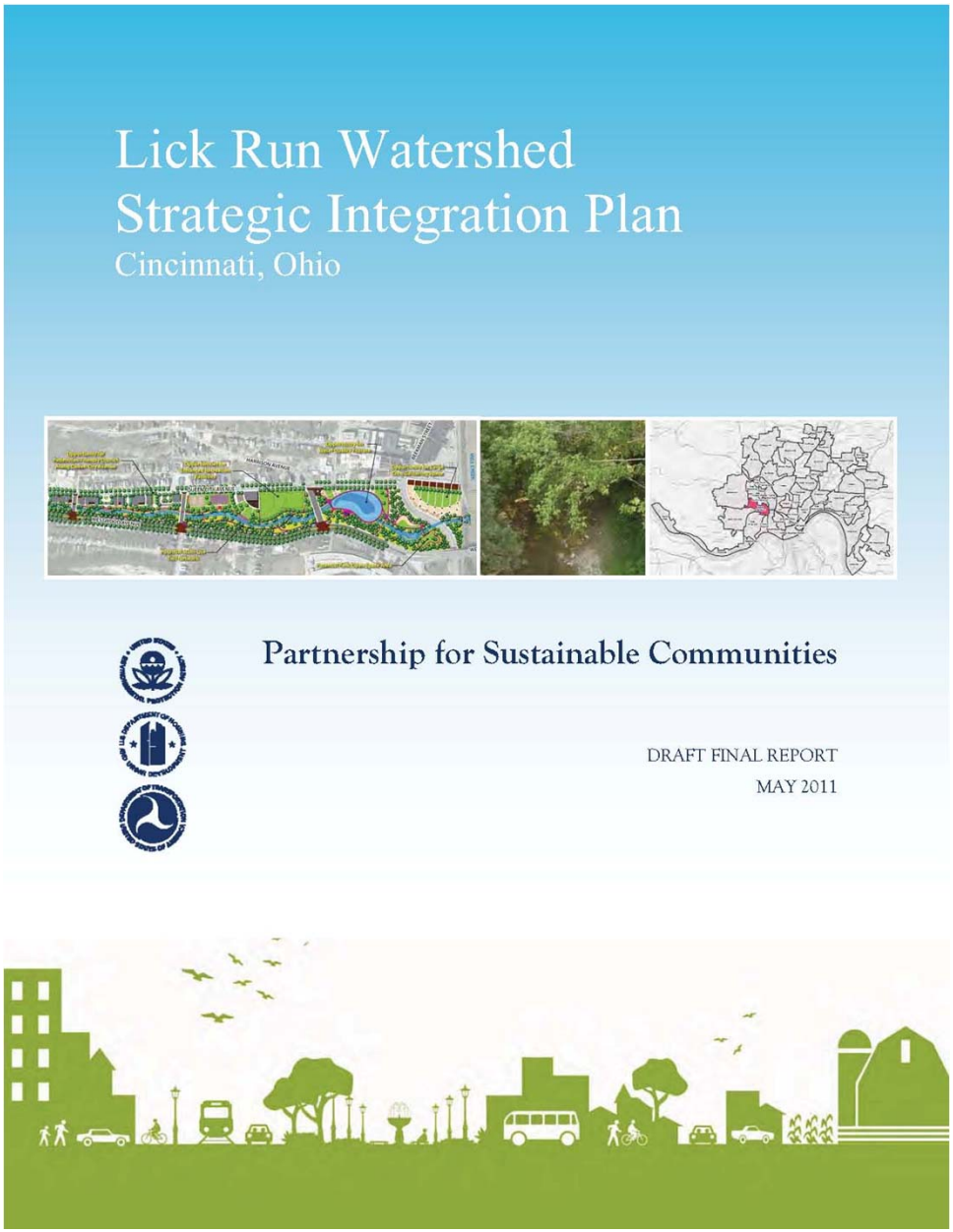
- State Historic Preservation Officers (SHPO)
- City of Cincinnati
- MSD: Applicant for Federal assistance, permits, licenses, and other approvals

MSD shall designate CFAC as a consulting party in 106 review, providing information about project impacts, mitigation plans and approaches

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Jon Grosshans,
USEPA

Bob Newport,
USEPA



What is a Community Design Workshop?

- A collaborative session in which members of the public work together to draft a proposed design solution
- Allow for the integration of
  aptitudes and interests
  diverse group of people
  multiple views
  final solutions

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Benefits of using the Design Workshop approach

- Ideas are collected as they evolve
- Questions are asked and answered at the same time
- Ideas are considered in an unbiased setting
- Community members have a stake in the final solution because they helped develop it

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Public Workshop #1

Orion Academy (South Fairmount)
July 19 or 21
6:00 – 8:30

Audience

- General watershed public
- MSD core planning & design team
- CFAC Members
- Project Groundwork Partners

Goals

Format

- Introduction/ Overview
- Question & Answer Session
- Break-out Sessions
  - (Visual Preference Surveys)
- Summary/Recap

Preparation

- Data Gathering, Interviews, Outreach, Community Organizing

Public Workshop #1

Goals

1. Outline Communities of the Future opportunities for South Fairmount and the Lick Run Watershed

2. Describe how MSD hopes to collaborate with the community on shaping this vision moving forward through a robust civic engagement process

3. Identify specific community needs, desires, priorities, and concerns with the intent of using this information, input and feedback to develop a Lick Run Master Plan by February 2012

Public Workshop #1

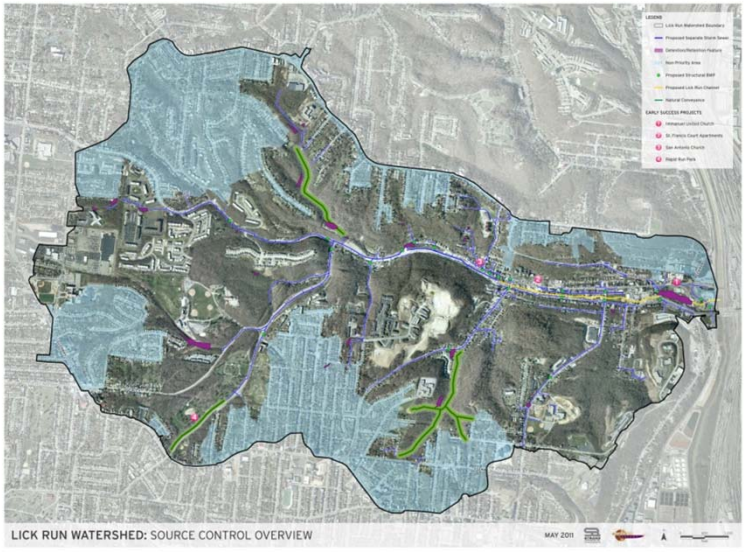
Introduction

Provide a brief overview of information & outcomes from the January Lick Run Open House

Explain the status of the concepts for the Lick Run watershed-based solution, the outcomes from the technical evaluation and VE study, and the communications with US EPA

Outline the schedule for the public workshops and the purpose of Public Workshop #1

Introduce & discuss conceptual CSO reductior solution for South Fairmount corridor and explain major technical objectives
(*e.g.*, current conditions water quality needs, CSO control needs, project boundary, etc.)



Public Workshop #1

Break-out Sessions

Provide general background information on the different components of the integrated Lick Run Master Plan

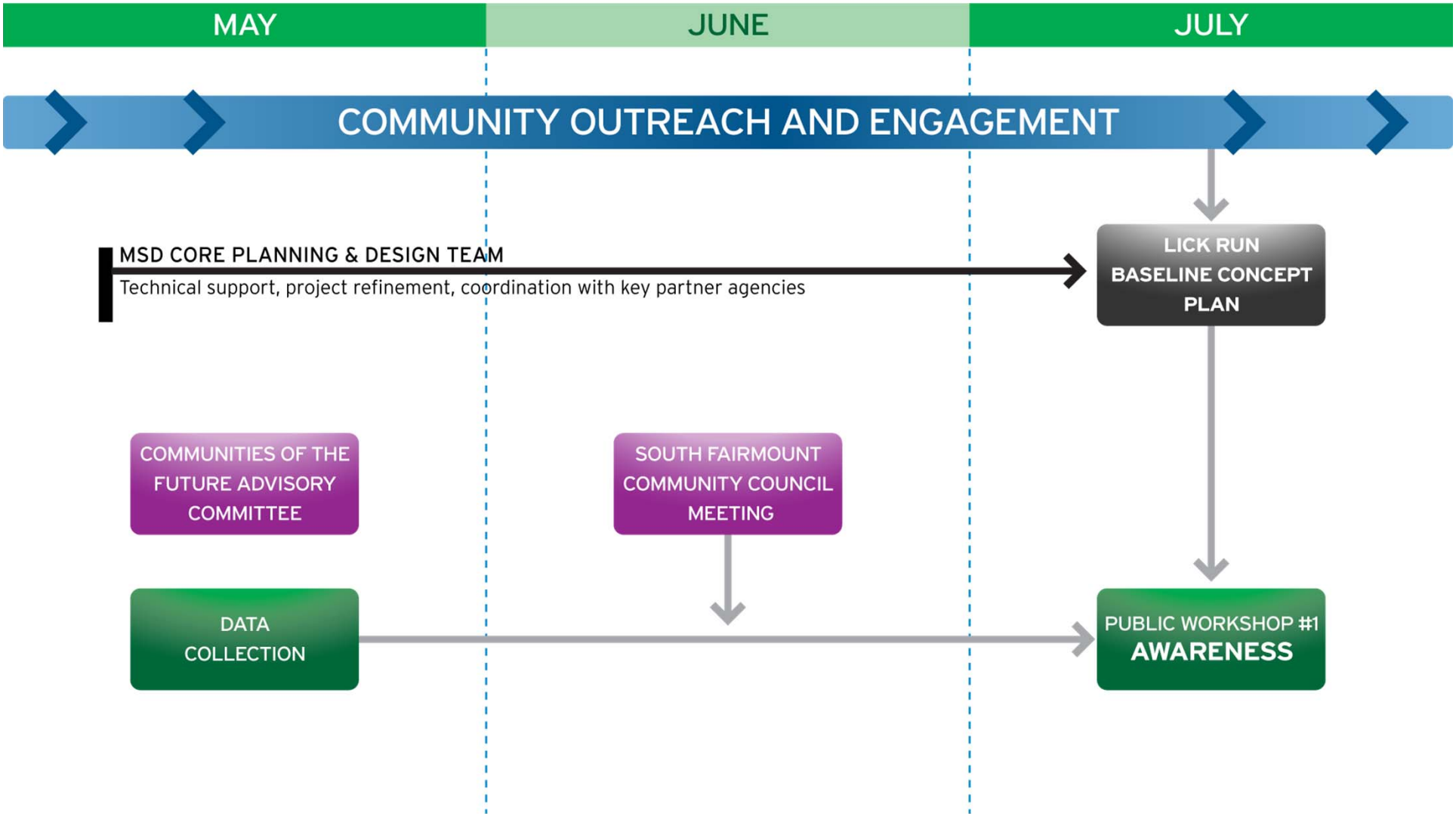
Gain input/feedback through visual preference surveys and discussions focused on a particular watershed strategy components

Public Workshop #1

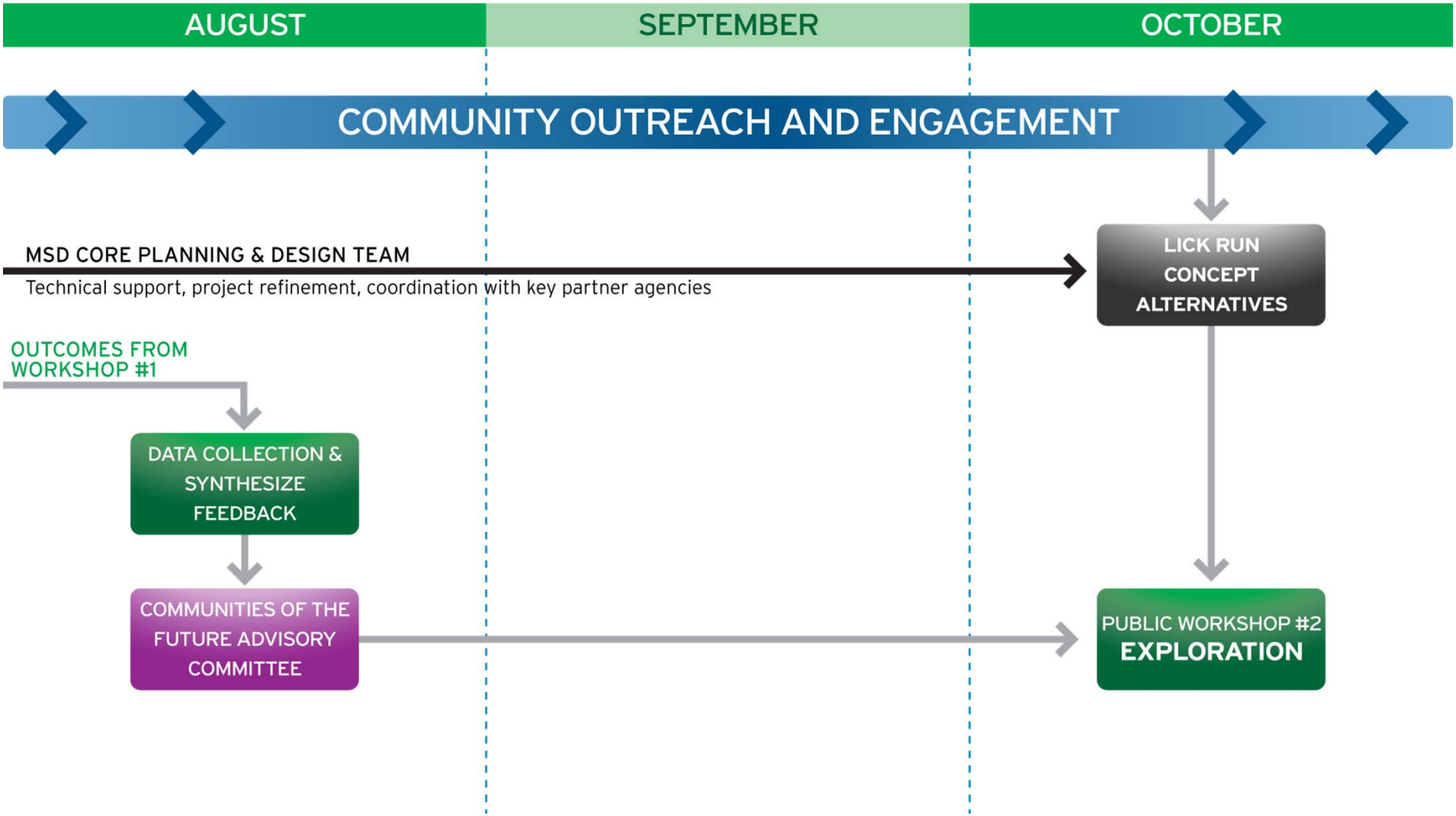
Summary/Recap

Outline main points and learning outcomes,
identify next steps

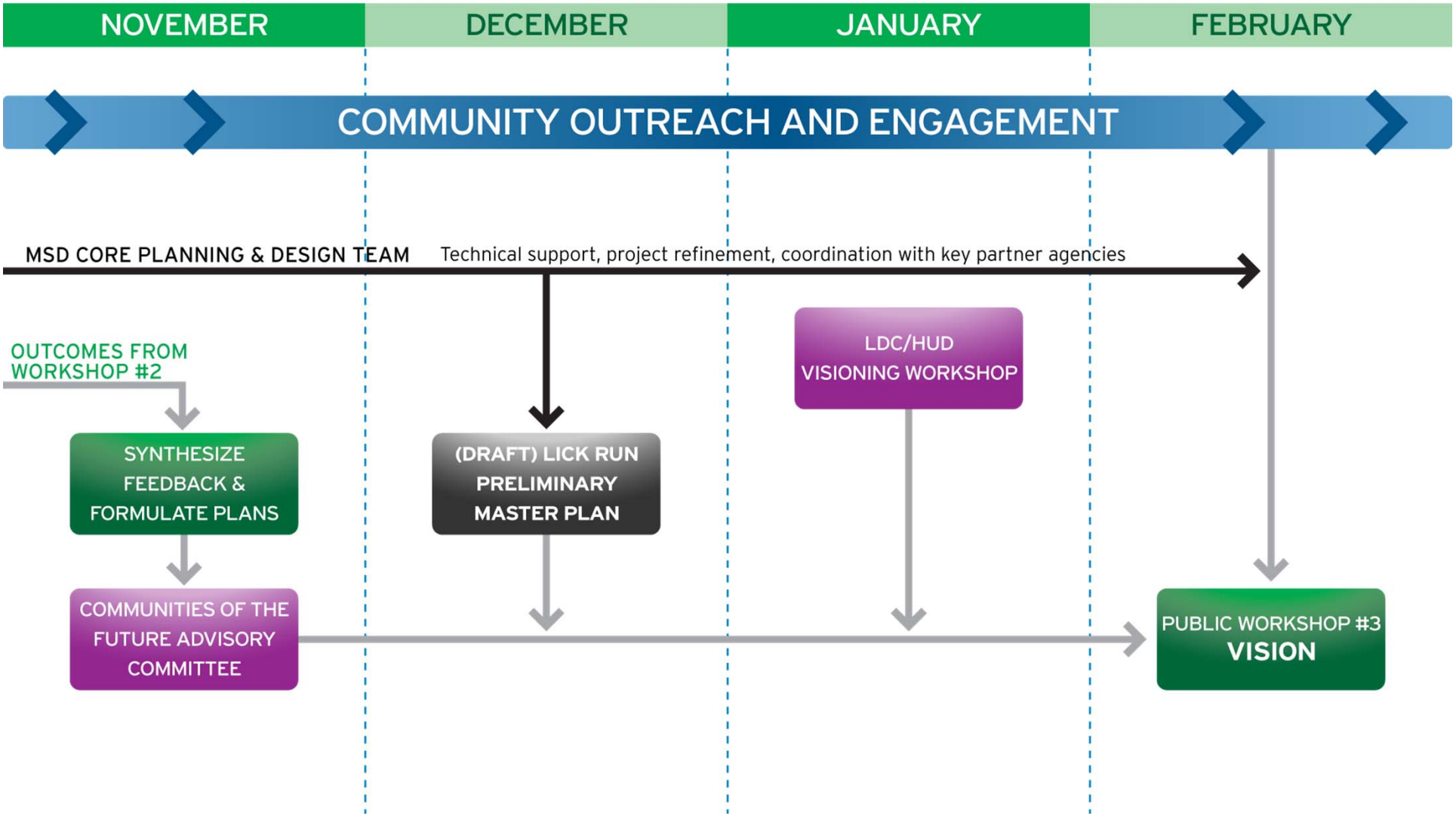
Workshop #1


MAY
JUNE
JULY
COMMUNITY OUTREACH AND ENGAGEMENT
MSD CORE PLANNING & DESIGN TEAM
Technical support, project refinement, coordination with key partner agencies
LICK RUN BASELINE CONCEPT PLAN
COMMUNITIES OF THE FUTURE ADVISORY COMMITTEE
SOUTH FAIRMOUNT COMMUNITY COUNCIL MEETING
DATA COLLECTION
PUBLIC WORKSHOP #1
AWARENESS

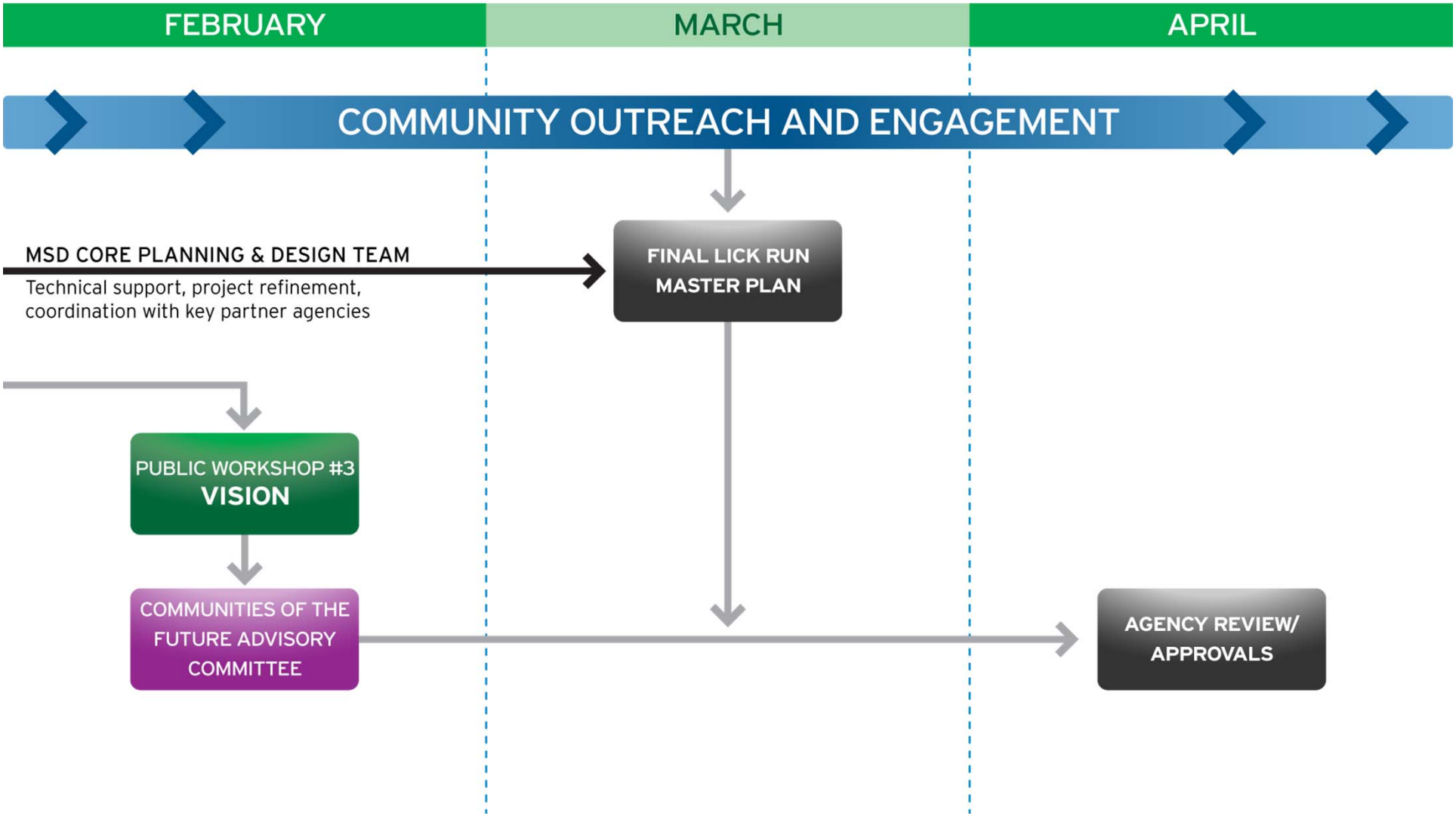
Workshop #2


AUGUST
SEPTEMBER
OCTOBER
COMMUNITY OUTREACH AND ENGAGEMENT
MSD CORE PLANNING & DESIGN TEAM
Technical support, project refinement, coordination with key partner agencies
LICK RUN CONCEPT ALTERNATIVES
OUTCOMES FROM WORKSHOP #1
DATA COLLECTION & SYNTHESIZE FEEDBACK
COMMUNITIES OF THE FUTURE ADVISORY COMMITTEE
PUBLIC WORKSHOP #2 EXPLORATION

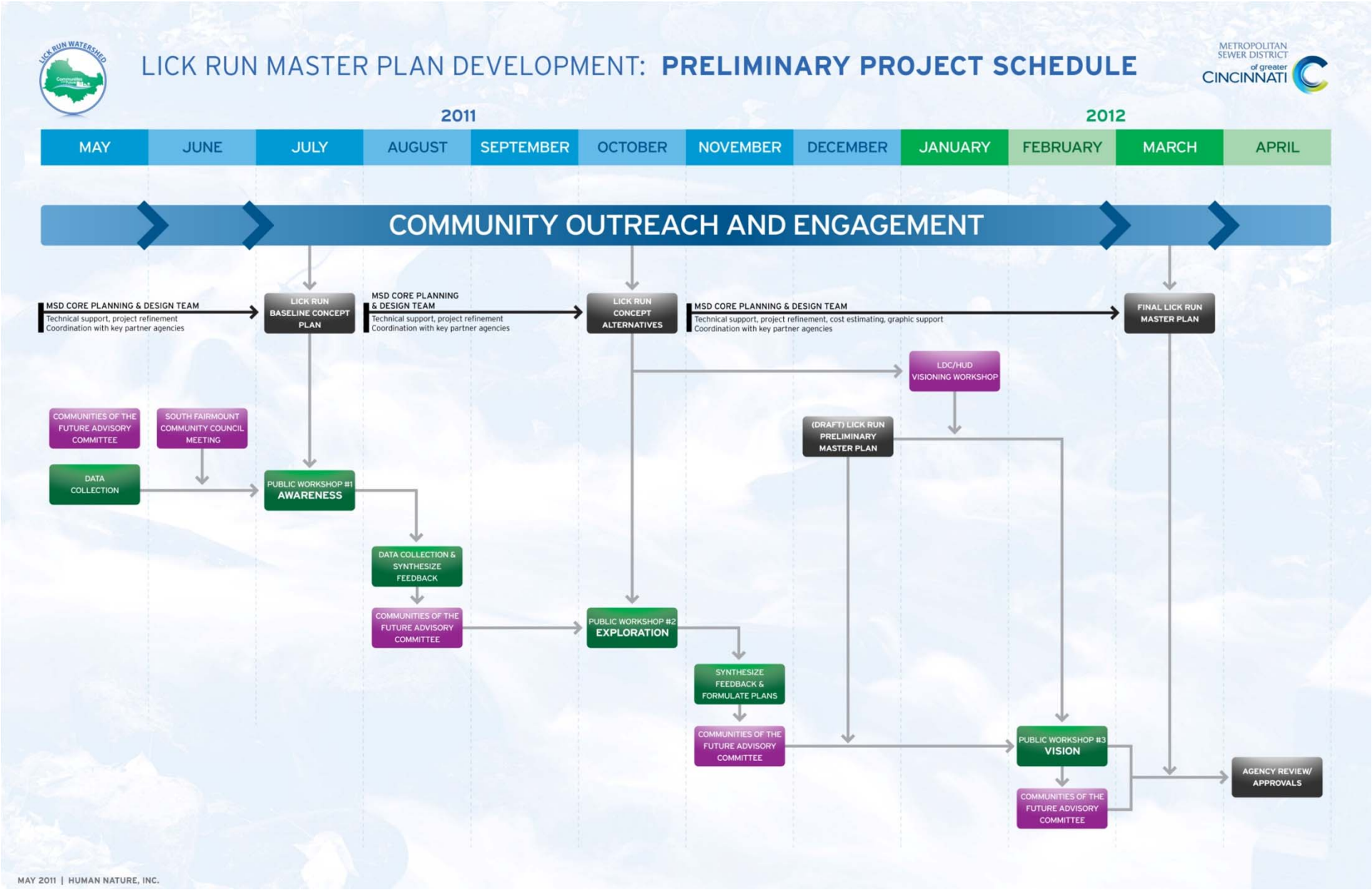
Workshop #3


NOVEMBER
DECEMBER
JANUARY
FEBRUARY
COMMUNITY OUTREACH AND ENGAGEMENT
MSD CORE PLANNING & DESIGN TEAM
Technical support, project refinement, coordination with key partner agencies
OUTCOMES FROM WORKSHOP #2
SYNTHESIZE FEEDBACK & FORMULATE PLANS
COMMUNITIES OF THE FUTURE ADVISORY COMMITTEE
(DRAFT) LICK RUN PRELIMINARY MASTER PLAN
LDC/HUD VISIONING WORKSHOP
PUBLIC WORKSHOP #3
VISION

Final Lick Run Master Plan & Agency Approvals



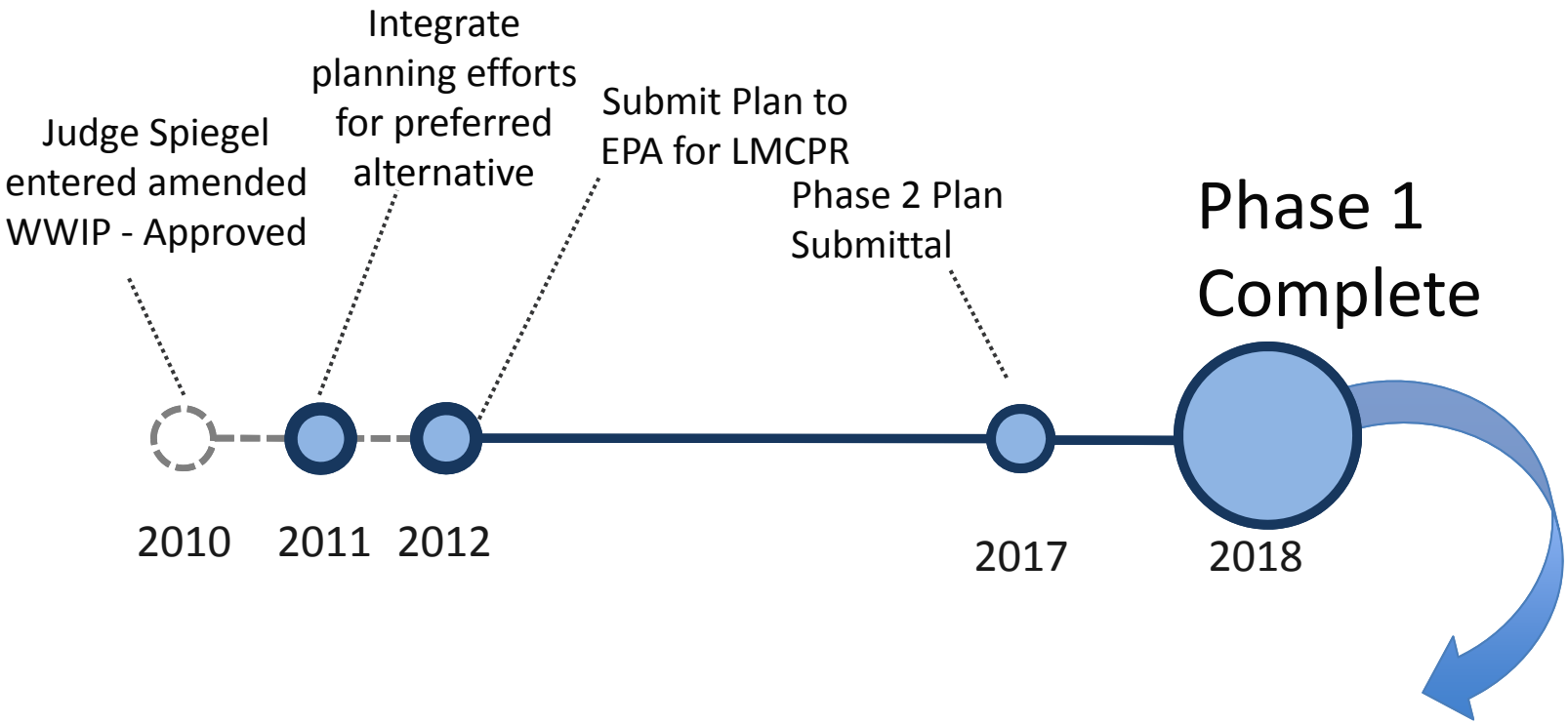
Community Design Workshop Schedule Overview



Bloody Run Watershed

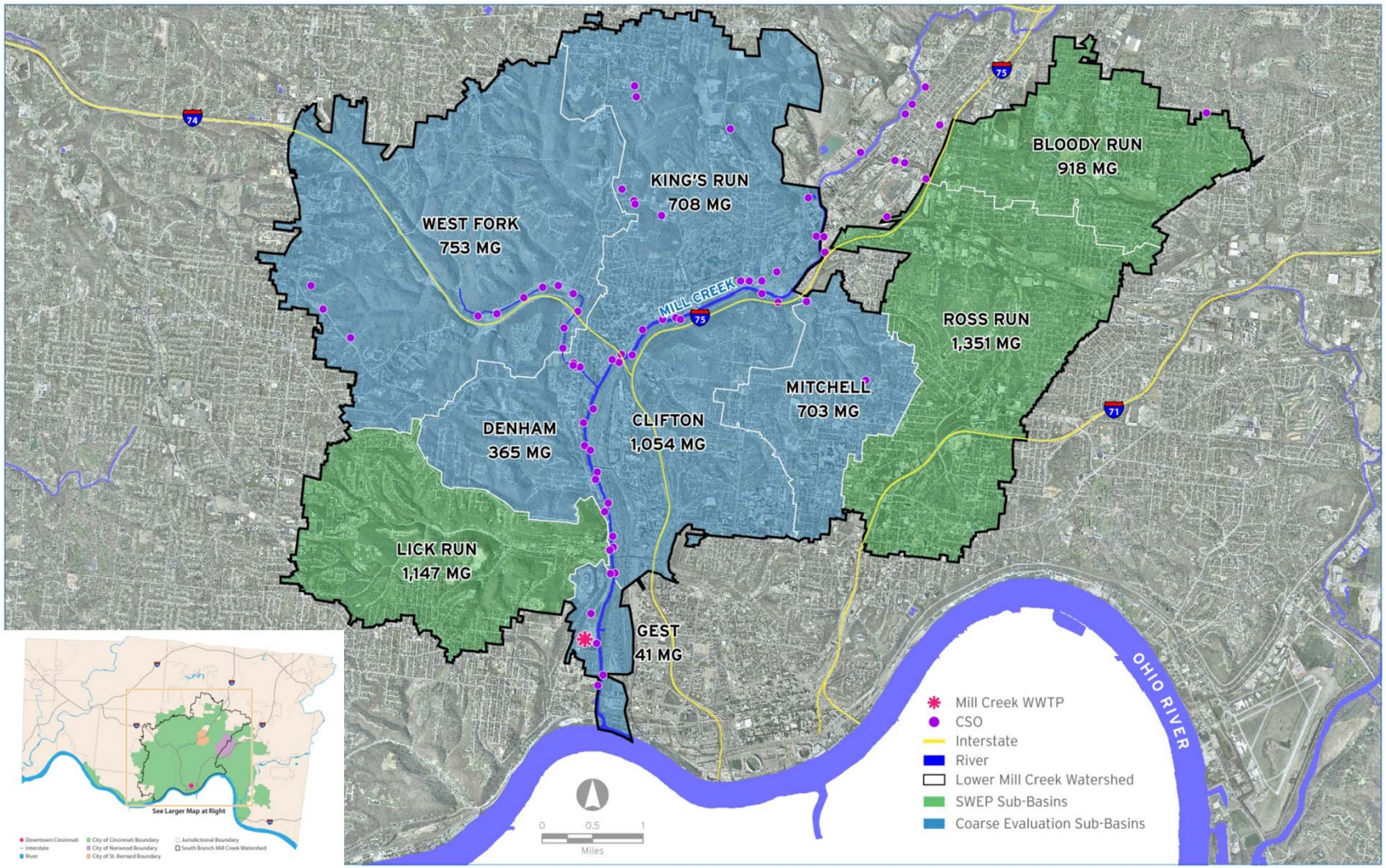
METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Consent Decree Timeline



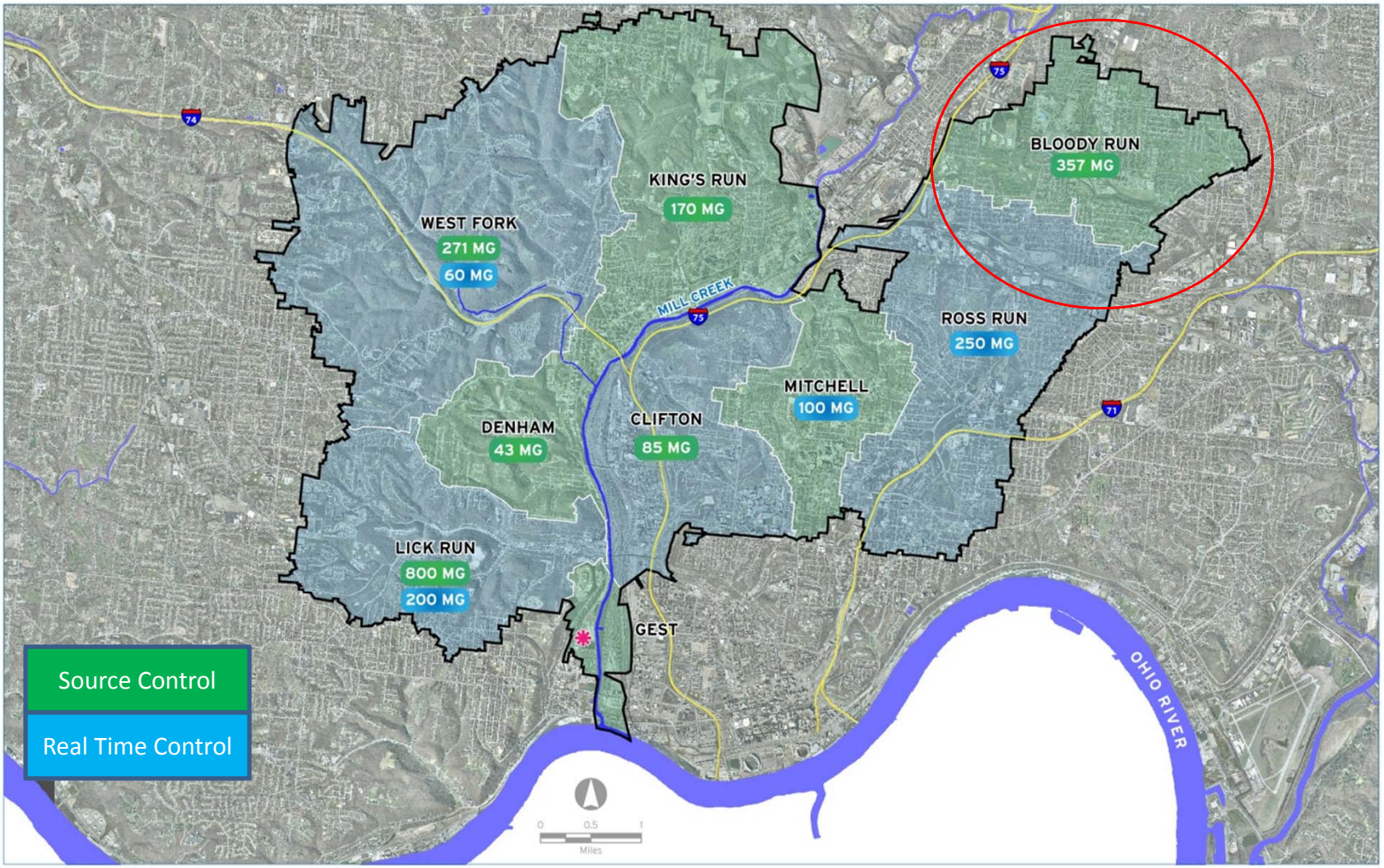
By 2018 MSD Must Remove 2 Billion Gallons of CSO from Lower Mill Creek Watershed

Lower Mill Creek Study Area: SWEP Planning



Annual CSO Volume: **7.6 billion gallons**

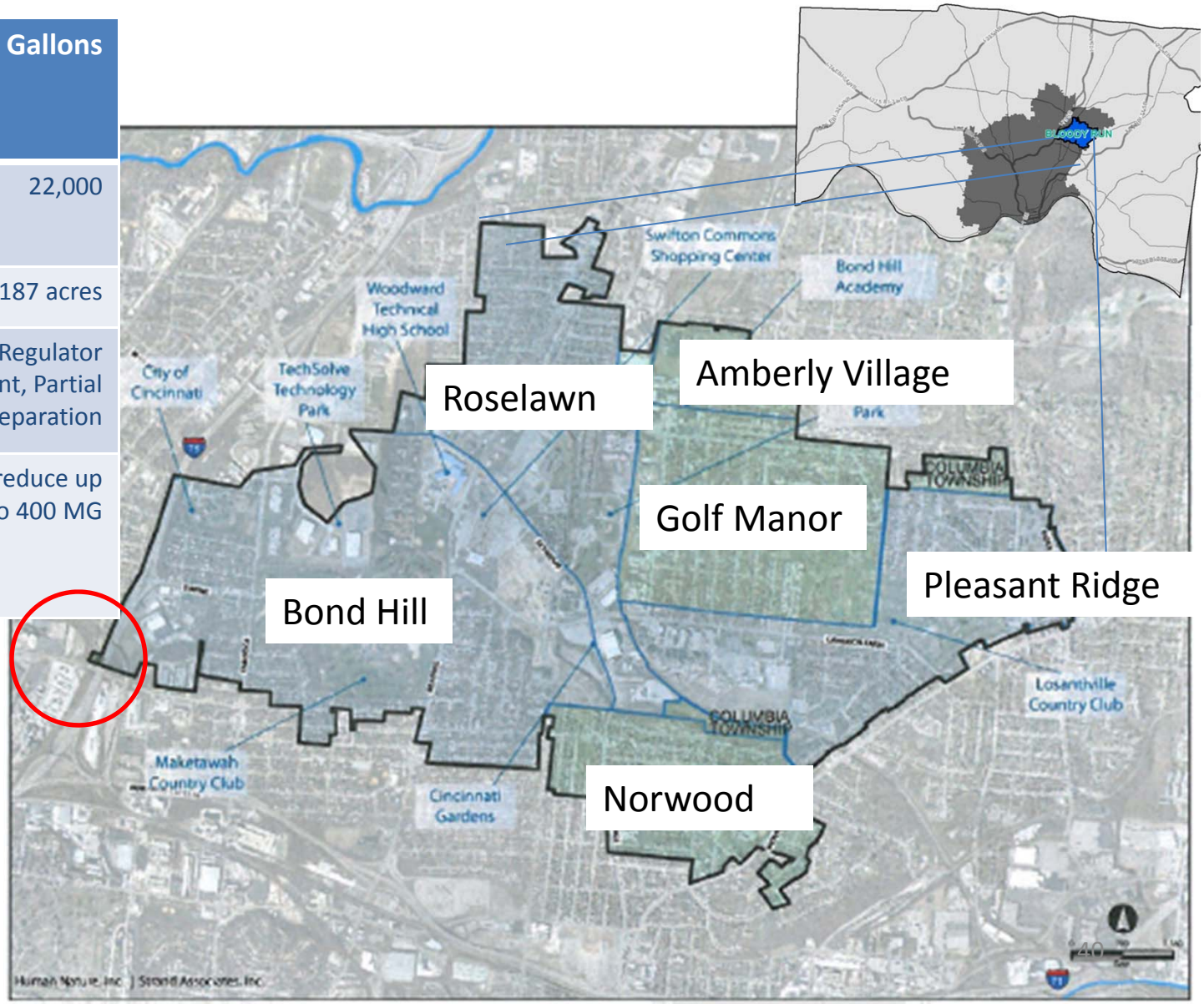
Lower Mill Creek:
Source Control & Real Time Control



Modeled annual CSO reduction based on typical year rainfall

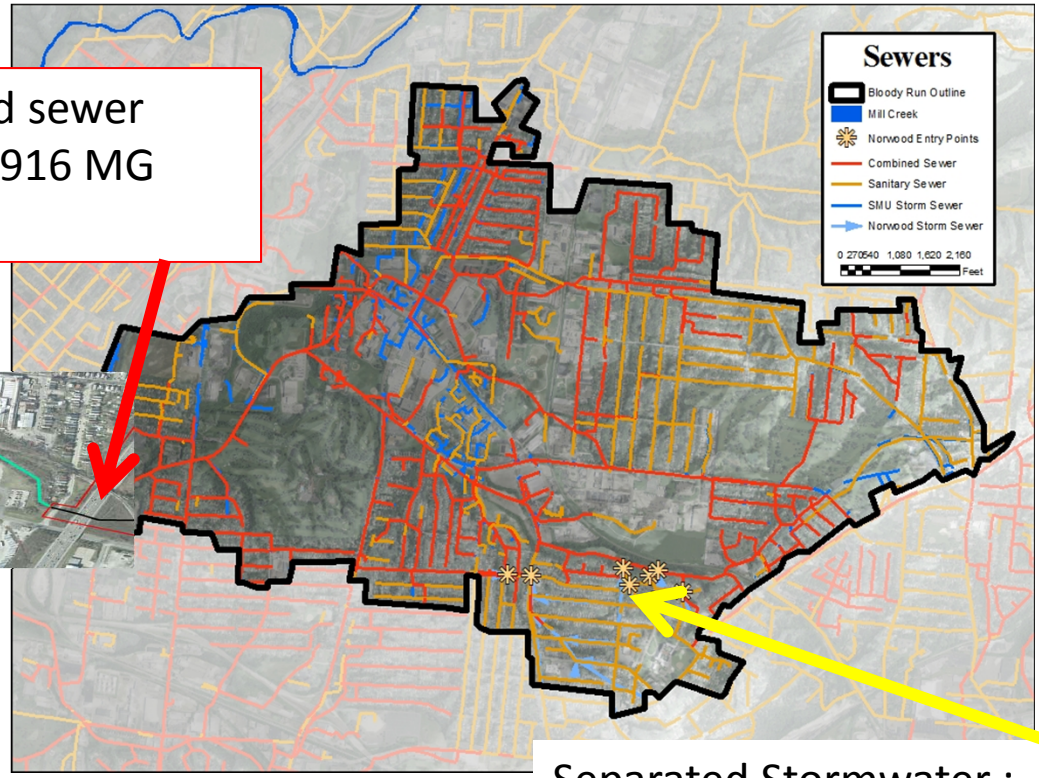
Bloody Run: Watershed Characteristics

Typical Year flow (modeled)	916 Million Gallons
Current number customers	22,000
Land Area	2,187 acres
Traditional Solution	EHRT, Regulator Improvement, Partial Separation
CSO Reduction	Potential to reduce up to 400 MG

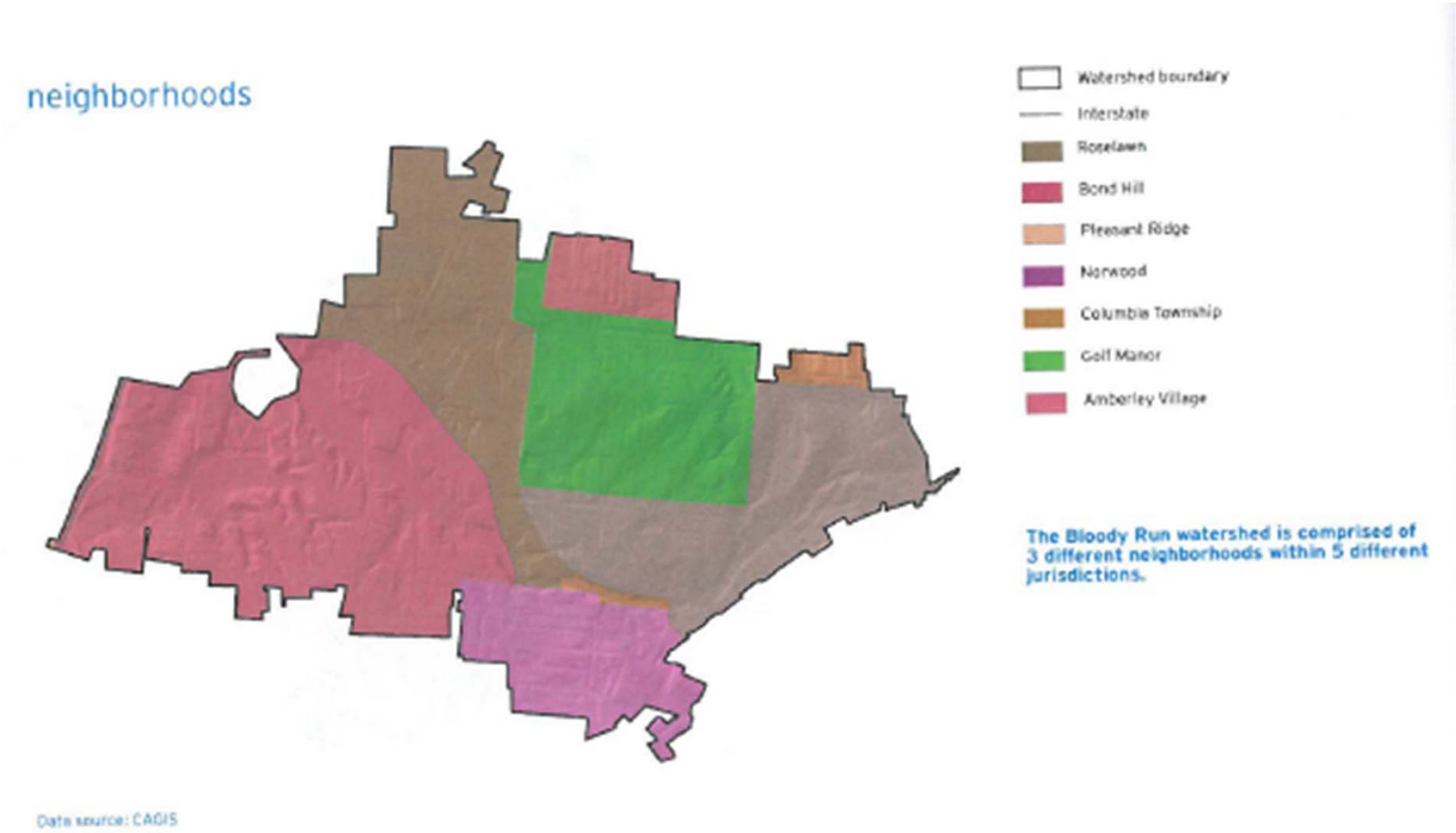


Bloody Run: Existing Conditions

Combined sewer overflow 916 MG



Separated Stormwater : 200 Acres of Norwood Flow - separated

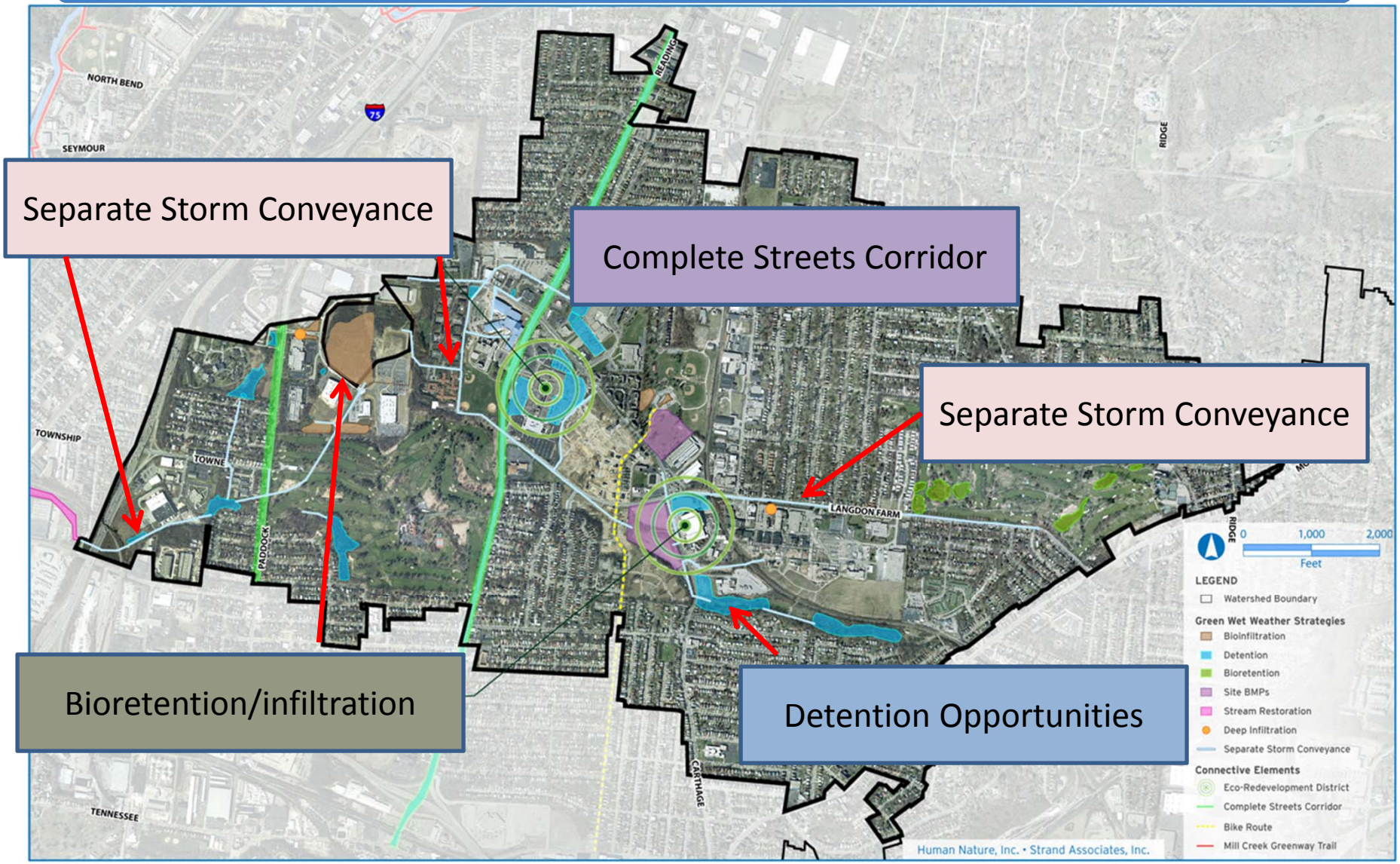


Land Use Neighborhood Plans

Historic Streams Soils Slopes Tree Canopy Built Systems

Bloody Run: Watershed Characterization

Bloody Run SWEP



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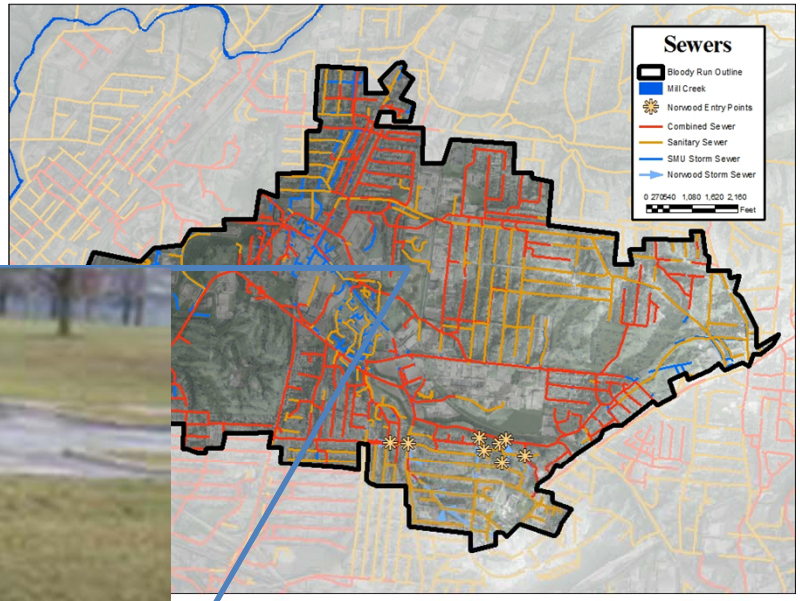
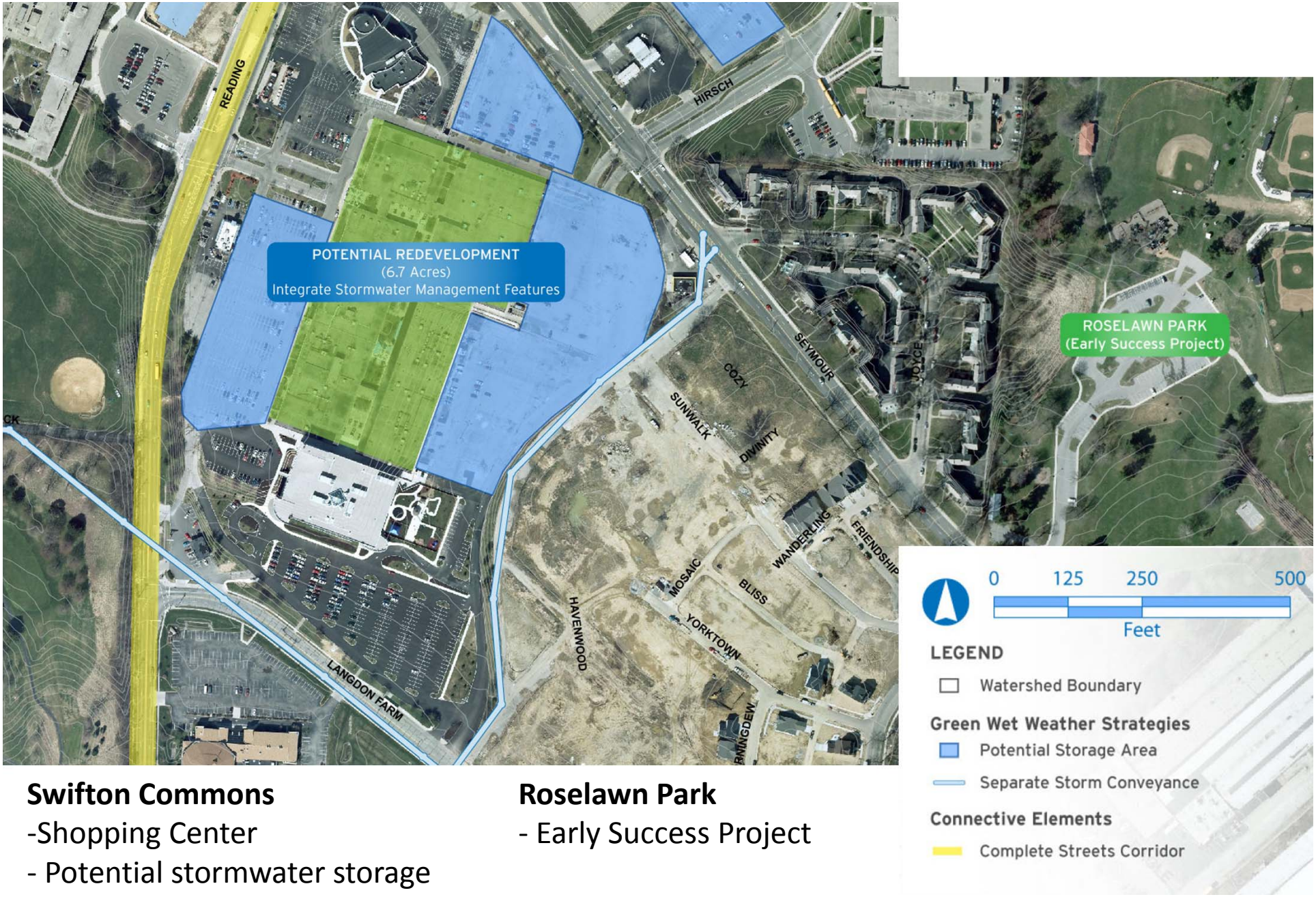
Roselawn Park Early Success Project



- **33-acre park** features four baseball diamonds
- Annual stormwater runoff from 10-acre portion of the property is about **3.6 million gallons**.

Regional Planning



Swifton Commons

-Shopping Center

- Potential stormwater storage areas

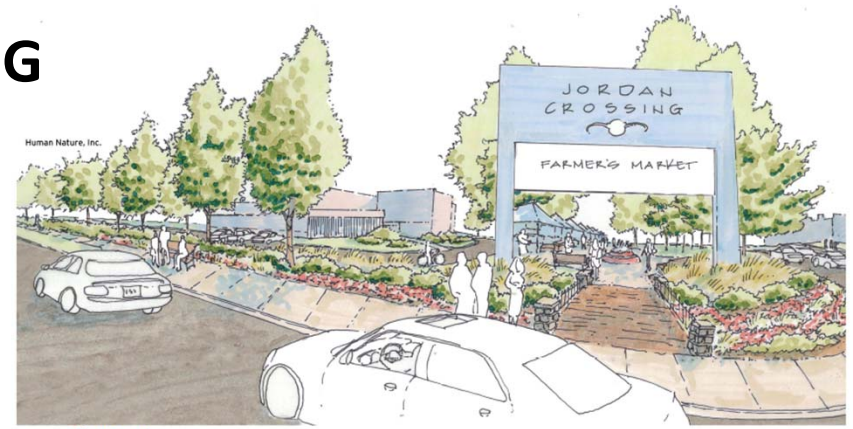
-Off-Peak hours Farmer's Market

Roselawn Park

- Early Success Project

Complete Streets

JORDAN CROSSING



Proposed

JORDAN CROSSING
PROPOSED STREETSCAPE ENHANCEMENTS

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SEYMOUR AVE – CINCINNATI GARDENS

Complete Streets

SEYMOUR AVENUE
PROPOSED STREETSCAPE ENHANCEMENTS

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Proposed

Existing Conditions

Next Steps

- Planning for design workshops
  - Tentative Meeting week of June 20
  - July 19th or 21st Design Workshop #1
- Project Groundwork Partners
- Next CFAC Meeting August 20th 10am

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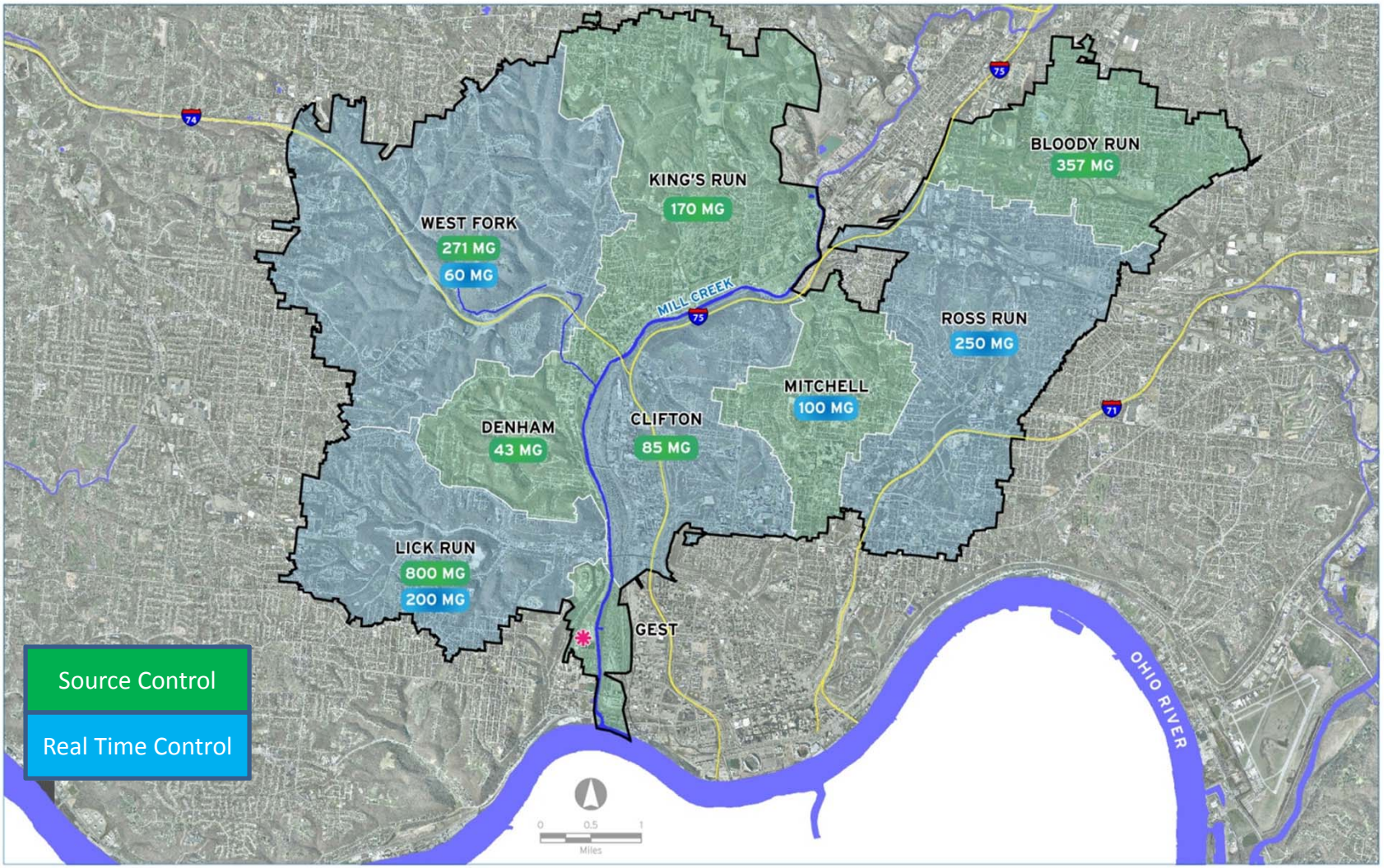
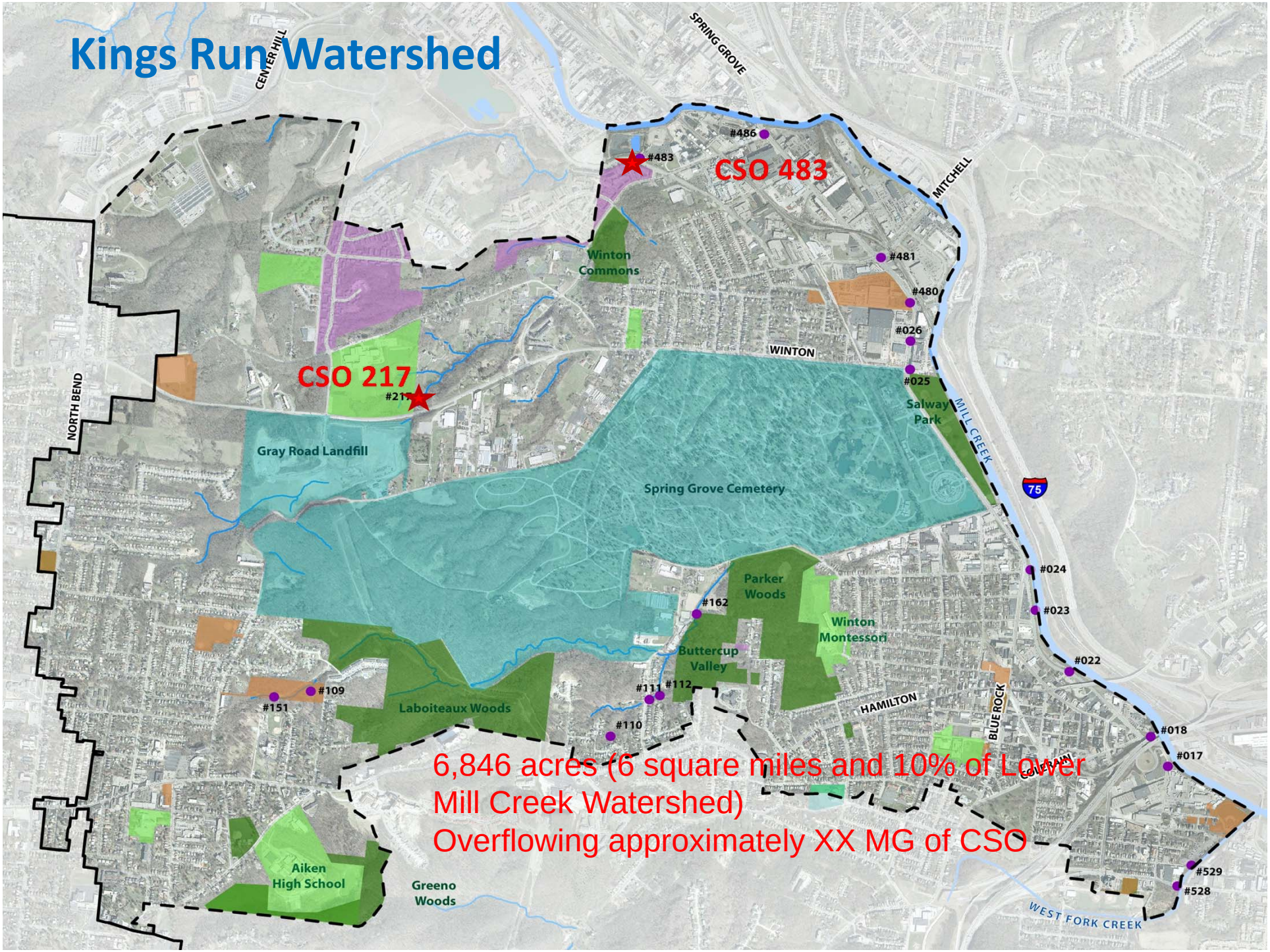
Kings Run Watershed

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Lower Mill Creek:
Source Control & Real Time Control



Modeled annual CSO reduction based on typical year rainfall


Kings Run Watershed
CENTER HILL
SPRING GROVE
MITCHELL
NORTH BEND
WINTON
MILL CREEK
HAMILTON
BLUE ROCK
COLERAIN
WEST FORK CREEK
CSO 483
CSO 217
#483
#486
#481
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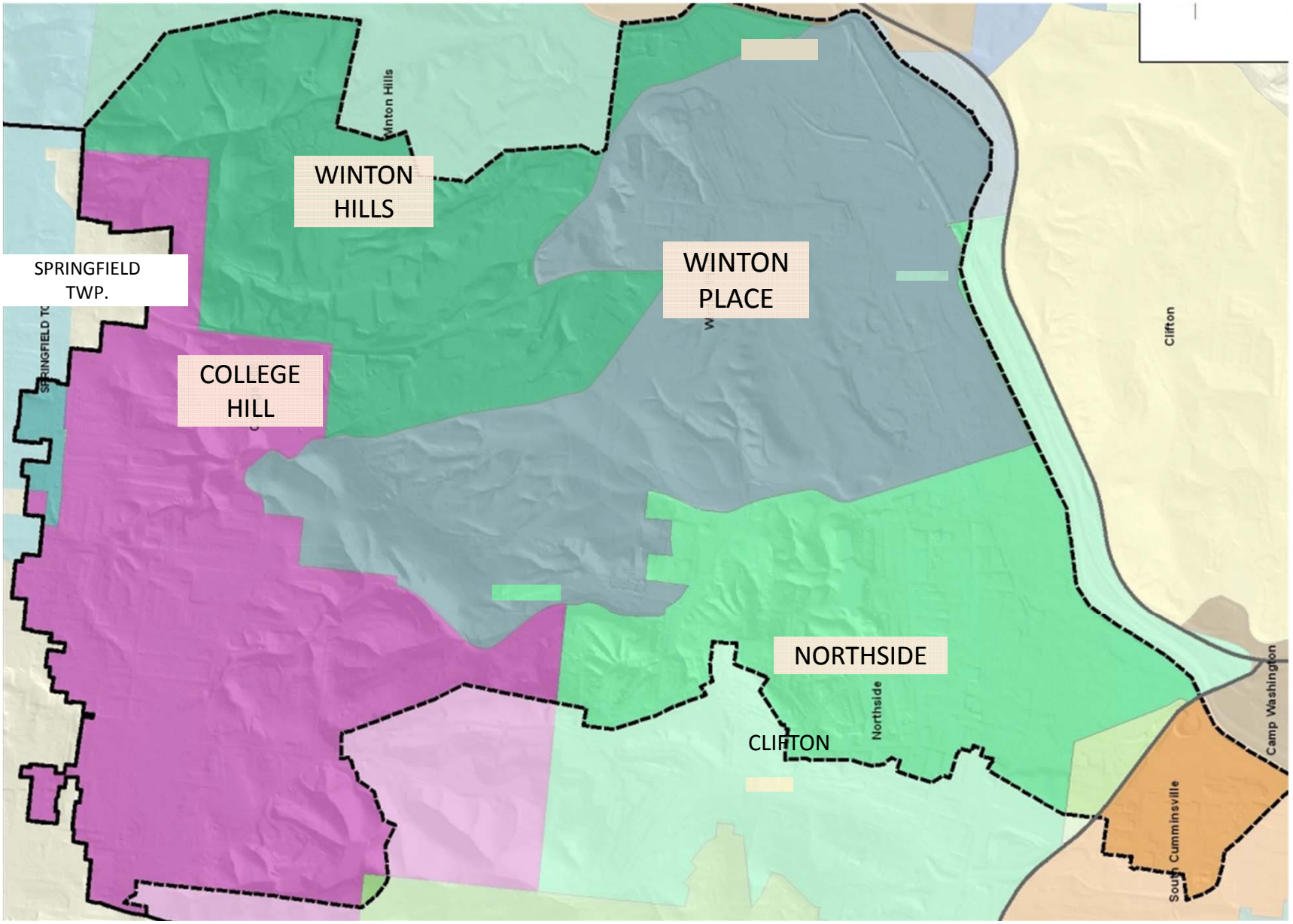
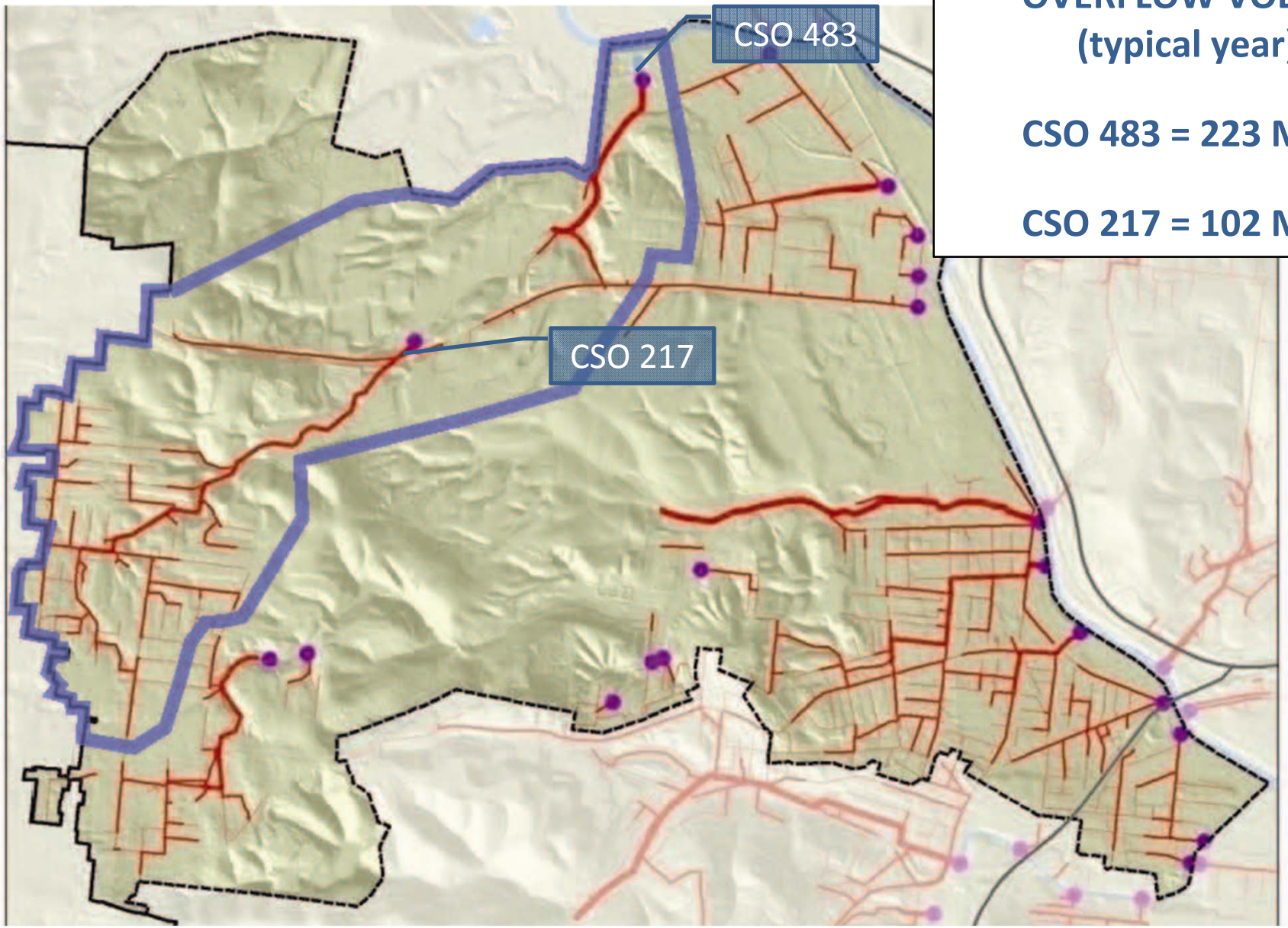
#217
#162
#111
#112
#110
#109
#151
Winton Commons
Salway Park
Gray Road Landfill
Spring Grove Cemetery
Parker Woods
Winton Montessori
Buttercup Valley
Laboiteaux Woods
Aiken High School
Greeno Woods
75
6,846 acres (6 square miles and 10% of Lower Mill Creek Watershed)
Overflowing approximately XX MG of CSO

Kings Run Watershed



CSOs 217 & 483



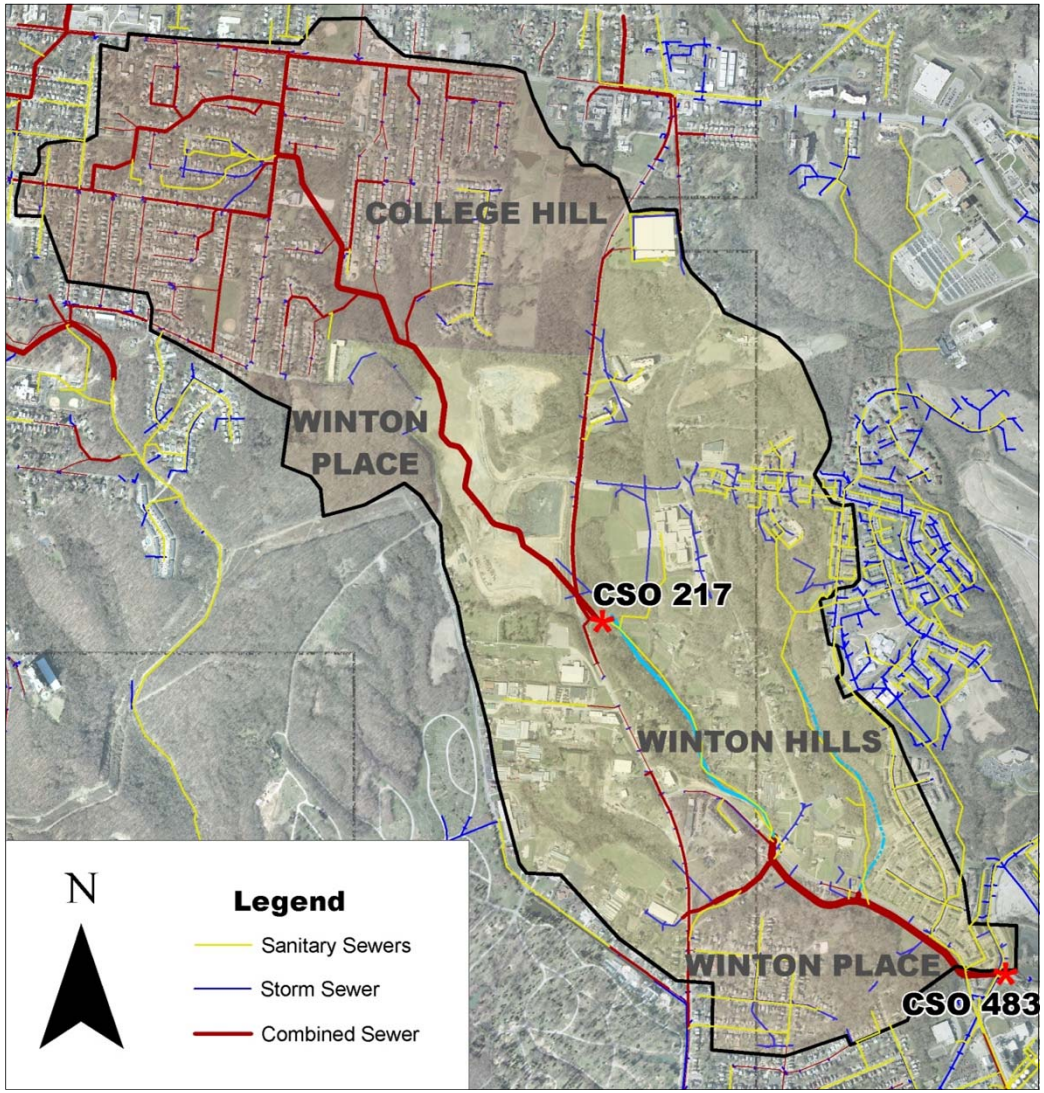
OVERFLOW VOLUME (typical year)

CSO 483 = 223 MG

CSO 217 = 102 MG

Sub-Watershed Characteristics

Existing Conditions



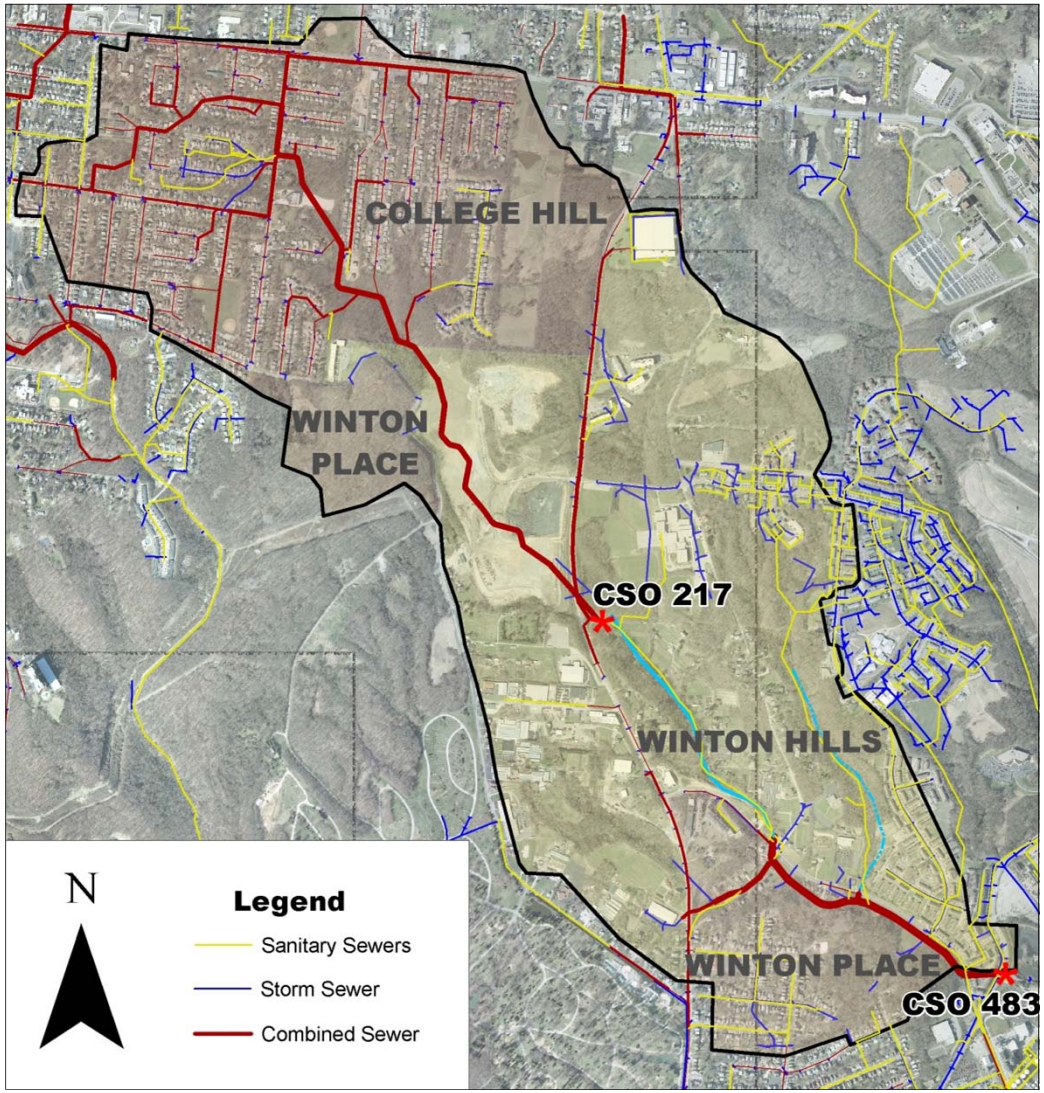
CSO 217

- Land Use
  - 300 acres of high-intensity residential & commercial
  - 86 acres of landfill/future industrial park
  - Primarily served by combined sewer
- Nested within CSO 483 drainage area
- Located east of Winton Road
- Drainage Area: 520 acres of the CSO 483 drainage area

PROJECT GROUNDWORK
your pipeline to clean water

Sub-Watershed Characteristics

Existing Conditions



CSO 483

- Located at Este Road
- Drainage Area: Total of 1,076 acres, spanning portions of Winton Hills, Winton Place and College Hill
- Land Use
  - 35% residential
  - 29% undeveloped
  - 24% institutional
  - 10% industrial
  - 2% commercial
- Served by both separated storm sewer and combined

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Kings Run CSO Reduction Objectives

- Focus on Sustainable Watershed Evaluation Process (SWEP) to maximize source control opportunities
- Current Volumes Typical Year: Reduction Goals:
  - 15.3 MG for CSO 483 (Current Overflow = 223 MG)
  - 23.3 MG for CSO 217 (Current Overflow = 102 MG)
- Target $0.10 per gallon of CSO removed while evaluating potential Social and Environmental Impacts
- Identify opportunities for water quality improvements
- Triple Bottom Line Analysis of Options

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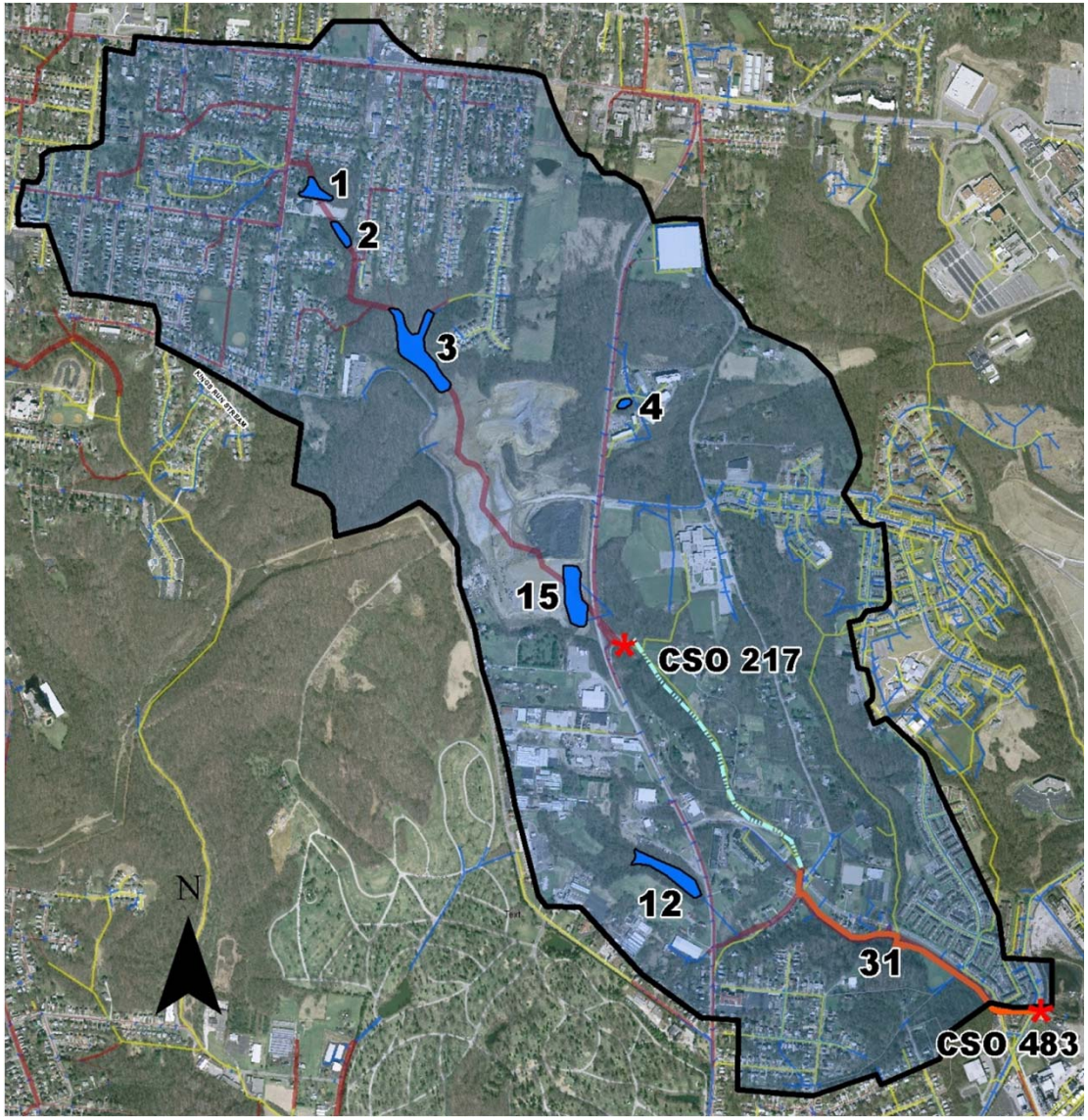
your pipeline to clean water

Kings Run SWEP: >200MG+ of CSO reduction

Opportunities	Description
Opportunity1	Detention basin upstream from CSO 217
Opportunity 2	Detention basin upstream from CSO 217
Opportunity3	Enlargement of existing detention basin at the northwest corner of the Gray Road Landfill, upstream from CSO 217
Opportunity 4	Detention basin upstream from CSO 217
Opportunity 15	Enlargement of proposed detention basin for the Gray Road Landfill development, upstream from CSO 217
Opportunity 12	Detention basin upstream from Measure 31 storage tank
Opportunity31	Sanitary/Storm separation system -



West Fork Watershed:
Presented in December 2010
Refinements: Underway

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

West Fork Conditions

Invert Grates Connect Channel to Interceptor

Mixture of sewage and stormwater to backup into the creek

Historic complaints & corrections of sewage in basements

Several invert grates connect channel to interceptor, directly beneath channel

Large volumes of natural drainage enters combined system

Large volumes of CSO, create public health & unsanitary conditions

Flooding within floodway and floodplain impacts

Opportunity to link the flooding and CSO problems to a joint solution

FEMA/OEMA Grant

The $3M grant provides MSD the funds to:

- Purchase properties at fair market value
- Demolish structures
- Convert the site to floodway/floodplain open space

Grant application – submitted December 2009

– 22 Properties located within the floodplain and floodway

- West Fork Creek Road
- Ammon, Hays Avenue

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

FEMA

Questions?