

Leveraging MSD's Investments

Communities of the Future Advisory Committee

James A. Parrott, Executive Director
MSD of Greater Cincinnati

March 5, 2010

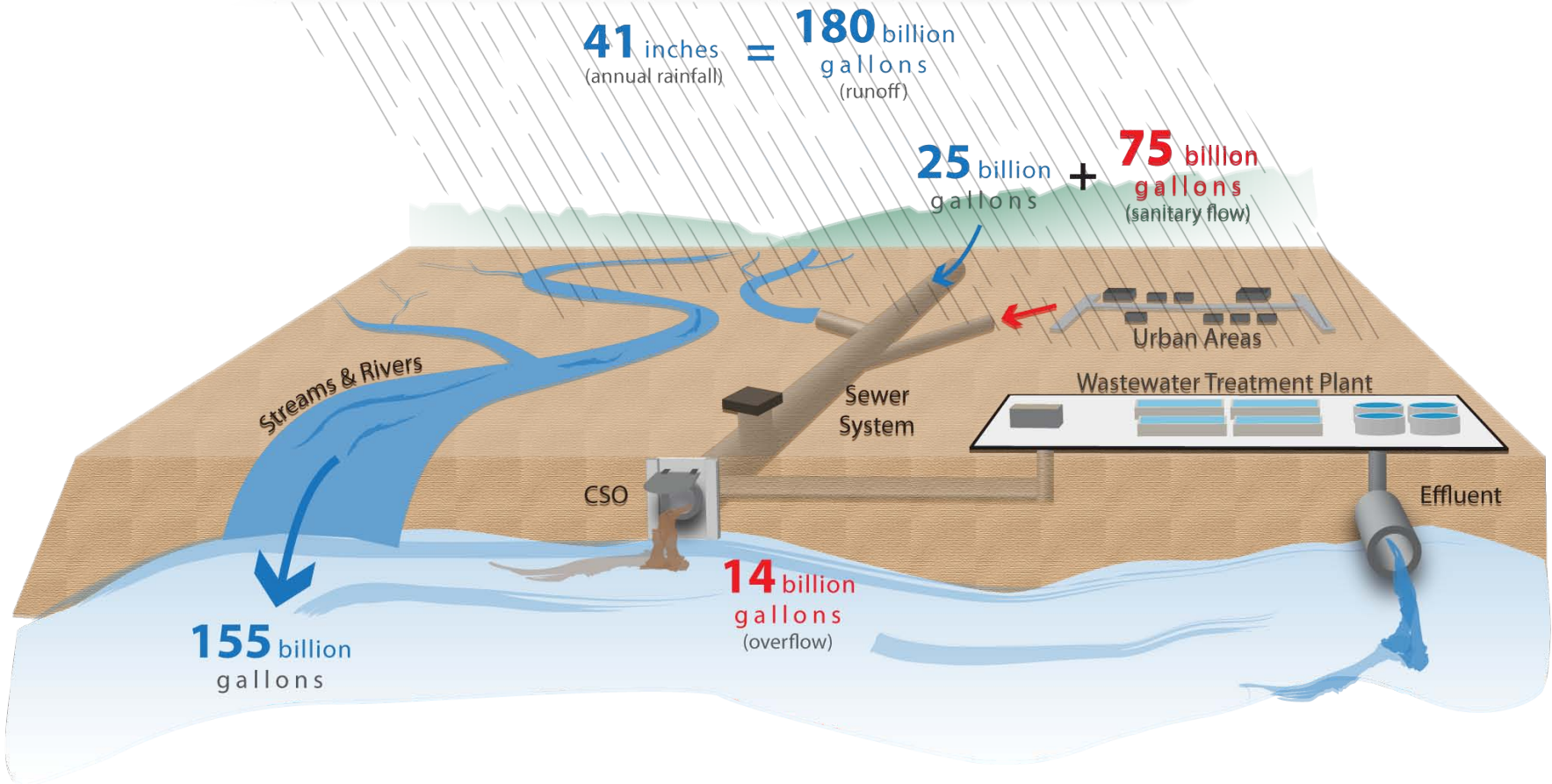
Agenda

- Welcome and Introductions
- Why are we here?
- MSD Weather Challenges and Strategies
- Business Case for Communities of the Future
 - Making Decisions for Future
 - Sustainable Watershed Evaluation Process
 - Leveraging MSD Investments
- Platform for Communities of the Future Facilitated Discussion
- Action Items and Plans to Move Forward

Why are we here?

- Community of the Future Advisory Committee
 - Mission is to review and give feedback to MSD's Wet Weather Strategy and Approach
- Building a Community of the Future is important to all of us
 - Co-development is key to success
- We need input/feedback from you

How Great is MSD's Environmental Challenge?



You May Not Know...

MSD is among the top 5 CSO dischargers in the US

MSD has a conditionally approved wet weather plan. Final legal action pending

MSD must submit a plan to USEPA by December 2012 for the Lower Mill Creek Remedy

MSD has until 2017 to submit Phase II schedule

PROJECT GROUNDWORK

in Your Community



Clean Streams



Neighborhood Construction Projects

Protecting the Environment

Partnering with our Communities

Revitalizing the Economy

Designing Innovative Solutions



Strengthened Economy



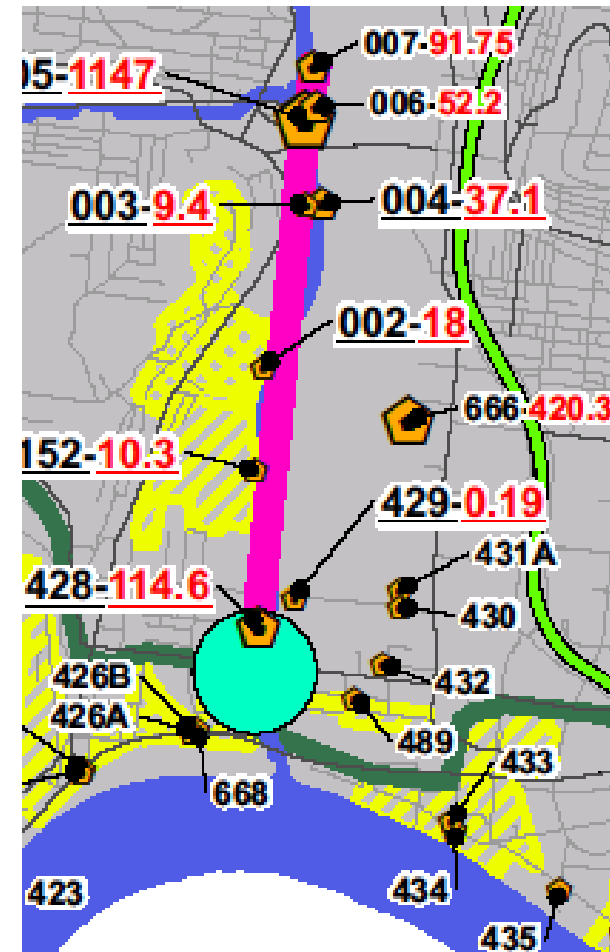
Green Roofs



*Project Groundwork is your program.
It's an investment in your community for generations to come.*

Default Consent Decree Solution Lower Mill Creek

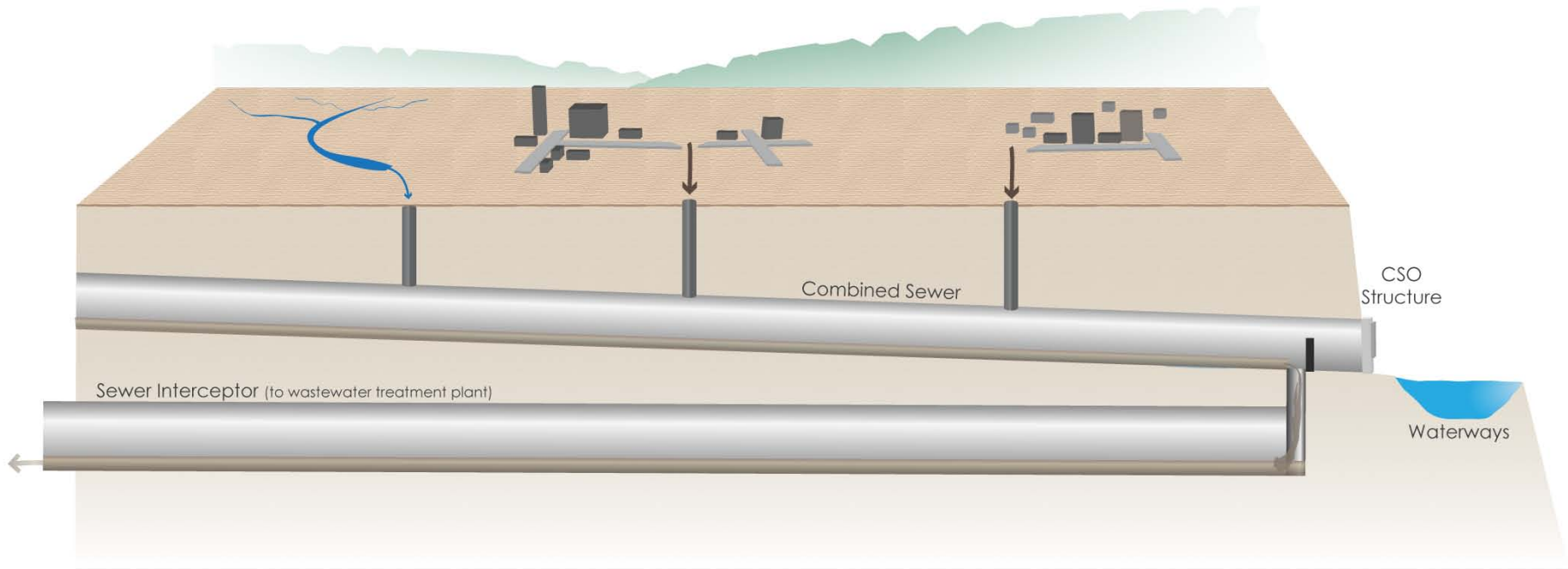
- Deep Tunnel beneath Mill Creek
 - From Western Hills Viaduct (CSO #5 to Gest Street)
 - 1.5 Miles, 30' diameter
 - \$244 Million



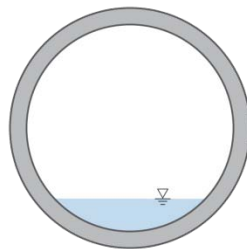
MSD Wet Weather Strategy

- Source Control
 - Removal of natural drainage from entering the system
 - Regional BMPs, Separate Storm Sewers Installation
- Conveyance and Storage
 - Tunnels, parallel interceptors, storage facilities
 - Real Time Control
- Product Control
 - EHRT

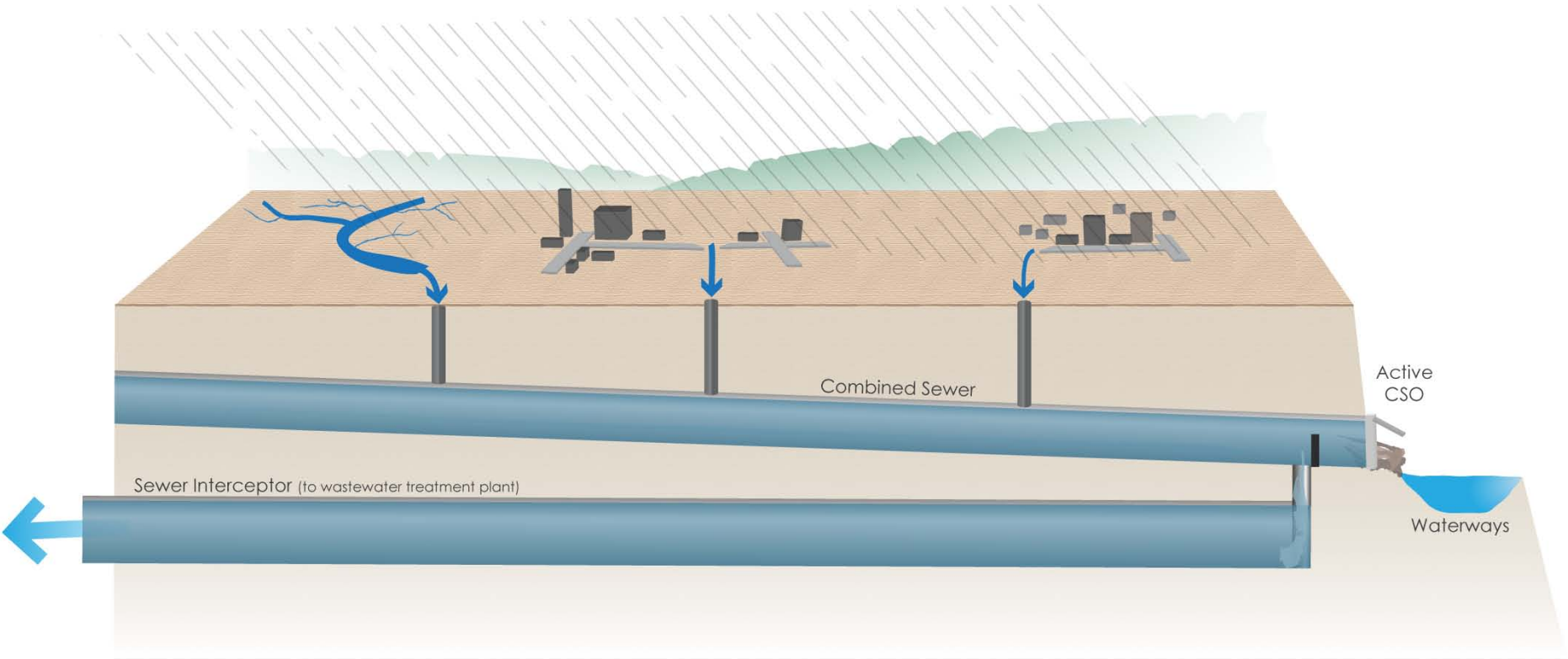
Dry Weather



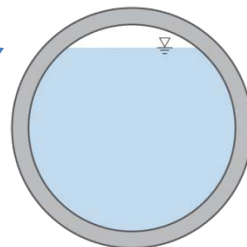
Hydraulic Grade Line →



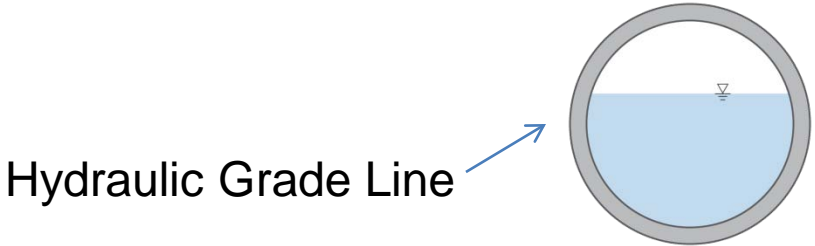
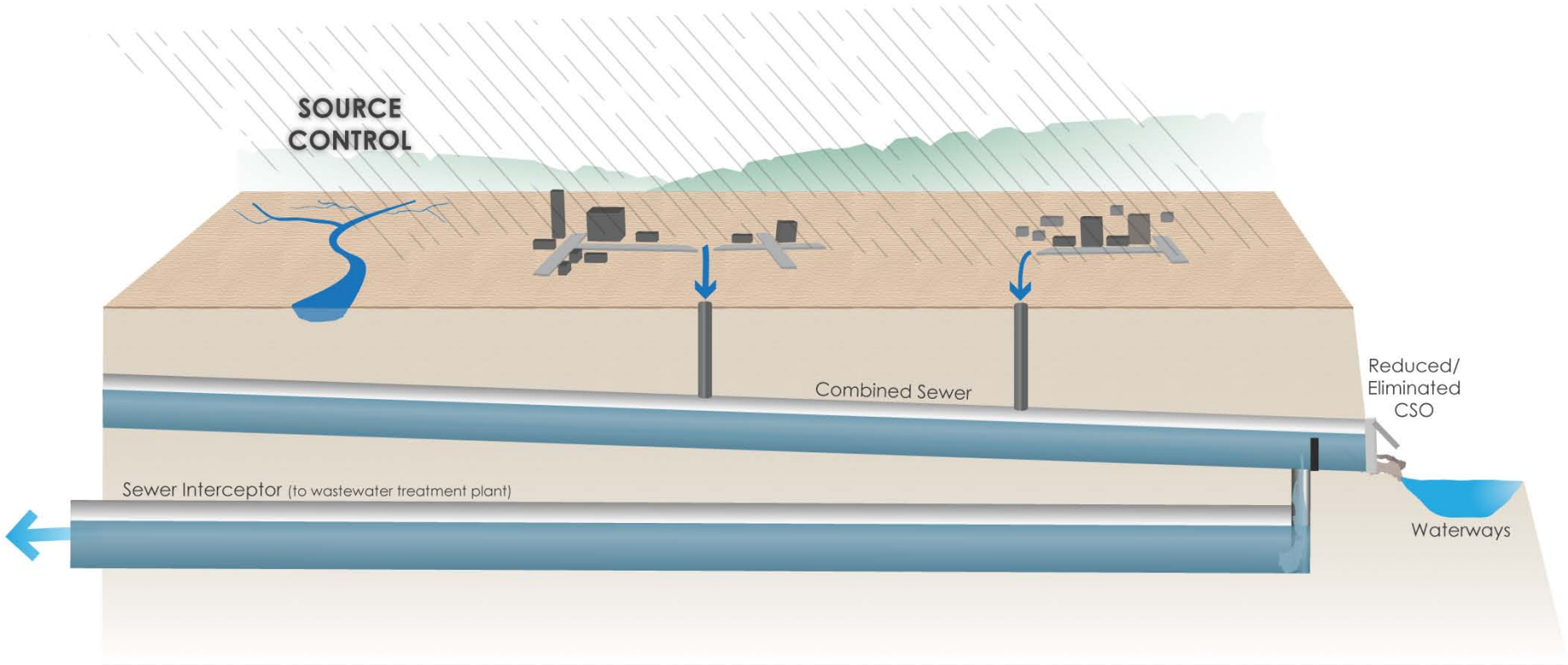
Wet Weather



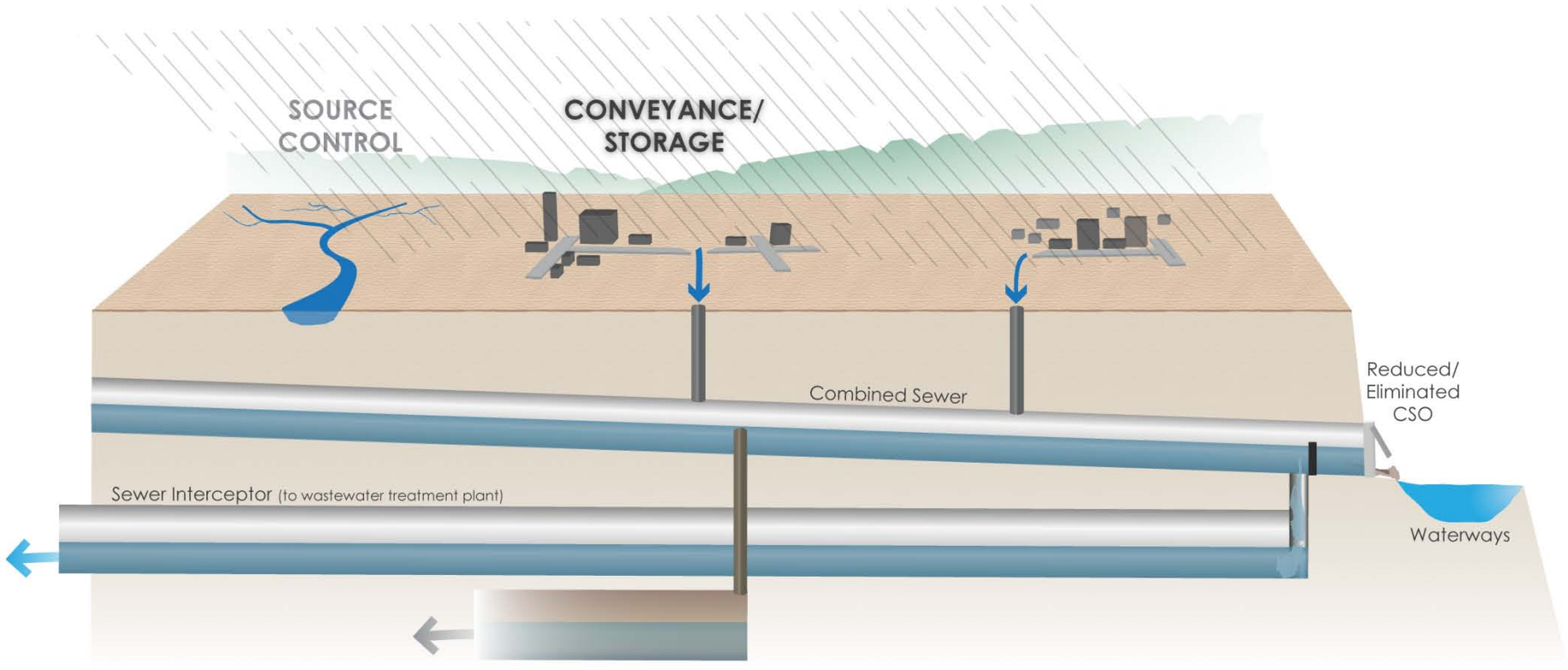
Hydraulic Grade Line



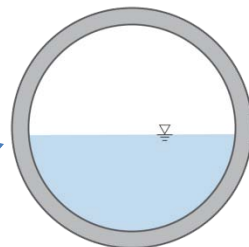
Wet Weather Strategy Source Control



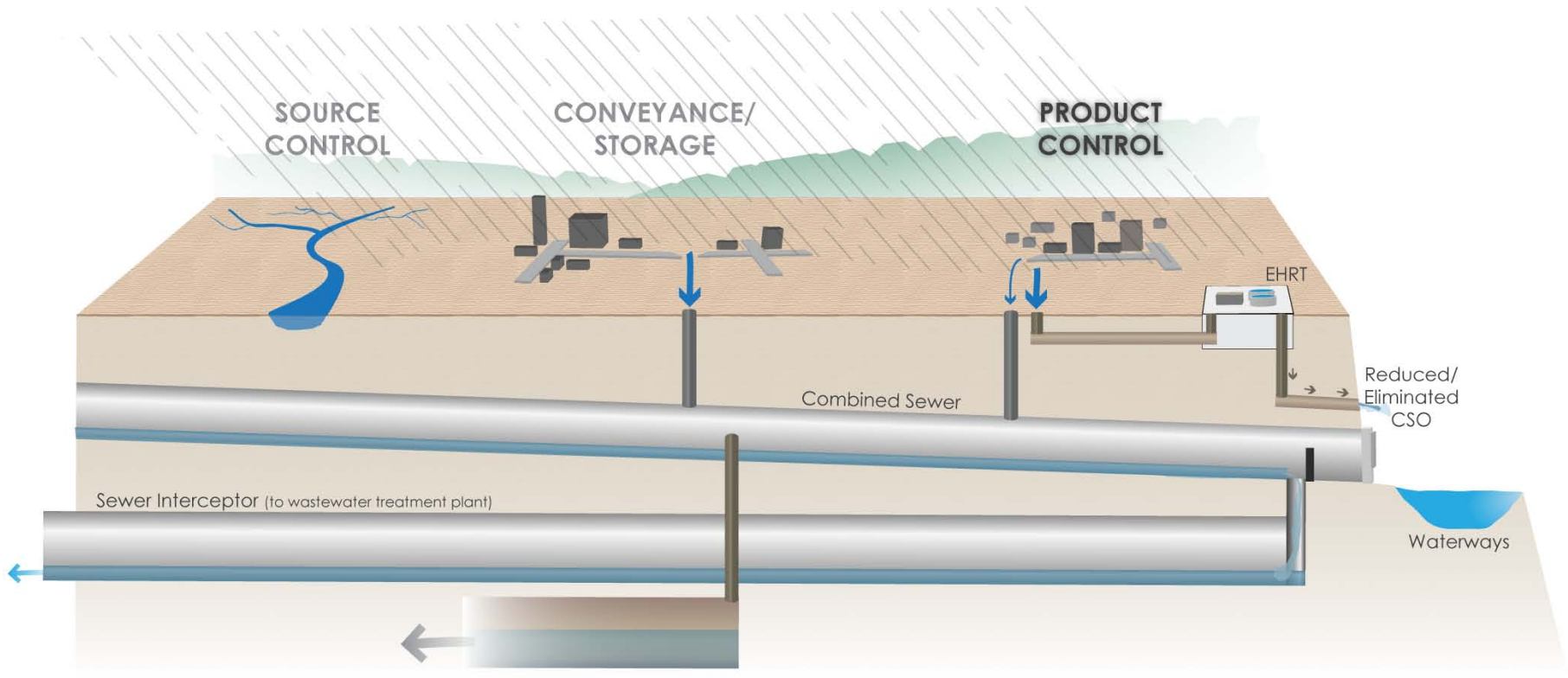
Wet Weather Conveyance/Storage



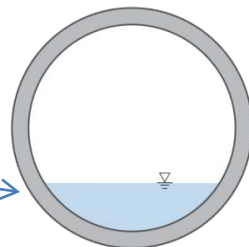
Hydraulic Grade Line



Wet Weather Product Control

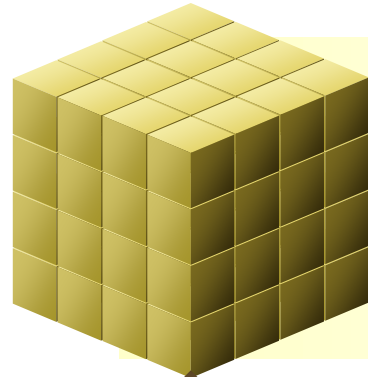


Hydraulic Grade Line



Building Blocks of the Consent Order

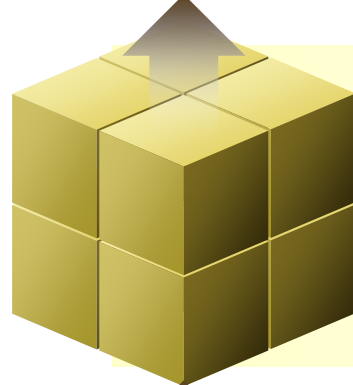
Strategy



Wet Weather Strategy

Source Control
Conveyance & Storage
Product Control

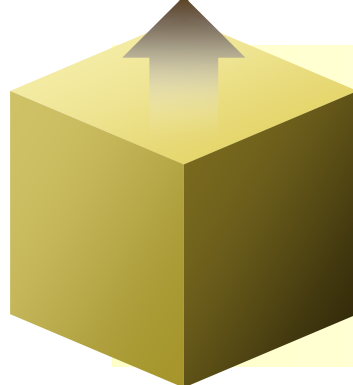
Flexibility



Phased Approach

Phase 1: 2009 – 2019
Phase 2: Schedule to be submitted by 2017

Affordability



Controlled Spending

Phase 1: \$1.145B
Credit for \$300M of projects already built
Phase 2: To Be Determined

Affordability is a Major Concern

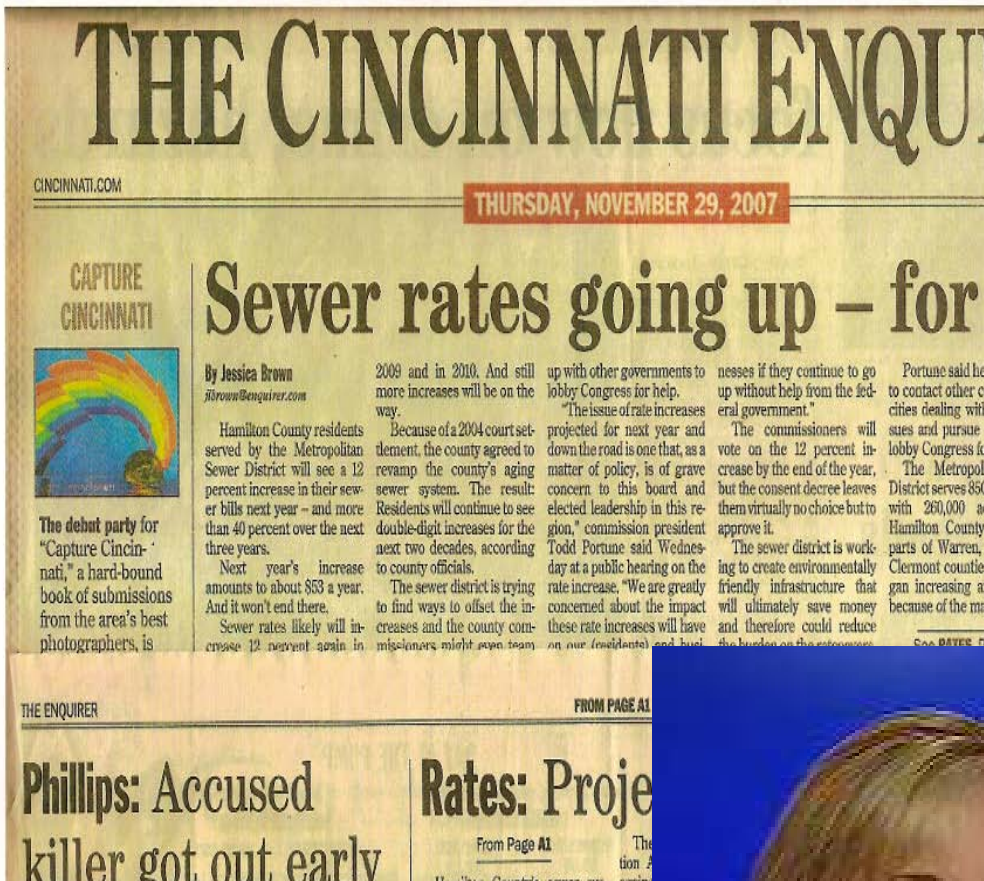


MSD Stakeholders

Affordability is a Major Concern



Policy Makers



Headline from November 29, 2007

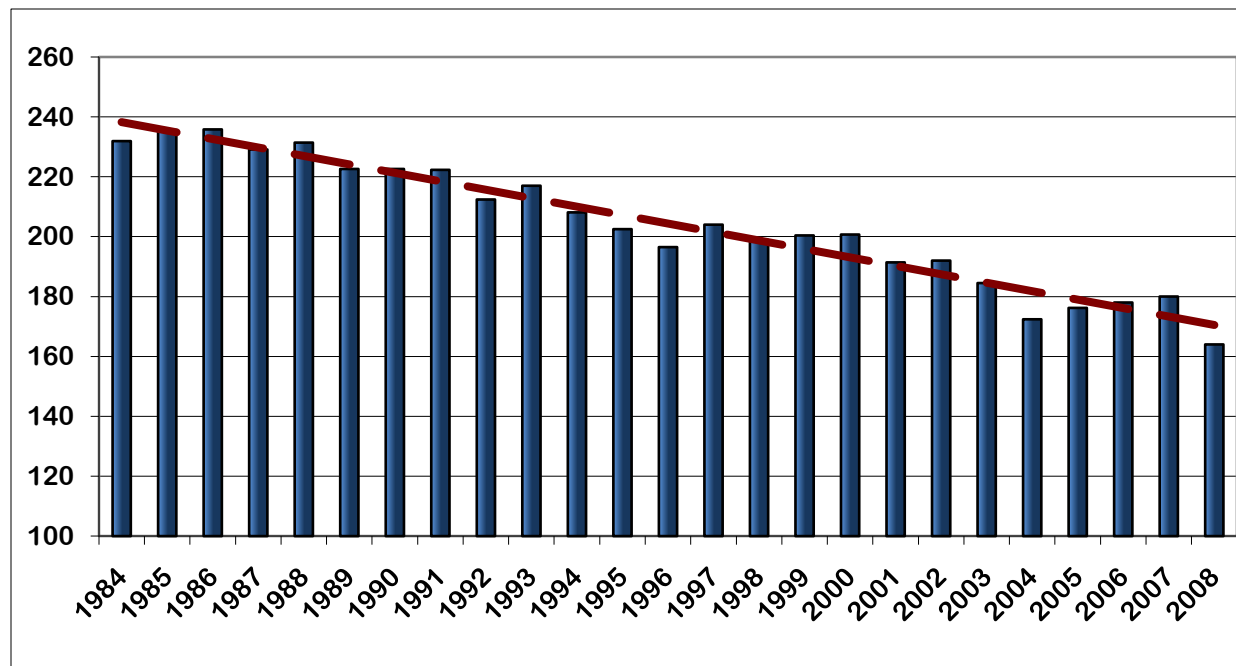


March 1, 2010 Broadcast
 "Sewer Rate Hikes Expected for MSD Customers"



MSD Affordability Challenges

- Maintaining affordability of residential usage
- Declining usage per account



Today's Decisions



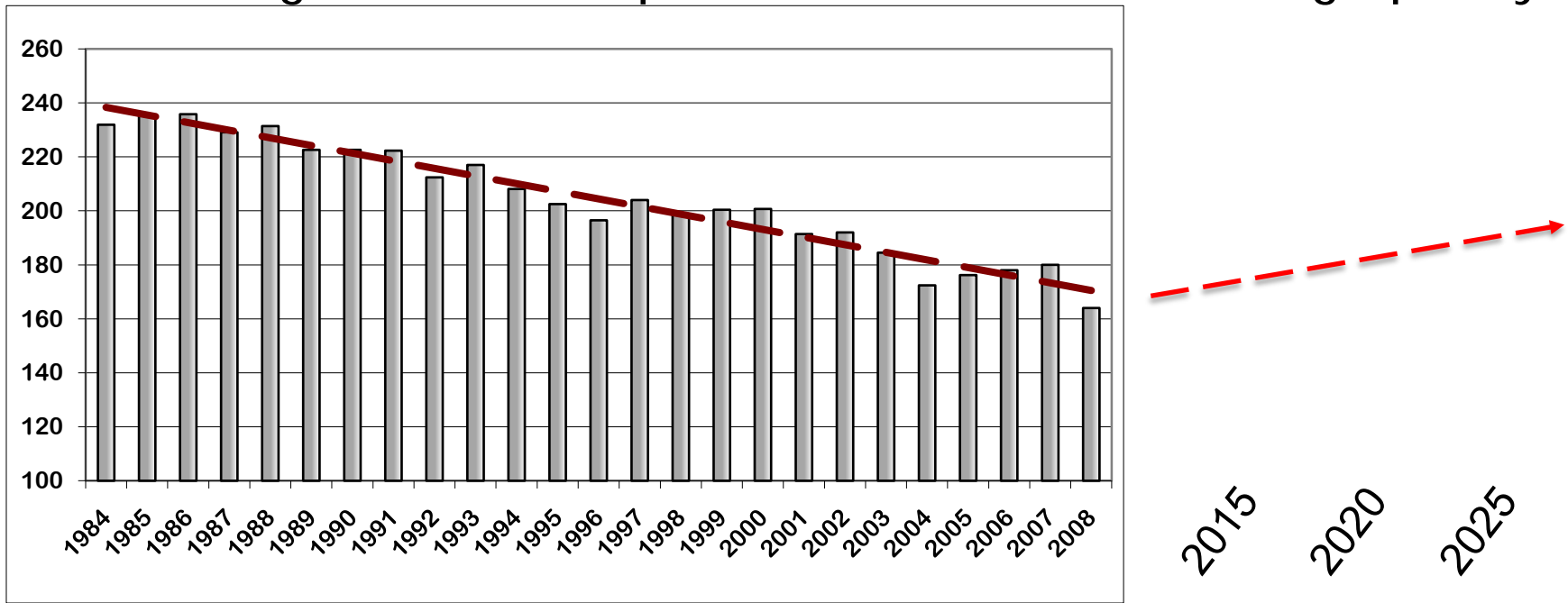
Tomorrow's Liabilities

Communities of the Future



Can the Challenges become an Opportunity?

- Expanding system capacity according to future city, county and neighborhood plans
- Leverage MSD Capital Investments to attract new customers
- Enabling others to expand customer base through policy

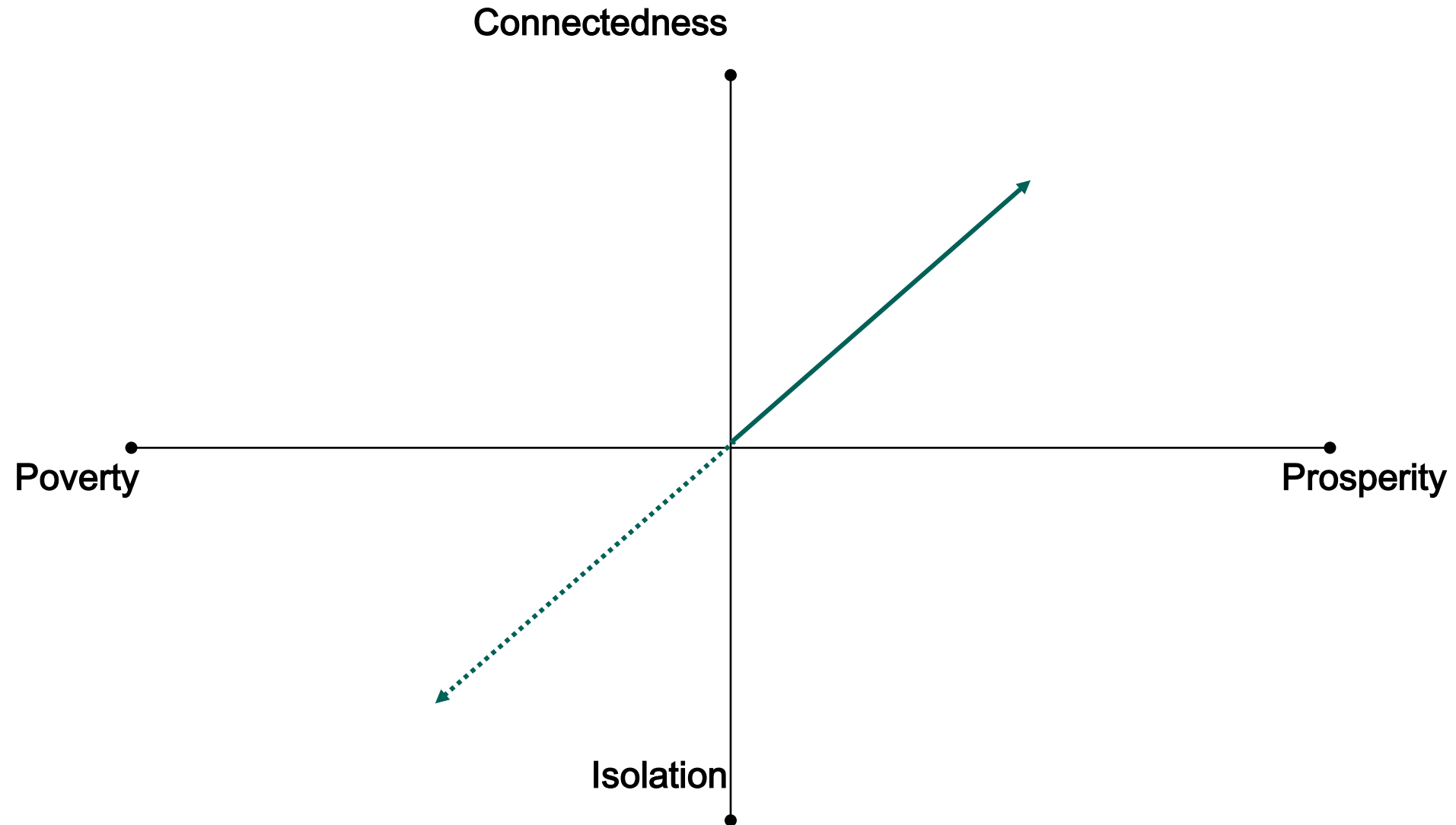


Scott Bernstein - Neighborhood Summit

“Use new knowledge to help shape Cincinnati’s new Plan...”

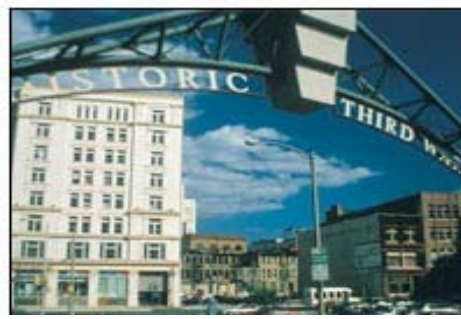
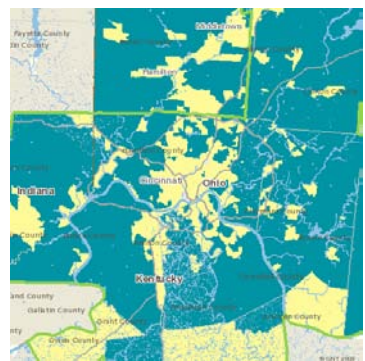
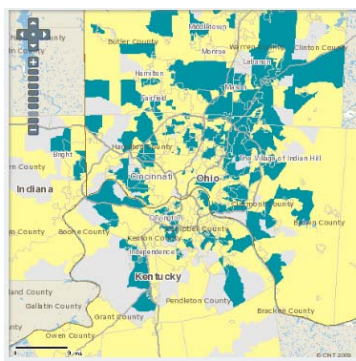
- ...identify the *value of urban quality to meet economic goals* =
Make intangible assets TANGIBLE
- ...*reduce “leakage” of dollars* to other areas, e.g. for gasoline =
Focus efforts on INFILL and Smart Growth
- ...*switch from* using transportation to bring “people to jobs” to
a “*jobs to people*” strategy
- ...*use public funds to support* a vitality & reputation that
attracts *investment from federal & state gov’t and private
sector* = Co-develop solutions for the future
- How to act as a “*region*”

“What a Nourishing Economy Does— Reduces Risk, Increases Gain”



What a Nourishing Economy Does, Reduces Risk, Increases Gain: Offers Both Higher Wage Opportunities, Lowers Waste and is more Inclusive

Connectedness



Poverty



Isolation



Prosperity

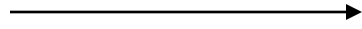


How the Market Views Cincinnati MSA

Moody's Economy.com

Strengths

- *Industrial diversity* provides resilience during recession
- *Presence of large healthcare services network*
- Business services *headquarters* bolsters income

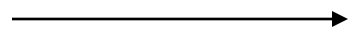


Forecast Upside

- *Attract more* corporate headquarters
- *Collaboration* between University of Cincinnati and industries foster high-tech employment

Weaknesses

- Still significant exposure to *declining manufacturing*
- *High cost of business* discourages firms from relocating here
- Unemployment 9.8%
- Home value drops 27%
- Personal bankruptcies, delinquency, foreclosures rising



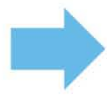
Forecast Downside

- Household debt burden rises
- Household financial risk continues
- Air transport falters
- Auto industry restructuring leads to further job losses in parts manufacturing
- Employment growth 2008-2010 ranked 211/392
- Employment growth 2008-2013 ranked 310/392

Cincinnati is poised for success

- Cincinnati is deeply centered around its 52 communities
- Wet weather solutions can be focused around our neighborhoods
- MSD's wet weather strategy and approach recognizes the value of those neighborhoods & partnerships.

Current Conditions
in the Community



Leverage
MSD's Investment



Community's Vision
for the Future

THE CINCINNATI ENQUIRER

Property value at a substantial decline

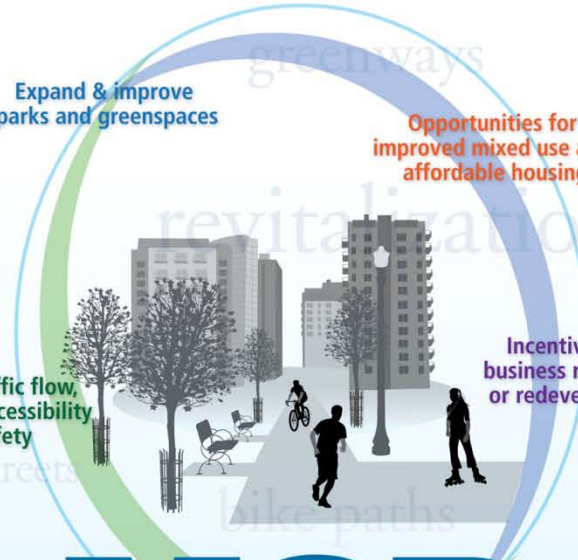


Expand & improve
parks and greenspaces

Opportunities for
improved mixed use and
affordable housing

Improve traffic flow,
pedestrian accessibility
and safety

Incentives for
business retention
or redevelopment

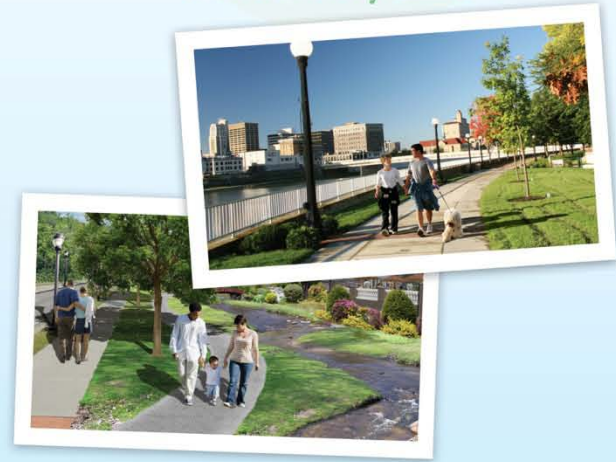


MSD

Metropolitan Sewer District

Investment to reduce sewer overflows
and meet federal mandates

economics
sustainability
infill
jobs
bike trails
smart growth
safety
recreational
opportunities
better
education
community
gardens
quality place
community assets

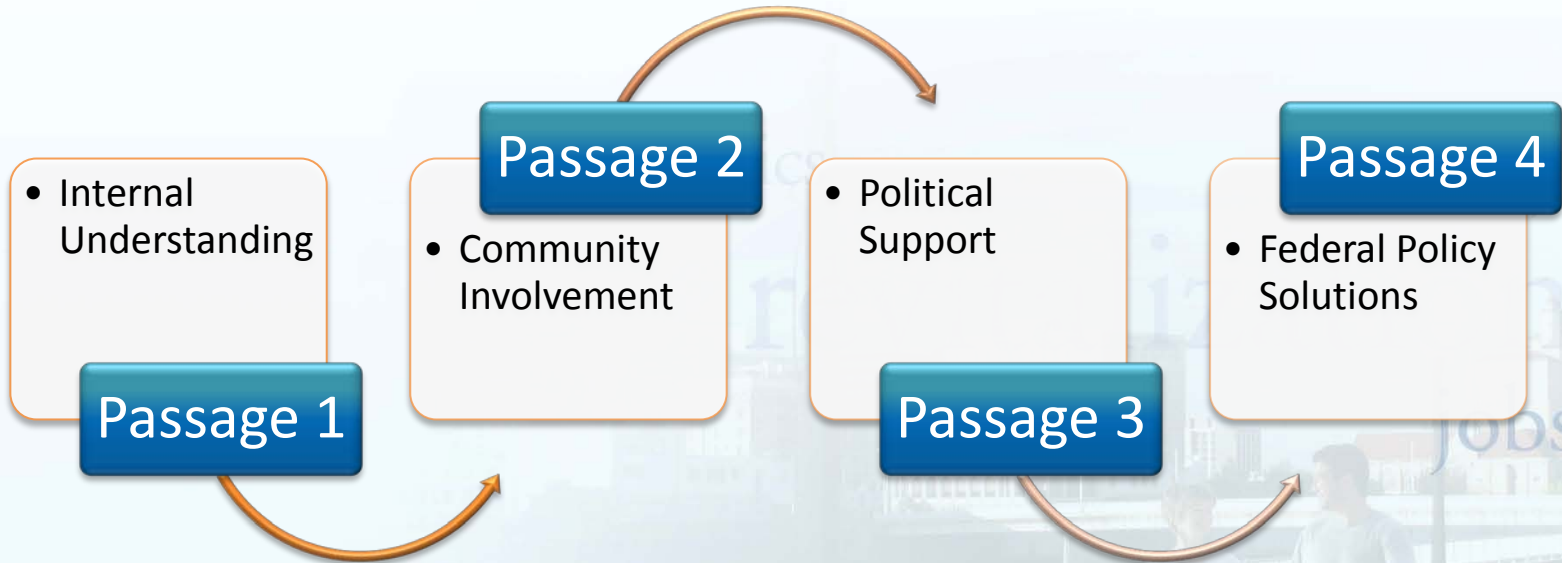


Leverage MSD's Investments....

Making Sustainable Decisions for the Future

- Think “Outside the Pipe” to develop holistic solutions to infrastructure needs
- Community Inclusion to Decision Making
- Public/Private partnerships: build value
- Create the Factor conditions for redevelopment
- Business clusters as an development tool
- Urban/Brownfield Redevelopment as outgrowth of infrastructure projects

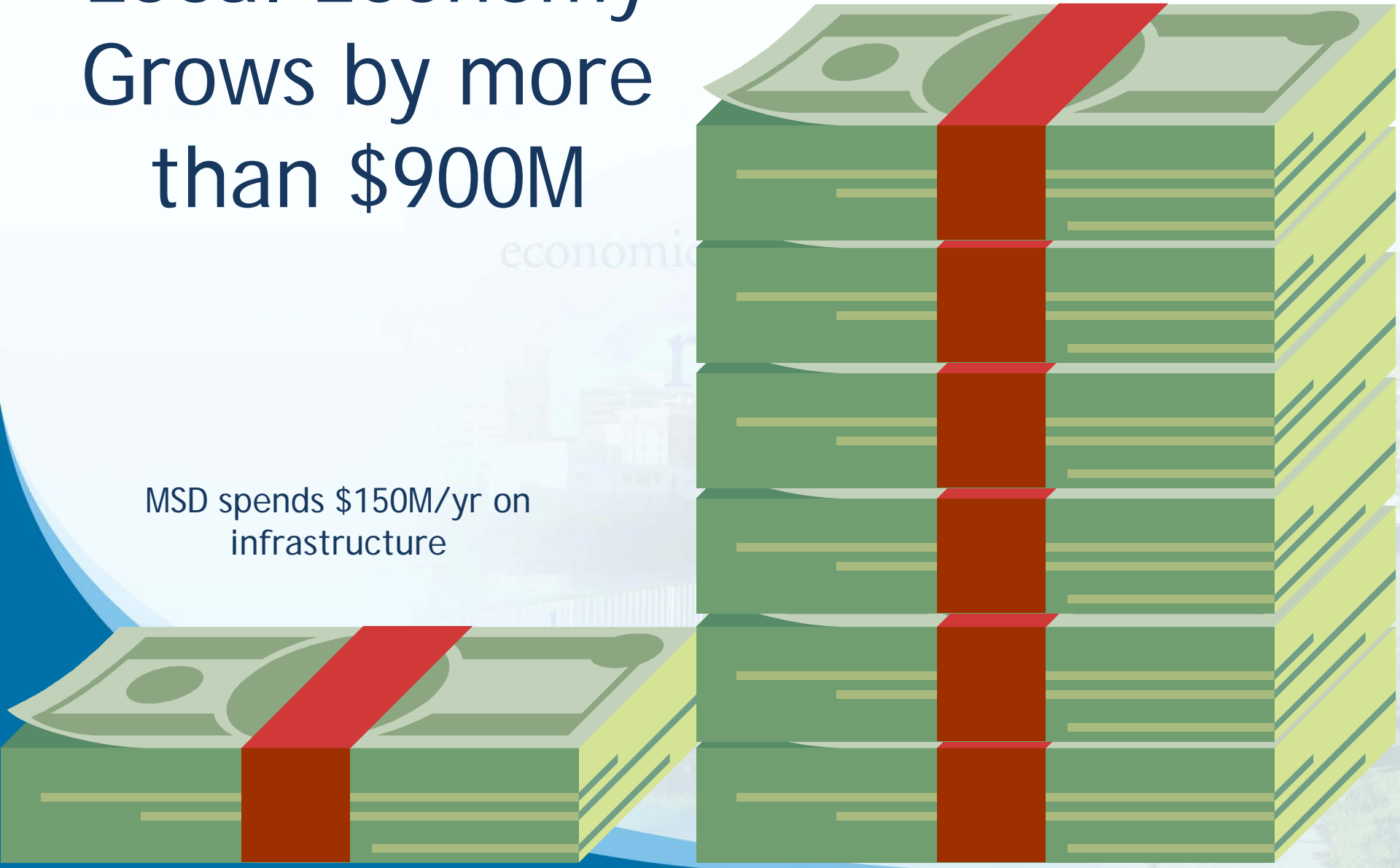
The “Getting to Yes” Pipeline



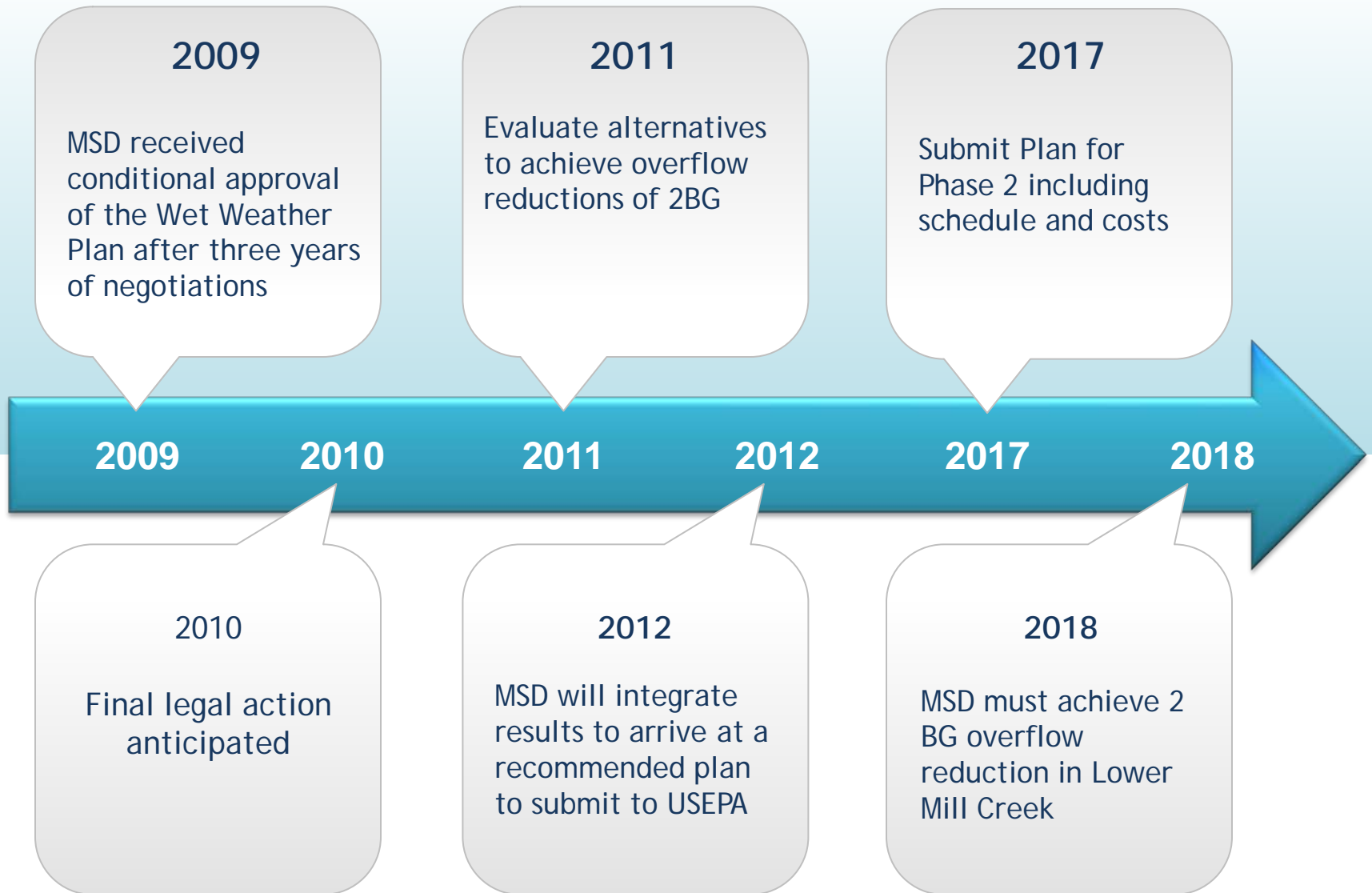
Source: US Conference of Mayors, 2006

Local Economy Grows by more than \$900M

MSD spends \$150M/yr on
infrastructure



The Clock is Ticking



Communities of the Future From 50,000 feet to Ground level

MaryLynn Lodor

The MSD Sustainable Watershed Evaluation Process



Data & Inventory Analysis

- Natural Systems
- Built Systems
- Community Character
- Policy Issues
- Watershed Projects
- Constituency Building

Opportunities & Constraints

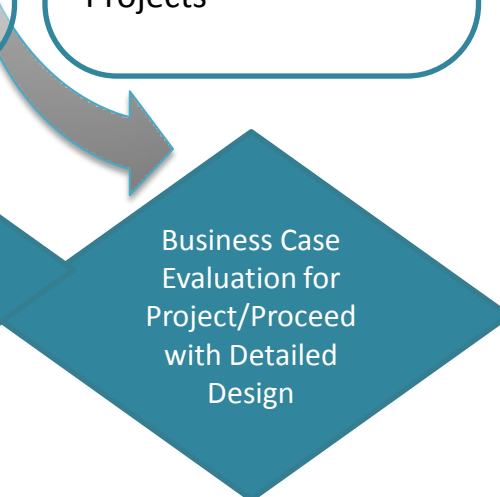
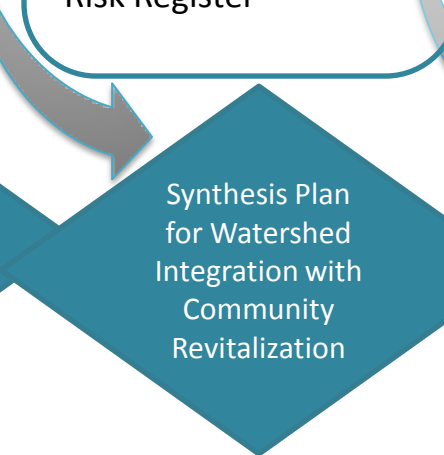
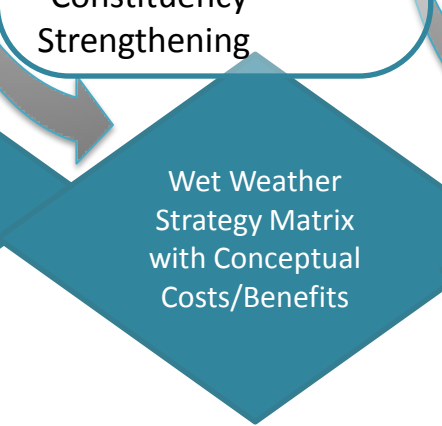
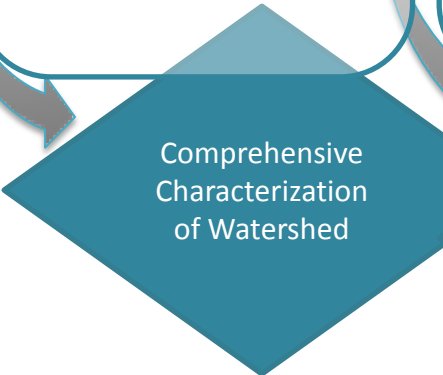
- Synthesize Outcomes from Inventory
- Formulate Goals
- Perform Modeling
- Develop Risk Assessment
- Evaluate Alternatives
- Constituency Strengthening

Solutions & Action Plans

- Refine Strategies
- Evaluate
- Build Project/Public Interface
- Identify & Assess Potential Risks with Risk Register

Implementation

- Finalize Watershed Goals
- Refine, Update, Verify Alternatives
- Detail & Market Community of Future Projects



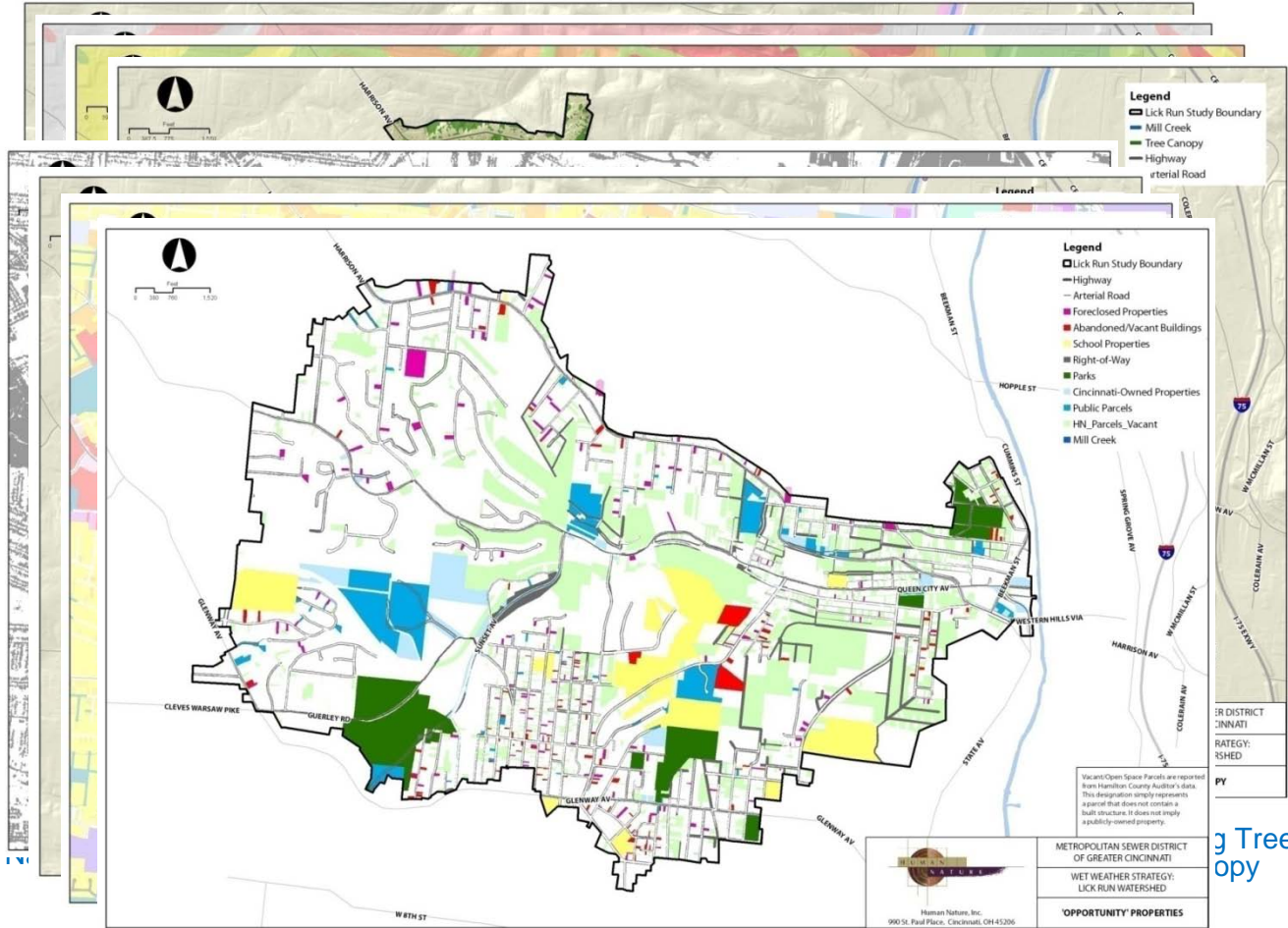
The MSD Sustainable Watershed Evaluation Process

Lay the Groundwork

Data & Inventory Analysis

- Natural Systems
- Built Systems
- Community Character
- Policy Issues
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- Constituency Building

Comprehensive Characterization of Watershed



Impervious Surfaces

Sewer System

Land Use

Opportunity Properties

g Tree
opy

The MSD Sustainable Watershed Evaluation Process



The MSD Sustainable Watershed Evaluation Process

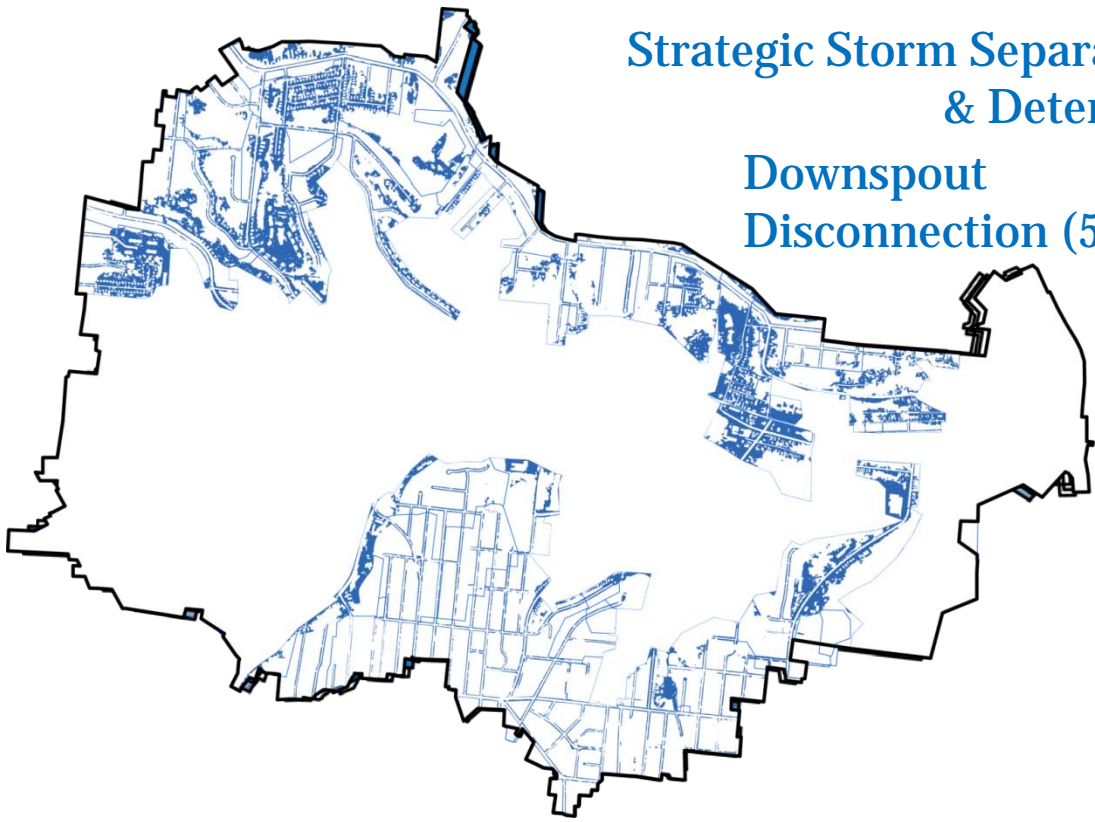
Build the Foundation

Lick Run Watershed
62 catchments 2.1 billion gallons
(annual stormwater runoff)

Opportunities
& Constraints

- Synthesize Outcomes from Inventory
- Formulate Goals
- Perform Modeling
- Develop Risk Assessment
- Evaluate Alternatives
- Constituency Strengthening

Wet Weather Strategy Matrix with Conceptual Costs/Benefits



Strategic Storm Separation & Detention

Downspout Disconnection (50%)

Reforestation - 50% of Right-of-Way (88 acres)
50% of Steep Hillsides (231 acres)

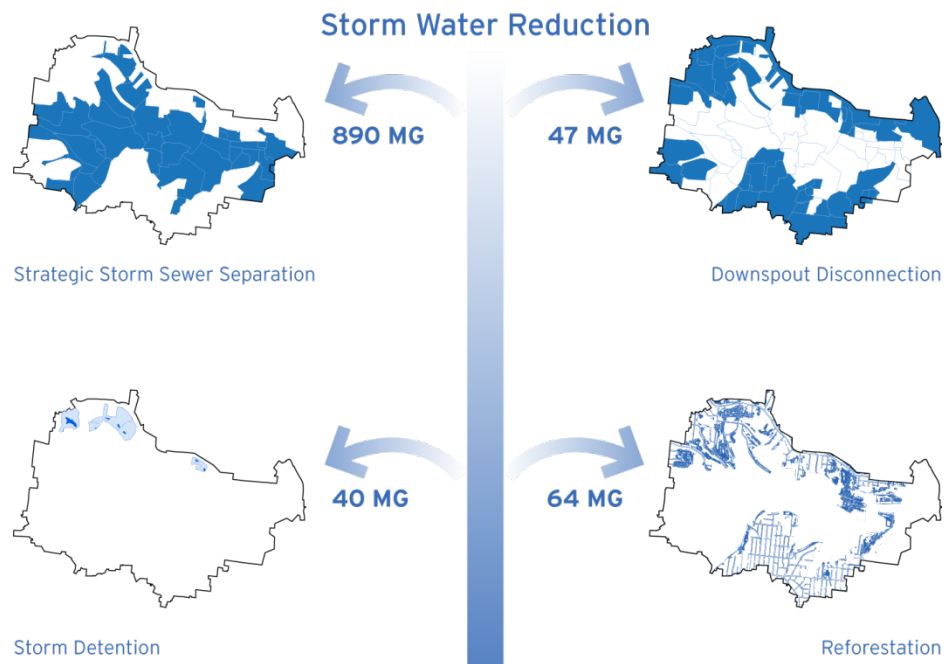
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Build the Foundation

Opportunities & Constraints

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Wet Weather Strategy Matrix with Conceptual Costs/Benefits



results in

800
million gallons

annually removed from combined sewer overflow

The MSD Sustainable Watershed Evaluation Process



The MSD Sustainable Watershed Evaluation Process

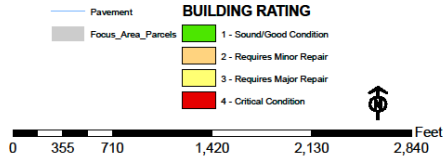
Build the Foundation

Urban Audit: South Fairmount



CS05 Urban Audit - Building Condition Rating

rpc HAMILTON COUNTY
Regional Planning Commission



Map 1

Build the Foundation

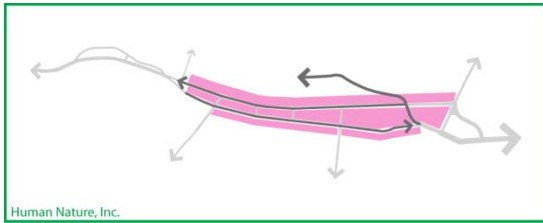
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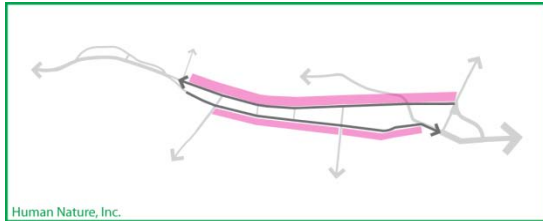
Synthesis Plan
for Watershed
Integration with
Community
Revitalization

The MSD Sustainable Watershed Evaluation Process

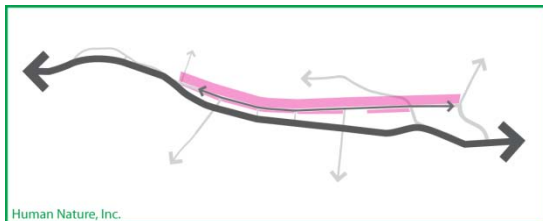
Integration with Traffic & Transit



Urban Ravine/Canal Concept



Green Spine/
Central Park Concept



Green Street/
Main Street Concept

Build the Foundation

Solutions &
Action Plans

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Synthesis Plan
for Watershed
Integration with
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Revitalization

The MSD Sustainable Watershed Evaluation Process

Build the Foundation

Solutions & Action Plans

- Refine Strategies
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Synthesis Plan for Watershed Integration with Community Revitalization

Partial Lick Run Community Redevelopment Concept achieves water infrastructure solutions



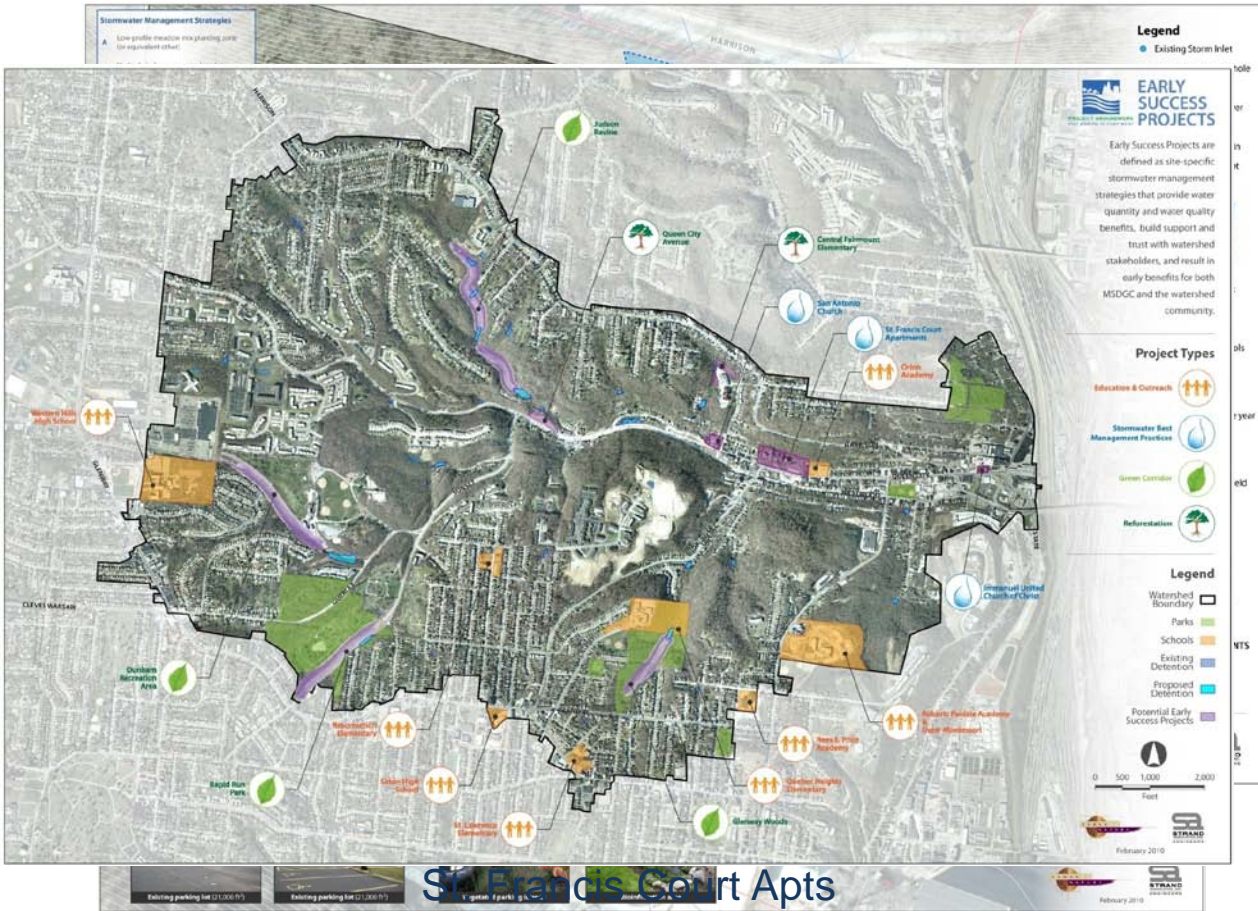
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Build the Foundation

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Synthesis Plan for Watershed Integration with Community Revitalization



St. Francis Court Apts
 6 Acre BioInfiltration
 Lick Run Early Success Projects

The MSD Sustainable Watershed Evaluation Process

Set the Framework

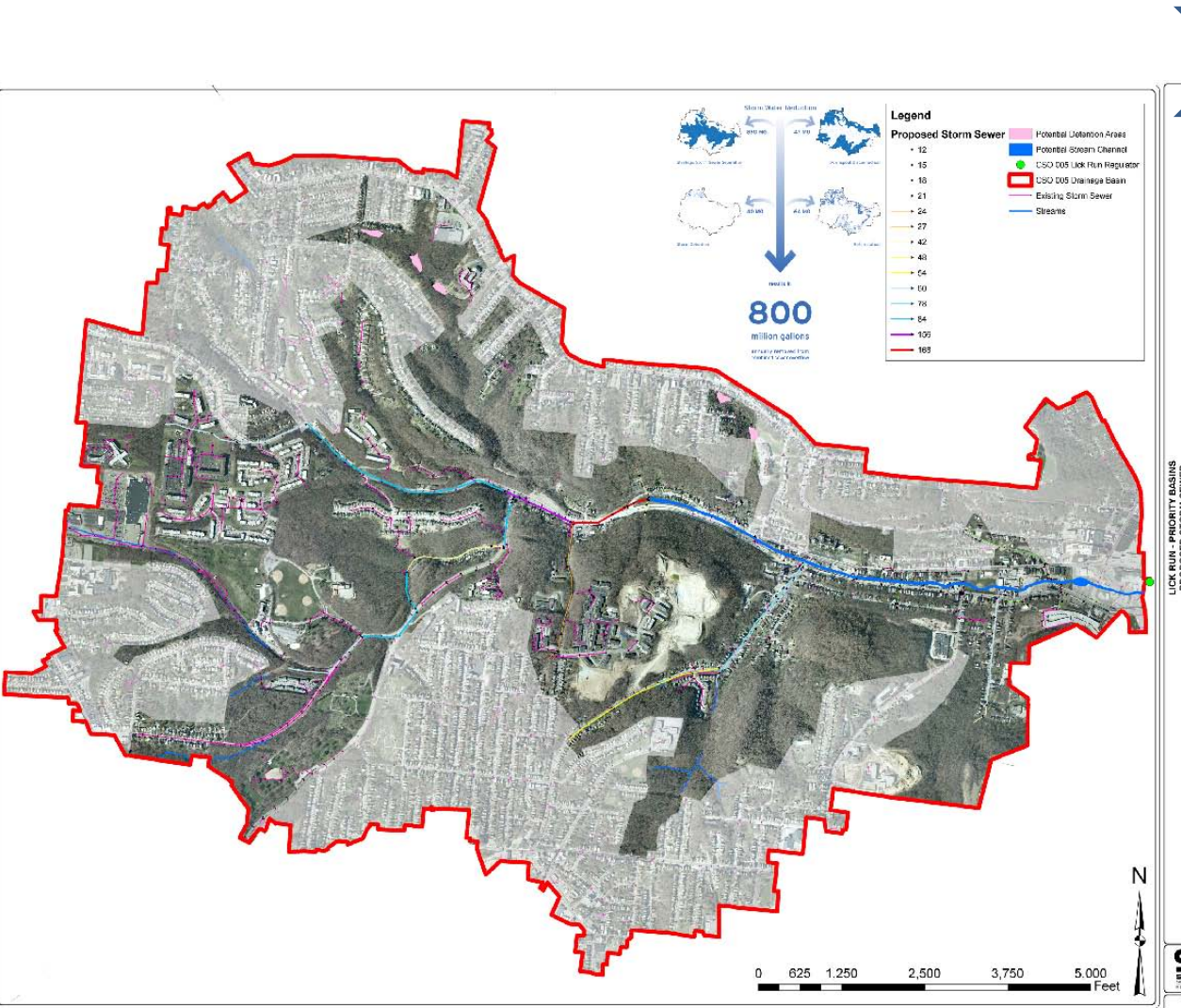
Implementation

- Finalize Watershed Goals
- Refine, Update, Verify Alternatives
- Detail & Market Community of Future Projects



Business Case Evaluation for Project/Proceed with Detailed Design

The MSD Sustainable Watershed Evaluation Process



Set the Framework

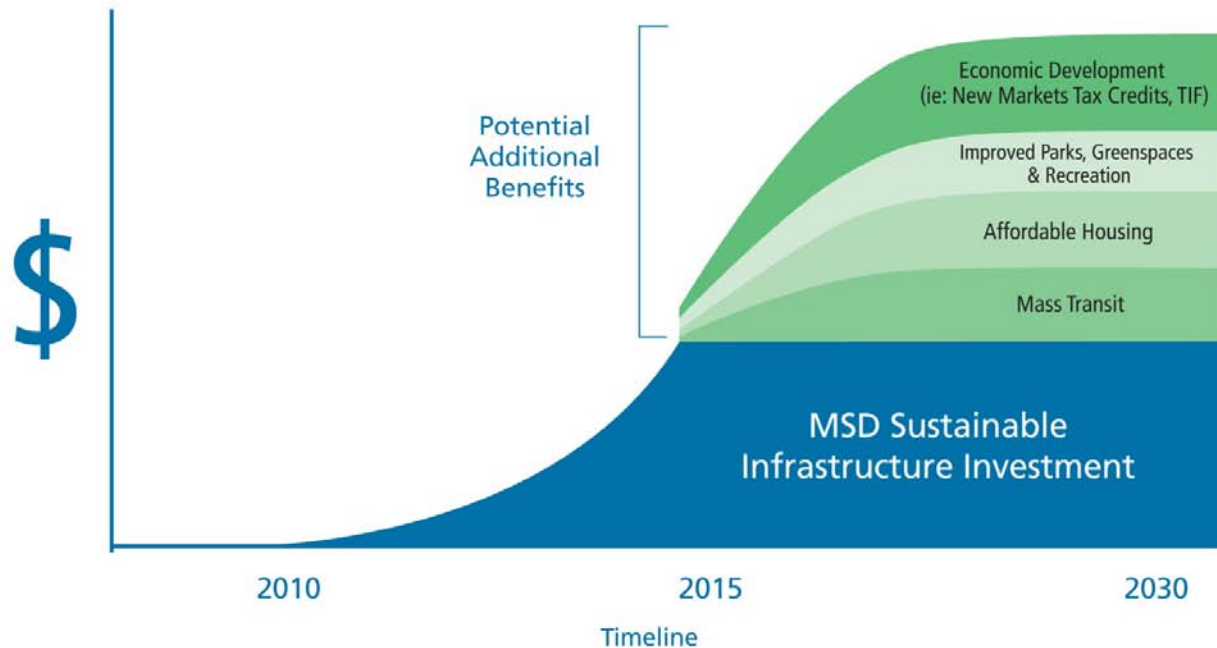
Implementation

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Business Case Evaluation for Project/Proceed with Detailed Design

The MSD Sustainable Watershed Evaluation Process

Value Creation: Market Analysis of Sustainable Infrastructure Investment



Set the Framework

Implementation

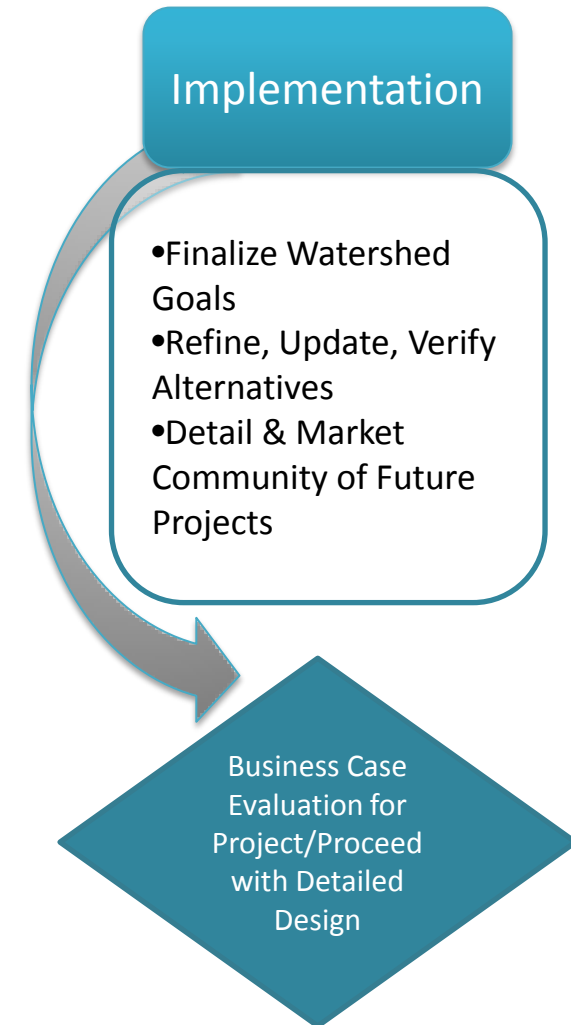
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Business Case Evaluation for Project/Proceed with Detailed Design

The MSD Sustainable Watershed Evaluation Process

Lick Run Status Update

- **Conceptual Plan – Complete**
 - Base: 8000' channel, 9 bridges, 46,000 In storm sewer, utility relocation
 - Base Plus: Roadway enhancements, bike paths, sidewalks, aeration features, civic spaces, active recreation, public gathering spaces, lighting, seating, etc
- **H&H Feasibility Study – Complete**
 - Fine-tune Sizing & Alignment, Costs, 100 Yr Flood Study
 - Willing Seller Acquisitions
 - Rerun Model prior to 30% design
- **Basis of Design 30% Design: June 2010**
- **Community Engagement**
 - Underway through 2011
- **Early Success Projects:**
 - Planning underway for completion in 2010

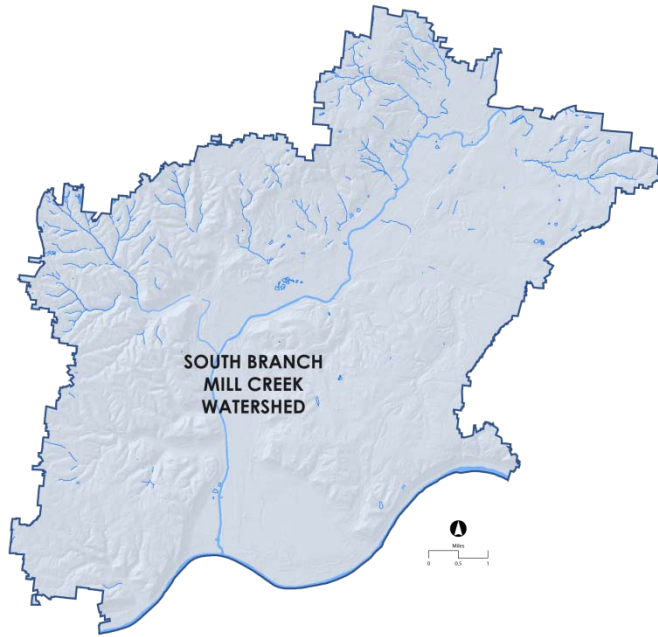


Lick Run: Community of the Future



JUN. 8 - '19

Lower Mill Creek SWEP Evaluations

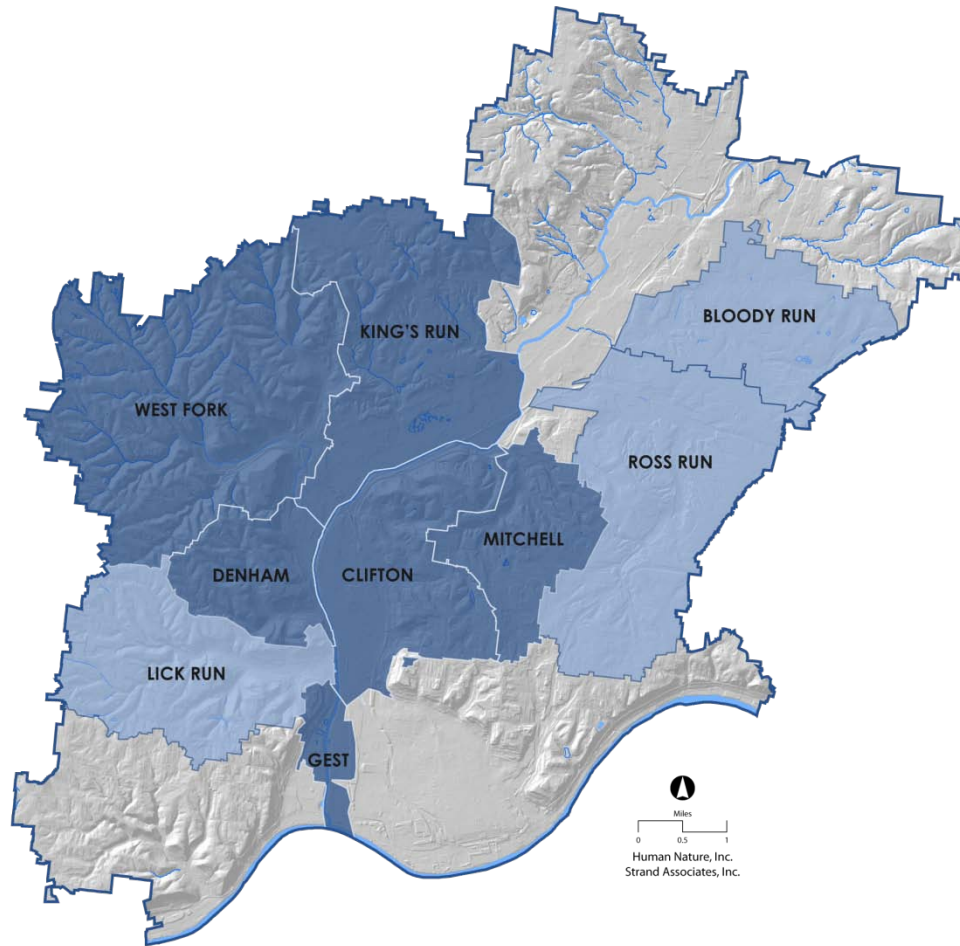


Coarse Evaluation: 6 Sub-basins

15,355 Acres (24 square miles)

SWEP Evaluations: 3 Sub-basins

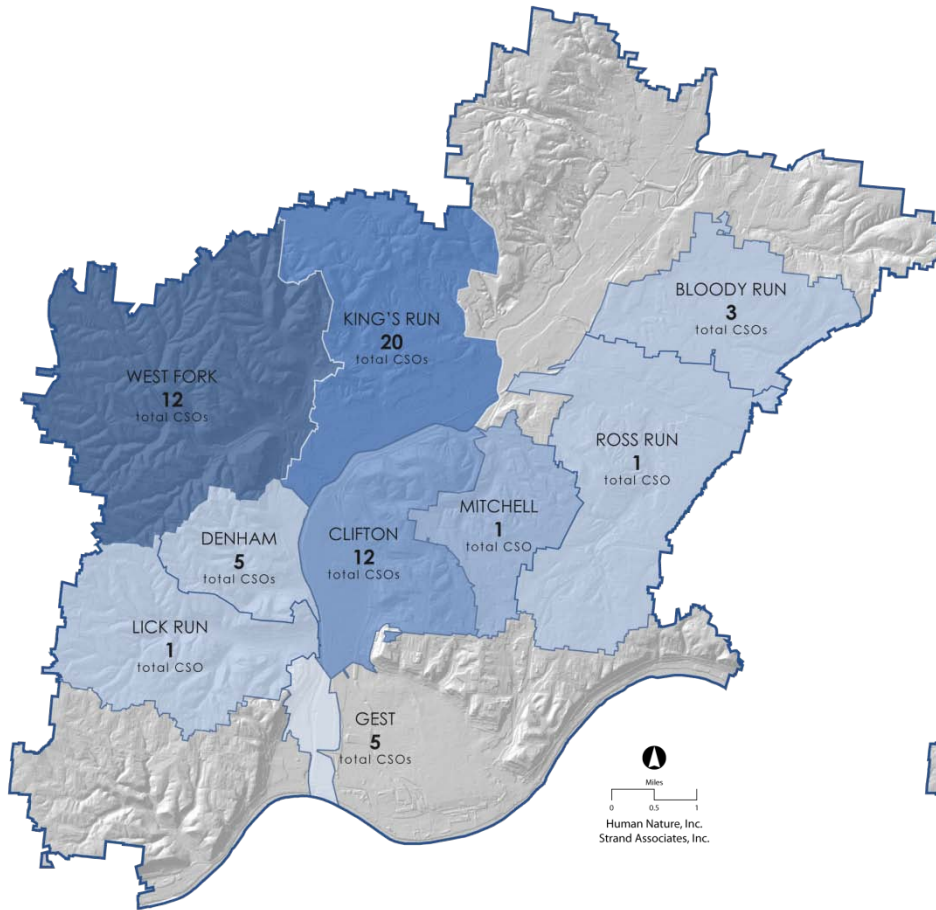
8,843 Acres (14 square miles)



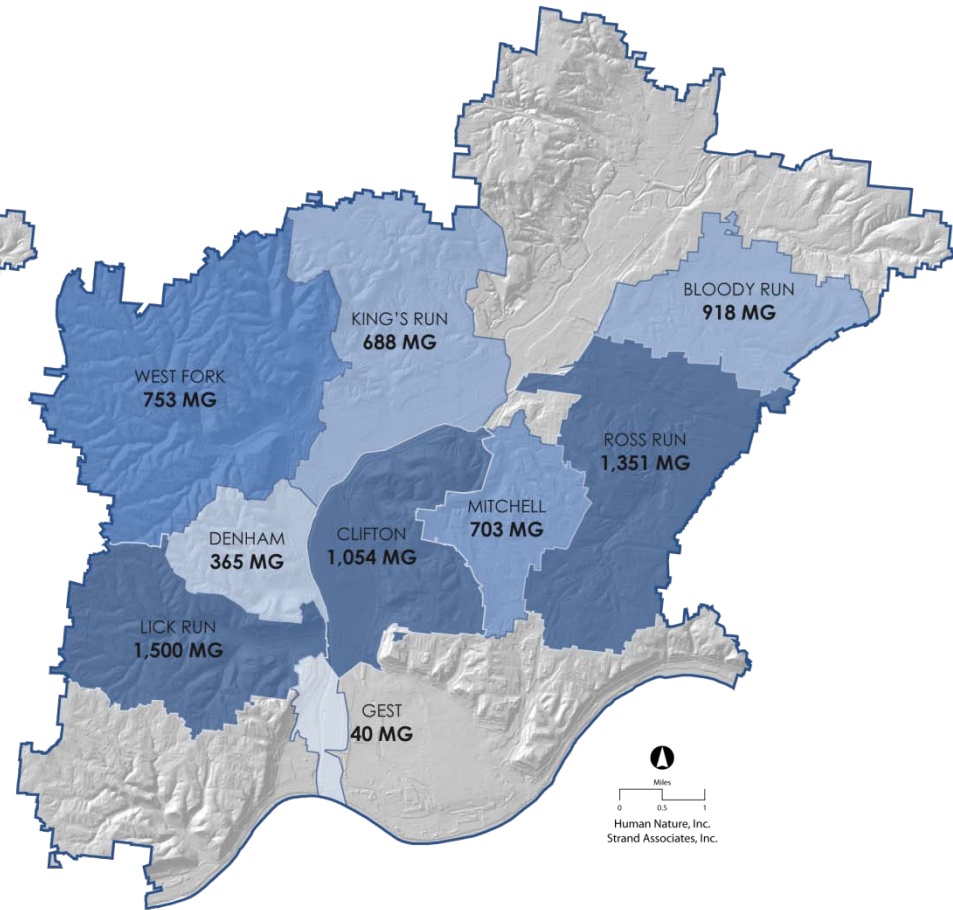
Miles
0 0.5 1
Human Nature, Inc.
Strand Associates, Inc.

Lower Mill Creek SWEP Evaluations

Context



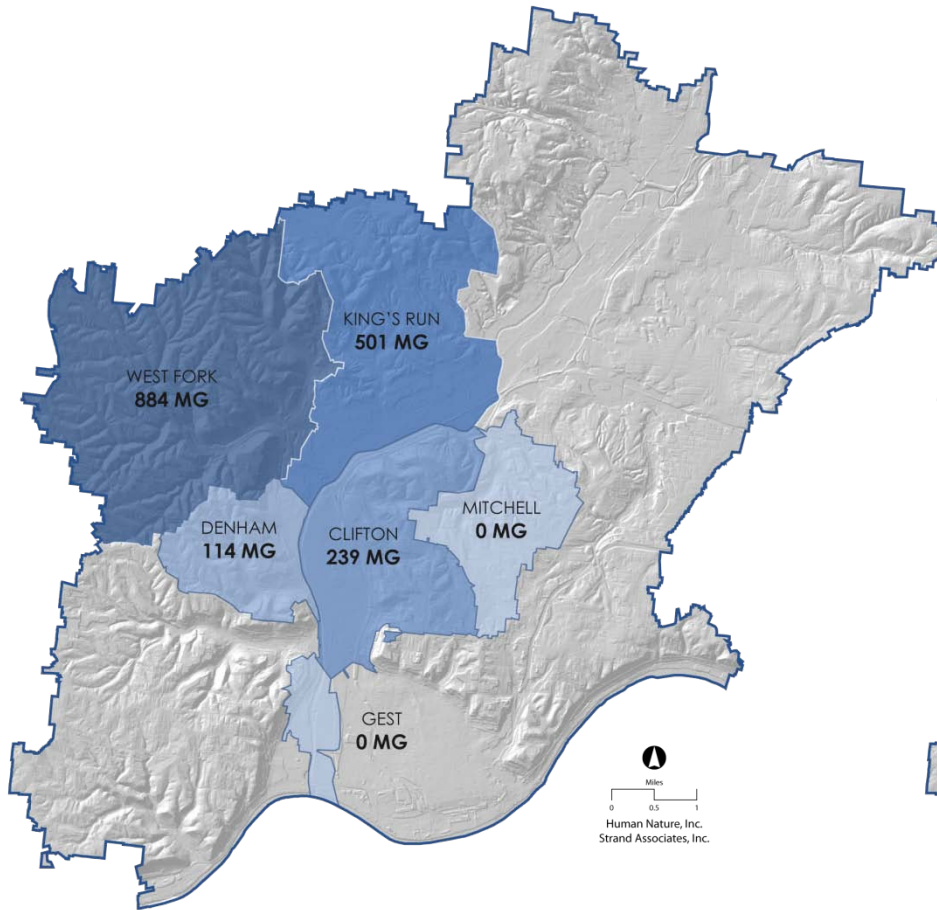
Number of CSOs
60



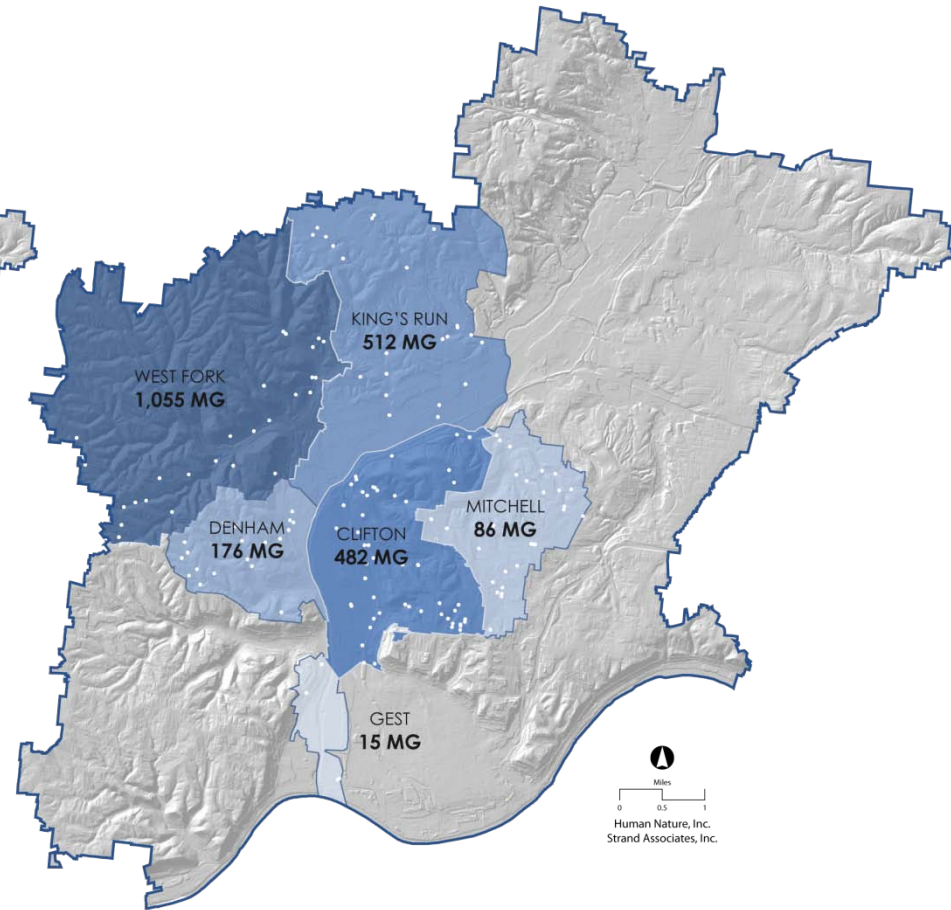
Annual CSO Volume
7,372 MG

Lower Mill Creek SWEP Evaluations

Source Control Opportunities



Annual Runoff
6,670 MG



Direct Entry Points
143 Total
2,326 MG

Communities of the Future





Facilitated Discussion

- The mission of this Committee is to review and give feedback to MSD approaches/projects like Lick Run Daylighting project
- Since USEPA has mandated that MSD must either build a default Tunnel or develop alternatives that would achieve the same wet weather reduction as the tunnel, do you think the community would be receptive to leveraging MSD investments & opportunities to help shape communities of the future?
- From your perspective, what are some of the biggest challenges for this approach?
- How can you contribute to the mission of this committee?
 - Who or what can you inform and influence to assist MSD in implementing COF projects?