

STRATEGY

PEOPLE

PROCESS

TECHNOLOGY



ORSANCO UPDATE

February 10, 2010

James A. Parrott

Executive Director

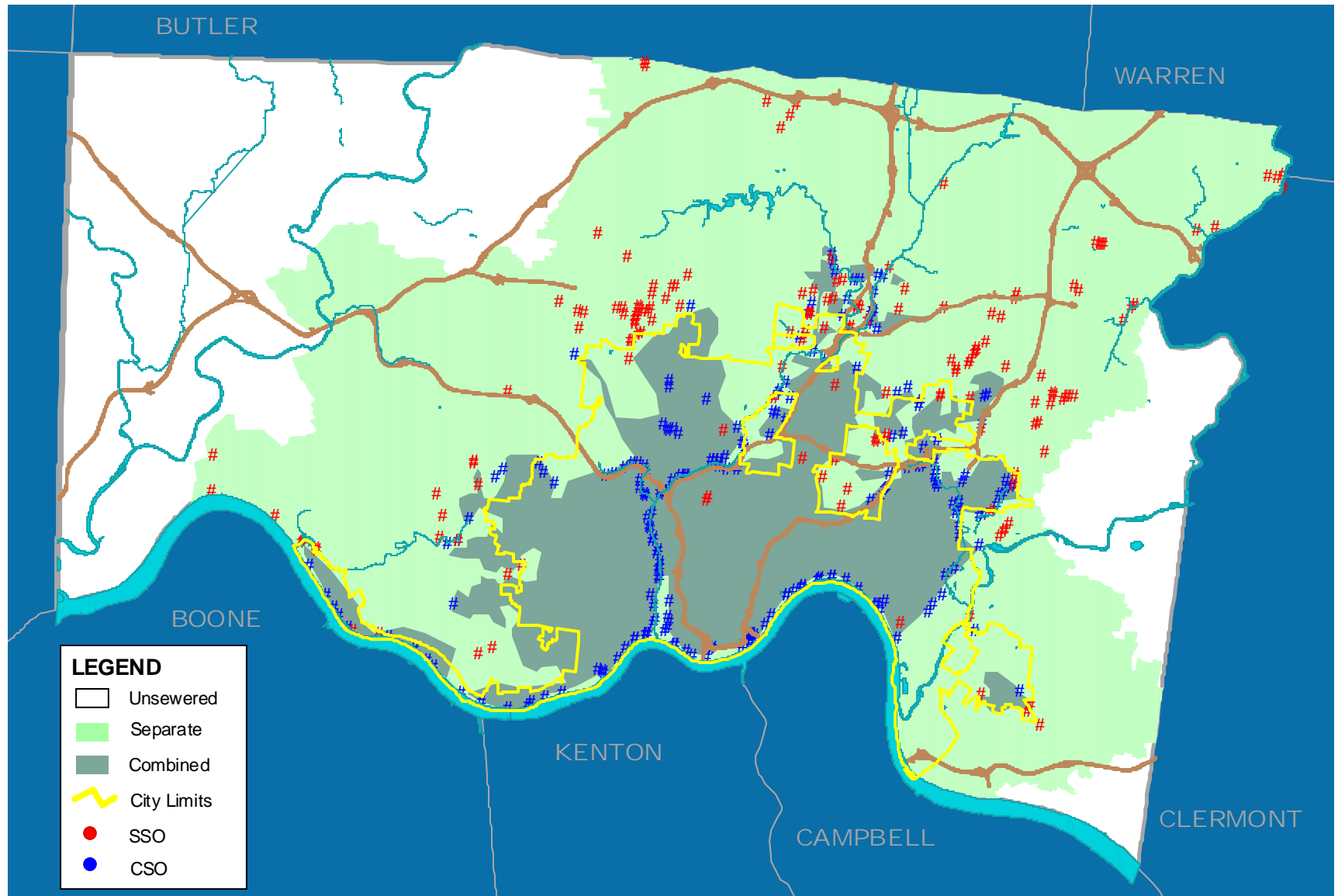
MSD of Greater Cincinnati



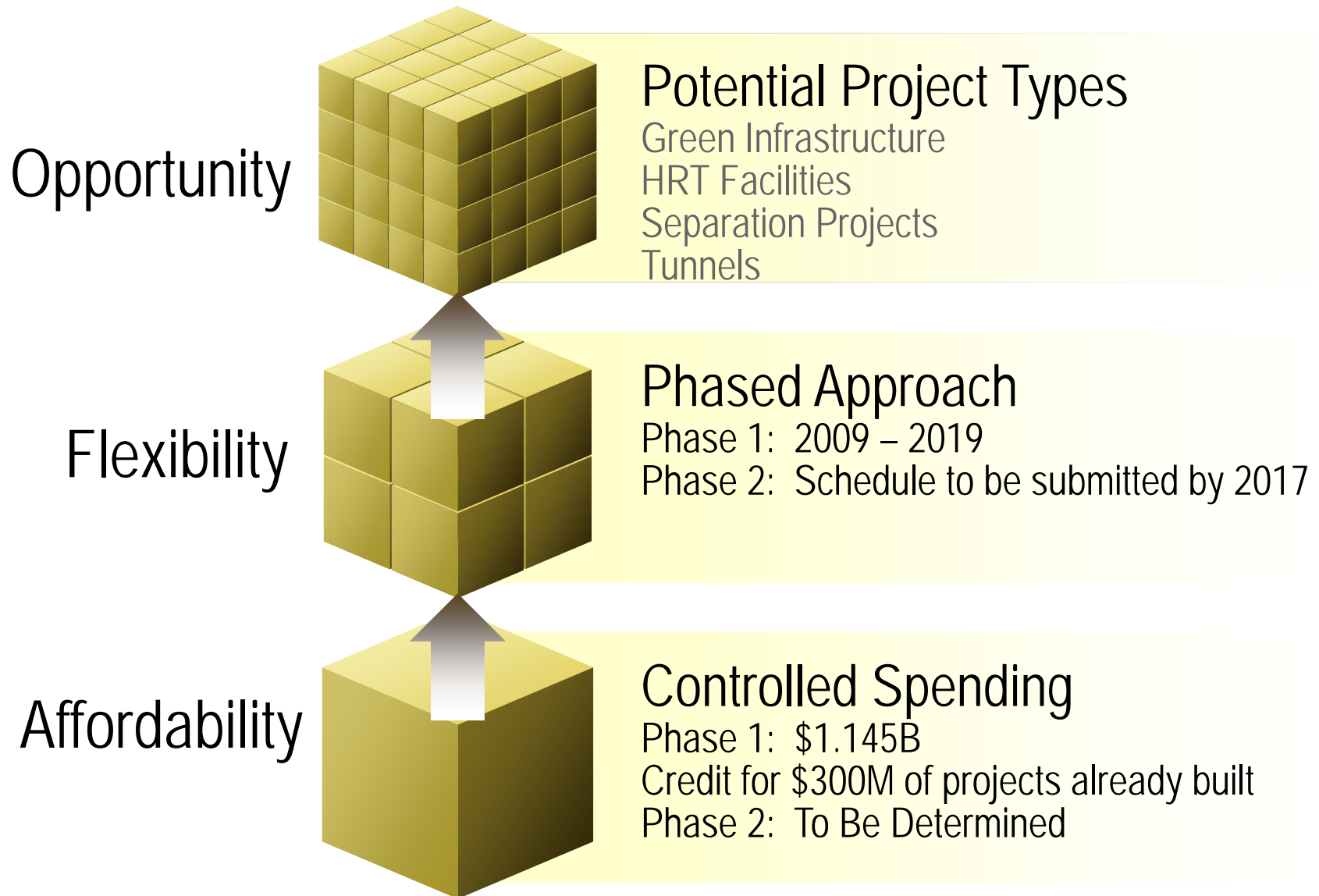
MSD by the Numbers

- Serves Cincinnati and most of Hamilton County in southwestern Ohio
 - Population of more than 800,000
 - More than 225k accounts
- Treats more than 70 Billion gallons/year
- Seven major treatment plants

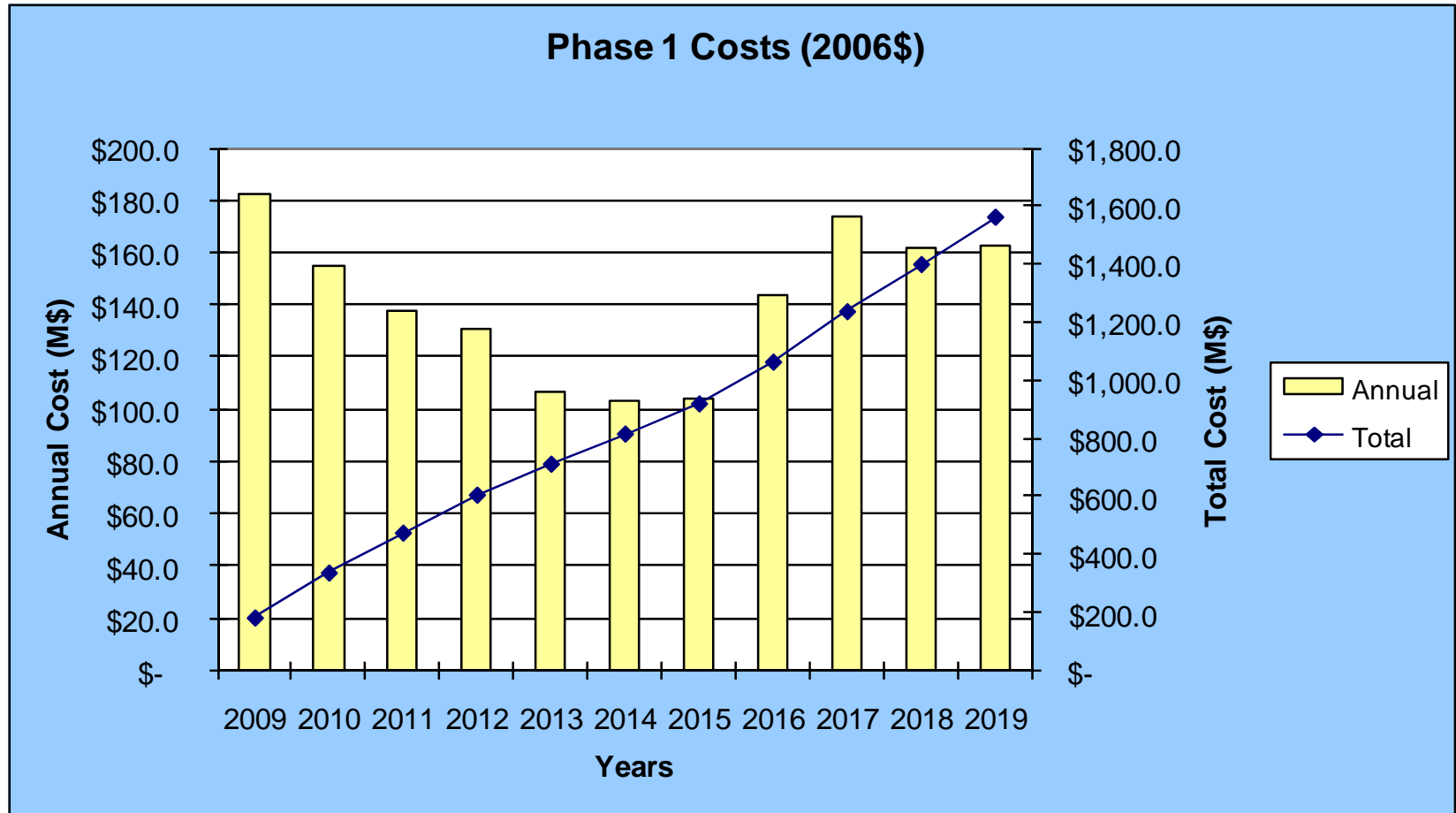
MSD Service Area



Building Blocks of the Consent Order

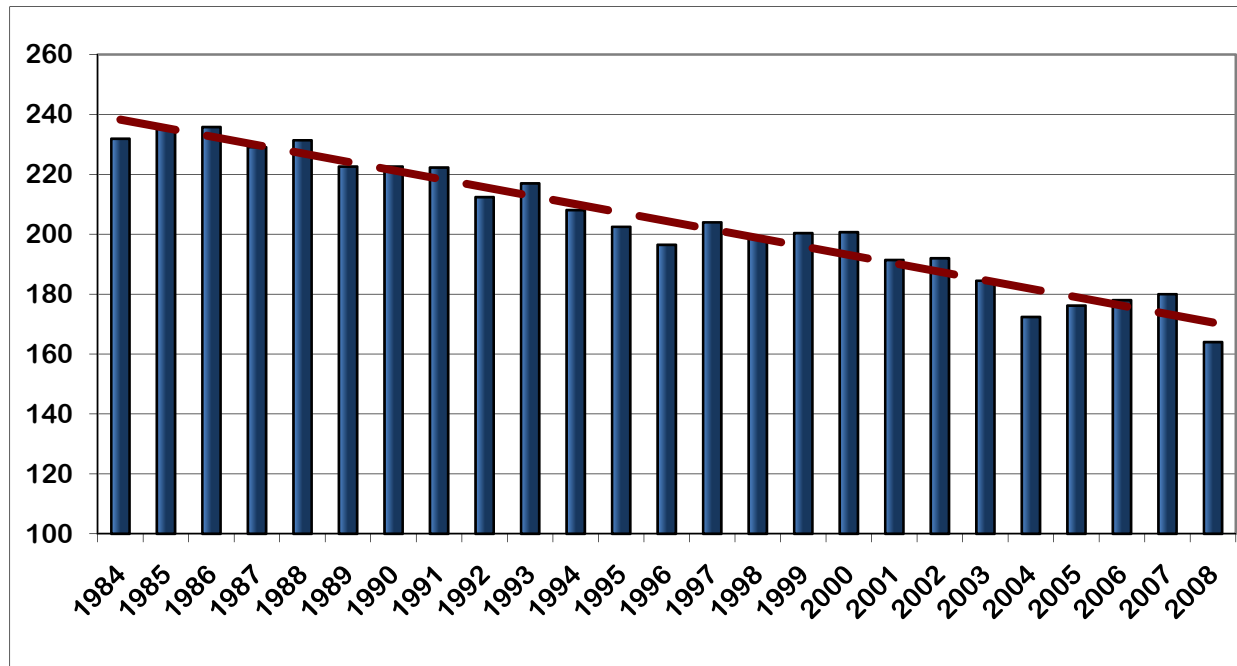


Phase 1 WWIP and Asset Management Costs



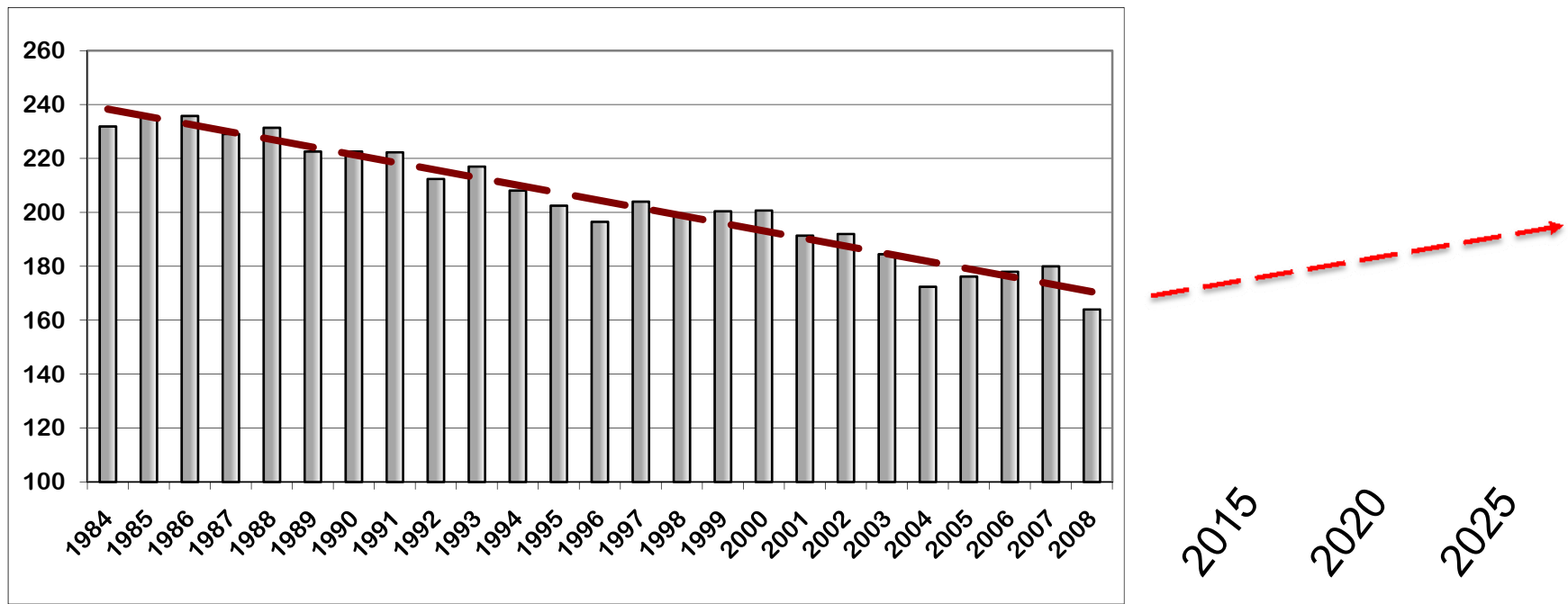
You See Challenges...

- Maintaining affordability of residential usage
- Declining usage per account



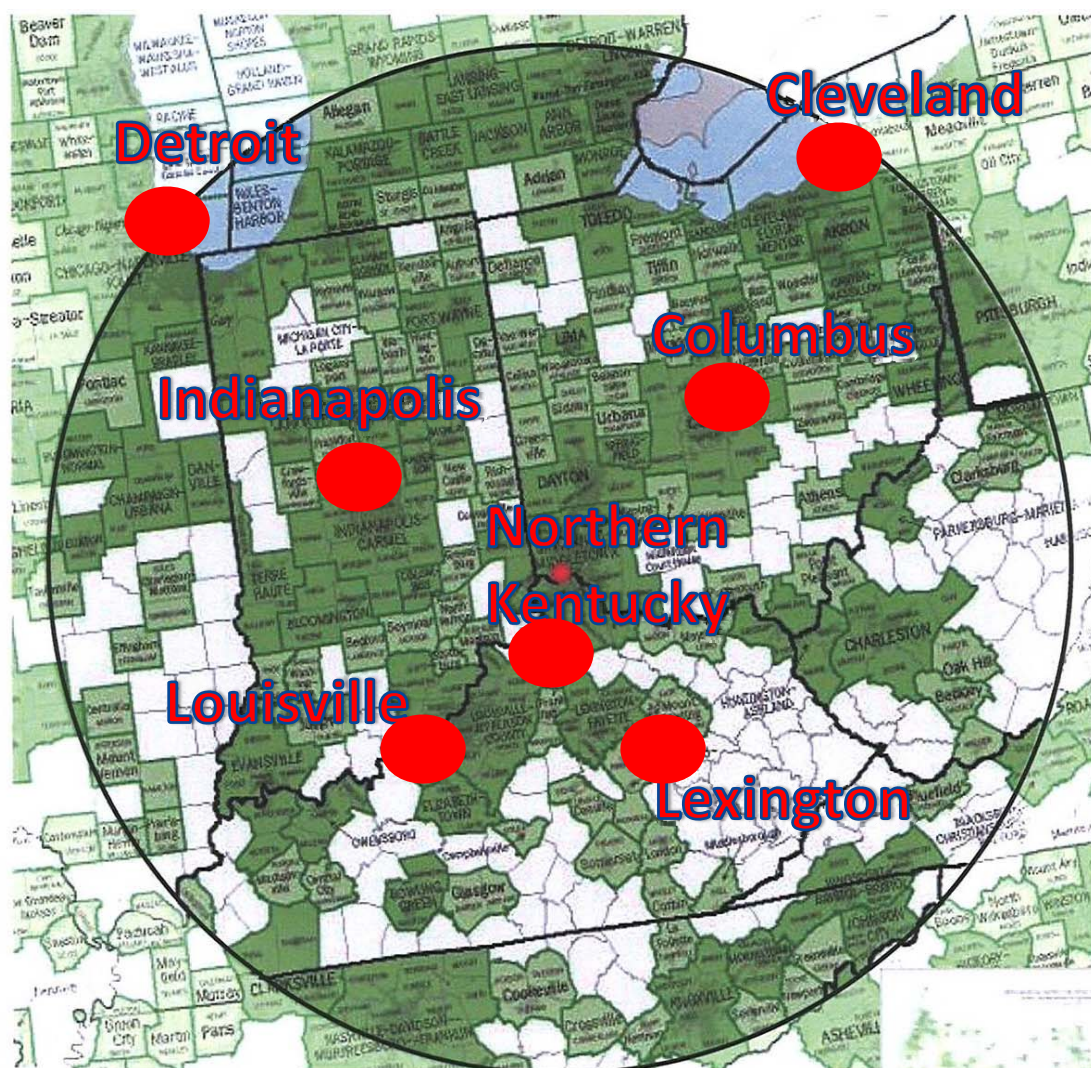
...We see Opportunity

- Expanding capacity within system according to future city, county and neighborhood plans
- Enabling others to expand customer base through policy guidelines



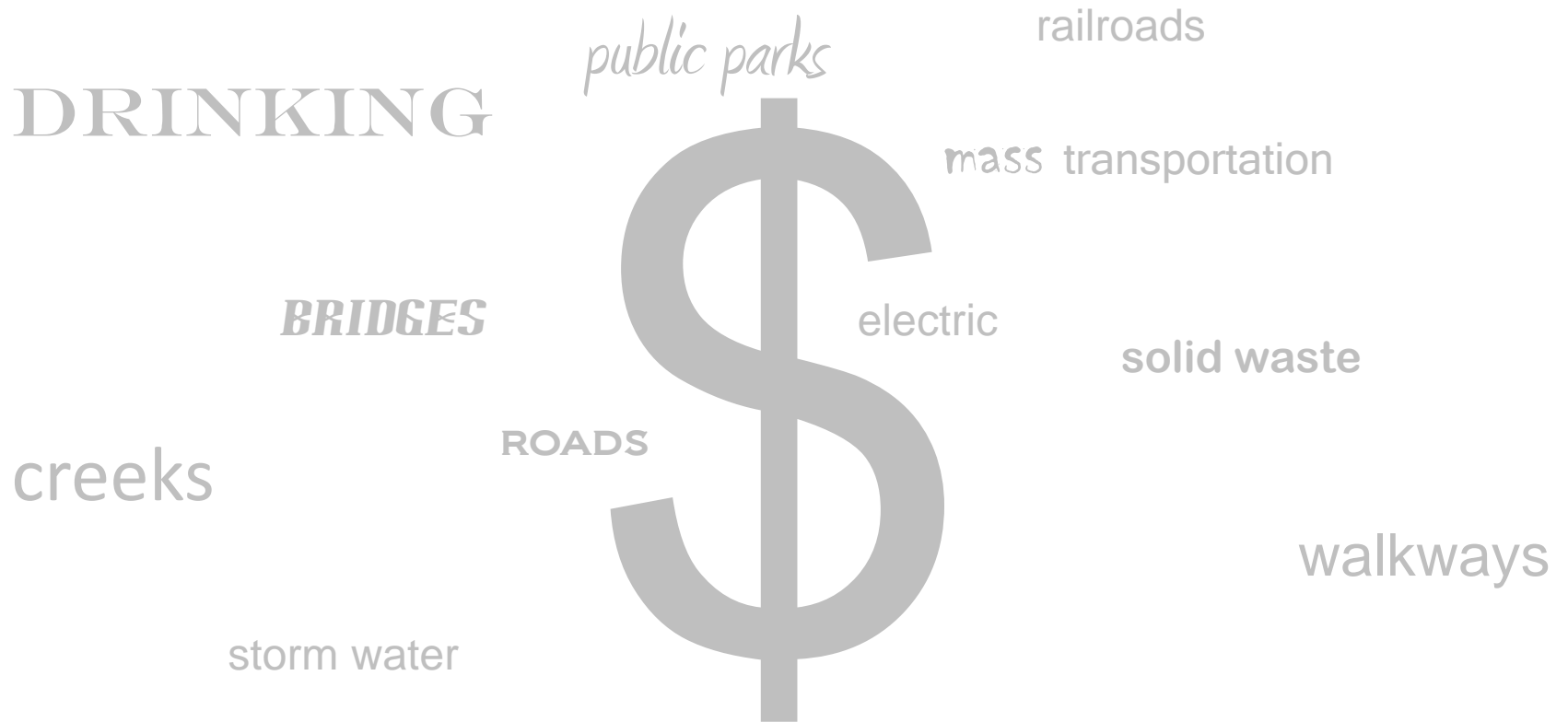
250-Mile Radius of Cincinnati

IL	Bloomington-Normal
	Champaign-Urbana
	Chicago-Naperville-Joliet
IN	Bloomington, IN-KY
	Evansville
	Fort Wayne
	Indianapolis-Carmel
	Lafayette
KY	Bowling Green
	Lexington-Fayette
	Louisville-Jefferson County
MI	Detroit-Warren-Livonia
	Lansing-East Lansing
OH	Akron
	Cleveland-Elyria-Mentor
	Columbus
	Dayton
	Youngstown-Warren-Boardman
PA	Pittsburgh
TN	Clarksville
	Knoxville
	Nashville-Davidson-Murfreesboro
WV	Charleston



You See Challenges...

- Competing public infrastructure needs



...We see Opportunity

- Integrated Approach to Infrastructure Needs

POLICY

water resources management

land use

**watershed
management**

TRANSPORTATION

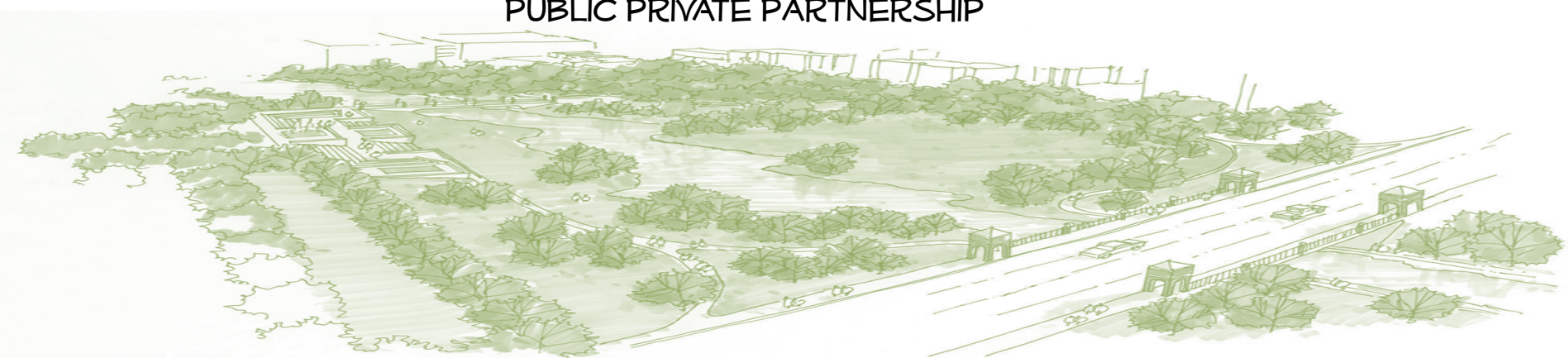
**economic
development**

**community
revitalization**

**COMMUNITY
STAKEHOLDERS**

Parks & Greenways

PUBLIC PRIVATE PARTNERSHIP



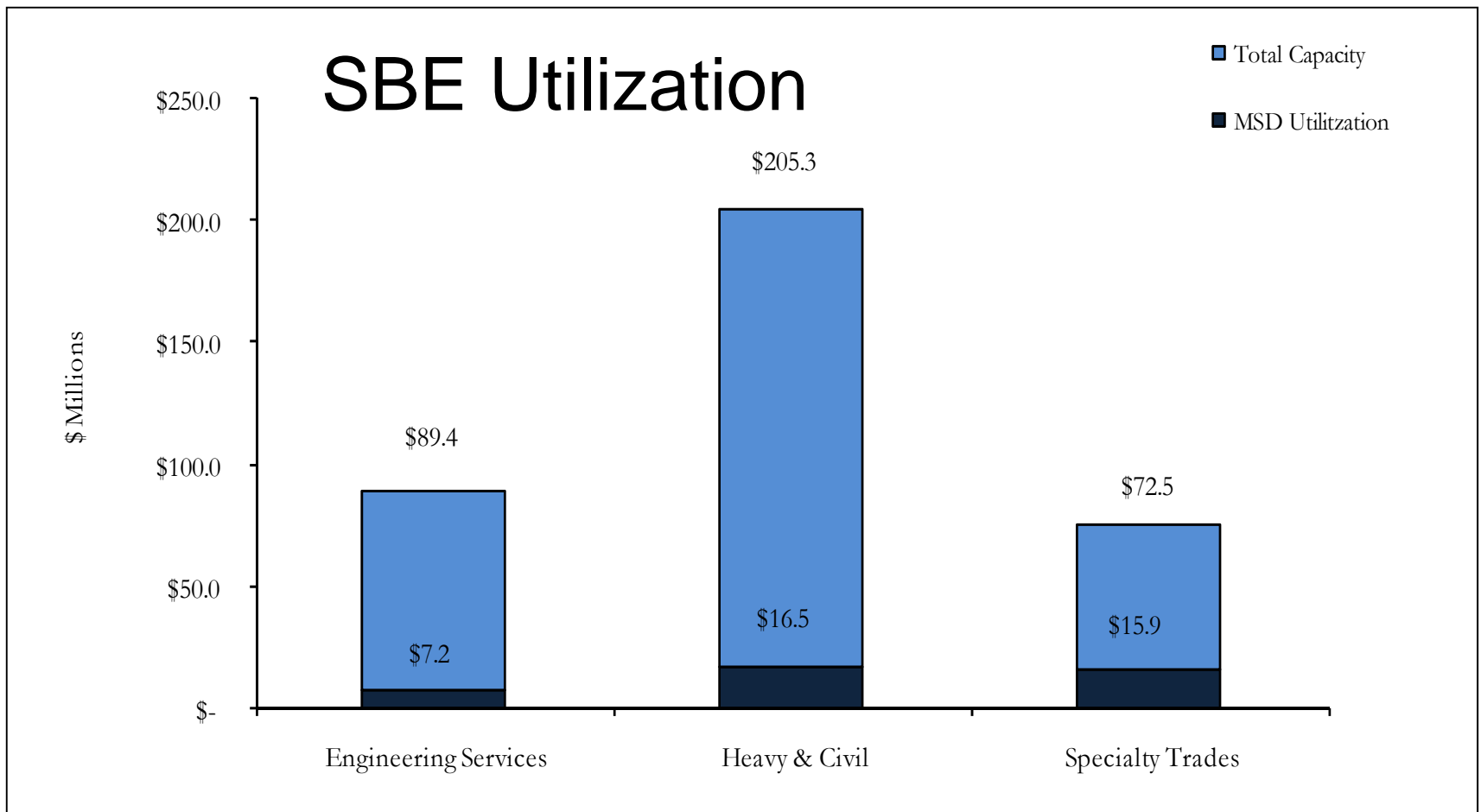
	2005	2006	2007	2008	2015	2016	2017
Engineering	19%	13%	3%	4%	-3%	-6%	-1%
Water Engineering	5%	8%	3%	6%	3%	2%	1%
Concrete Finishing	11%	6%	1%	1%	3%	3%	1%
Concrete Forming	18%	12%	0%	0%	-12%	-16%	-1%
Ironworkers	11%	10%	8%	0%	0%	-1%	-1%
Equip. Operators, Trenchless	10%	8%	2%	2%	-3%	-4%	-1%
Equipment Operators	2%	2%	2%	1%	-4%	-4%	-1%
Painters & Layers, Welders	5%	2%	1%	1%	-3%	-3%	-1%
Rebar Workers	9%	7%	2%	4%	1%	0%	1%
Steel Workers	8%	7%	2%	2%	-3%	-4%	-1%
Construction Management	5%	-3%	-4%	6%	2%	1%	1%
Engineering	7%	1%	0%	11%	2%	1%	1%
Water Engineering	8%	2%	-1%	10%	1%	0%	1%
Concrete Finishing	29%	19%	8%	3%	2%	0%	1%
Ironworkers	7%	3%	3%	3%	5%	2%	1%
Equip. Operators, Trenchless	11%	6%	-1%	-2%	1%	0%	1%
Equipment Operators	8%	2%	-5%	-7%	1%	0%	1%
Painters & Layers, Welders	9%	4%	-2%	-4%	1%	0%	1%
Rebar Workers	21%	15%	7%	7%	4%	2%	1%
Steel Workers	15%	9%	2%	0%	2%	0%	1%

You See Challenges...

- Local & regional contractor capacity issues

...We see Opportunity

- Enhanced economic possibilities



You See Challenges...

- Current economic downturn

WEATHER
High 61°
Low 46°
Mostly sunny



COMPLETE
FORECAST: A2

SHARE YOUR OPINION

We want to hear what you think. Post your restaurant, music and movie reviews at cincinnati.metromix.com



Breaking News

Updates on your cell phone
Text ORNEWS to 44636 (4NPD) for breaking news headlines, as they happen. (Carrier charges may apply)



More Kroger
savings at
www.kroger.com

THE CINCINNATI ENQUIRER

TUESDAY, SEPTEMBER 29, 2009

75 CENTS

LOCAL

SECTION
B

Editor: Julie Engbrecht, jengbrecht@enquirer.com, 513-768-8600 • MONDAY, MAY 21, 2007

Report: City lags economically

By Jon Newberry
jnewberry@enquirer.com

Named 1 of 8 financially weak in Ohio

Cincinnati is one of eight "economically weak" large cities in Ohio, and one of 65 nationally, that lags behind the rest of the country but could benefit greatly if state governments got behind efforts to revive core urban areas in the industrial heartland.

That's the conclusion of a report ranking 302 cities across the country based on economic data released Sunday by the Brookings Institution, a Washington, D.C.-based think tank.

The data is from 2000, the latest available for all the cit-

ies studied.

A key to reinvigorating older industrial cities—predominantly in the Northeast and Midwest—is to take advantage of their existing wealth of colleges and universities, hospitals, central waterfronts, cultural institutions and historic buildings, concluded the report, "Restoring Prosperity: The State Role in Revitalizing America's Older Industrial Cities."

Bruce Katz, vice president of the Brookings Institution and director of its Metropolitan Policy Program, said the

report's suggestions don't require new investment so much as a change in focus and the way resources are allocated.

For example, Ohio is known for spending transportation dollars on the periphery of cities, encouraging sprawl rather than vital urban centers, he said.

Ohio cities also have abundant water supplies—unlike Sunbelt cities that are growing at unsustainable rates—but they do little to take advantage of the fact.

"You've got some real as-

sets," Katz said. "The question is whether you build on them or not."

Among the Ohio cities on the Brookings list of weak cities, Greater Cincinnati leads several categories of physical, economic and cultural assets with:

- 242 properties on the National Register of Historic Places.
- 17 two- and four-year colleges and universities.
- 16 hospitals and major medical facilities.

See REPORT, Page B5

How Cincinnati ranks

The city compares poorly to 302 cities nationally in a recent Brookings Institute study. Here's how Cincinnati compared to other regional cities.

City	Economic confidence index*	Rank	Lowest's well-being index**	Rank
Cincinnati	-0.85	263	-0.353	204
Columbus	0.033	122	0.605	68
Dayton, Ohio	-1.064	283	-0.935	264
Huntington, W.Va.	-0.702	242	-1.338	286
Indianapolis	0.13	149	0.679	55
Lansing	-0.126	146	0.786	51
Louisville	0.292	190	0.536	223
Springfield, Ohio	-0.548	262	0.468	216

* Based on changes in employment, annual payroll and number of establishments from 1990 to 2000.

** Based on median household income, per capita income, unemployment rate, labor force participation rate, and poverty rate in 2000.

Source: Brookings Institute study "Restoring Prosperity" (2007)

The Enquirer

LIGHTLY

es flat as nation's fell

l recession's 'Beast-going-downhill effect'

the rest of household last year, recession did country as areas," said economics University, ing-down-

But Sullivan said the average incomes could mask declines among the poorest residents, who have been hit hard by the loss of low-wage jobs.

In the city of Cincinnati, the median household income fell slightly to \$33,562.

One-quarter of people living in the city of Cincinnati were below the federal poverty line—\$21,910 for a family

of four. That's a slight increase over last year. But with other parts of the country battered even harder by the recession, Cincinnati has lost its position as one of the three poorest big cities in the country. In Ohio, Youngstown, Cleveland, Dayton, Canton and Lorain all had poverty rates higher than 25 percent.

While the overall poverty rate is mostly unchanged, it increased for

married-couple families and those over 65.

Warren County had the highest median household income in the region last year at \$70,504, followed by Boone County at \$66,017.

Hamilton County's income was lowest at \$50,301.

Clermont County saw the most significant change, increasing 11 percent to \$61,288.

Other county averages: Butler, \$52,297; Campbell, \$49,702; Kenton, \$52,222.

OULD DAMPER WATER DISTRICT



Recession lowering

THE CINCINNATI ENQUIRER

CINCINNATI.COM

THURSDAY, NOVEMBER 29, 2007

CAPTURE
CINCINNATI



The debut party for "Capture Cincinnati," a hard-bound book of submissions from the area's best photographers, is

Sewer rates going up — for

By Jessica Brown
jbrown@enquirer.com

Hamilton County residents served by the Metropolitan Sewer District will see a 12 percent increase in their sewer bills next year — and more than 40 percent over the next three years.

Next year's increase amounts to about \$53 a year. And it won't end there.

Sewer rates likely will increase 12 percent again in

2009 and in 2010. And still more increases will be on the way.

Because of a 2004 court settlement, the county agreed to revamp the county's aging sewer system. The result: Residents will continue to see double-digit increases for the next two decades, according to county officials.

The sewer district is trying to find ways to offset the increases and the county commissioners might even team

up with other governments to lobby Congress for help.

"The issue of rate increases projected for next year and down the road is one that, as a matter of policy, is of grave concern to this board and elected leadership in this region," commission president Todd Portune said Wednesday at a public hearing on the rate increase. "We are greatly concerned about the impact these rate increases will have on our residents and busi-

nesses if they continue to go up without help from the federal government."

The commissioners will vote on the 12 percent increase by the end of the year, but the consent decree leaves them virtually no choice but to approve it.

The sewer district is working to create environmentally friendly infrastructure that will ultimately save money and therefore could reduce the burden on the ratepayers.

Portune said he will contact other cities dealing with issues and pursue lobby Congress for help.

The Metropolitan Sewer District serves 850,000 people with 260,000 in Hamilton County and parts of Warren, Clermont counties. Rates have been increasing at a rate of about 12 percent a year because of the man-

CAN DATE: 11/29/07

THE ENQUIRER

FROM PAGE A1

FN

Phillips: Accused killer got out early

From Page A1



Rates: Project to be done by

From Page A1

Hamilton County's sewer system was considered state-of-the-art when it was built in the 1830s. It is still working as intended.

The U.S. Environmental Protection Agency filed a court action against Hamilton County and Cincinnati to force the district to comply with the Clean Water Act. As part of a 2004 settlement agree-

er gets a quarterly water bill of \$110.35. Starting Jan. 3 next year that bill will increase to \$123.40 a quarter. That's an annual increase of \$41.40 a year to \$494.36 a year.

Sewer district officials estimate

The Business Case for Change



PROJECT GROUNDWORK

your pipeline to clean water

PROJECT GROUNDWORK

in Your Community



Clean Streams



Protecting the Environment



Partnering with our Communities



Revitalizing the Economy



Designing Innovative Solutions



PROJECT GROUNDWORK
your pipeline to clean water

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



Neighborhood Construction
Projects



Strengthened Economy



Green Roofs

...We see Opportunity

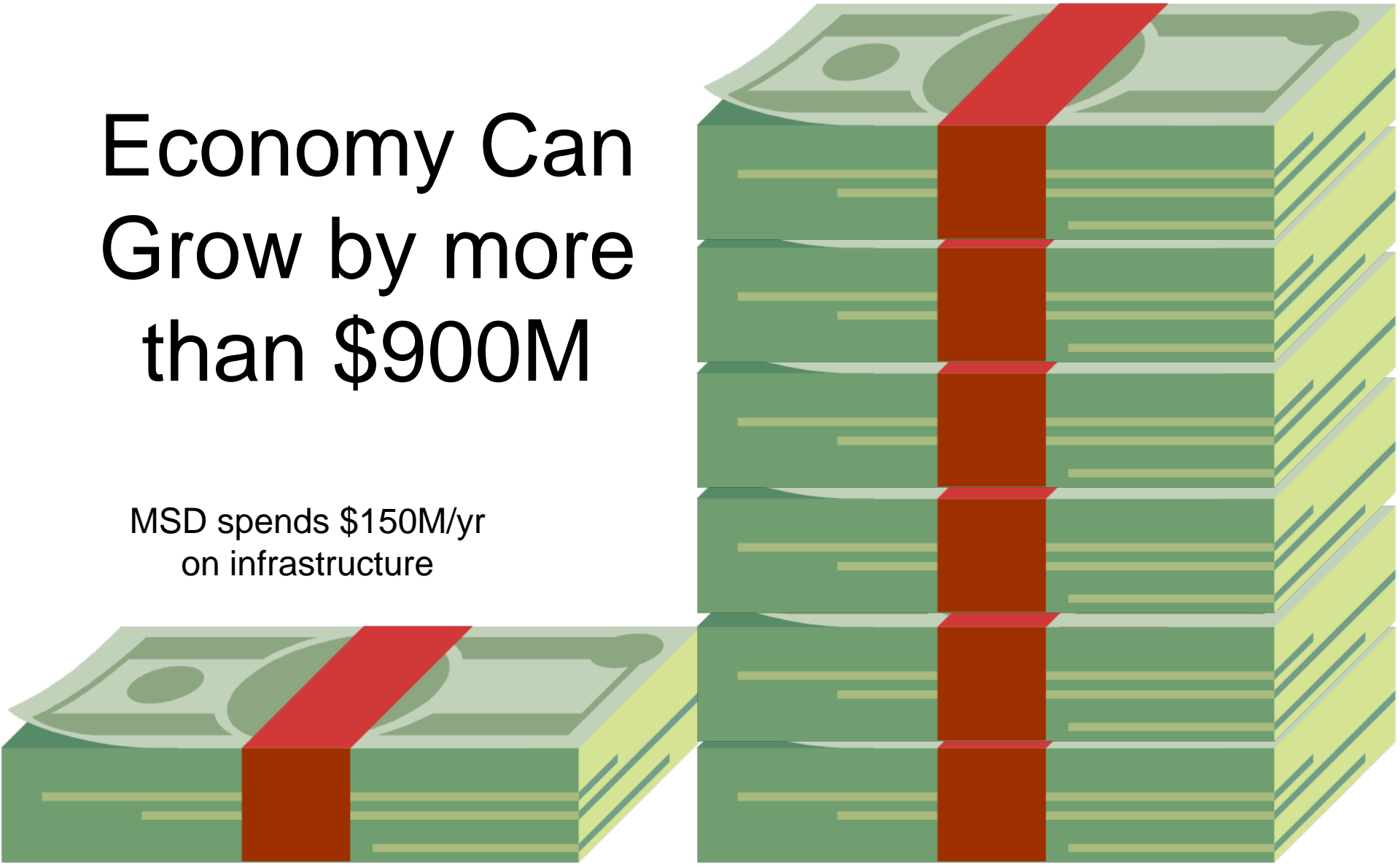
- Infrastructure investments can spur economic growth
 - ✓ Every \$1 spent on infrastructure improvement can lead to \$6.35 for the local economy
 - ✓ Every job created in rebuilding infrastructure creates over 3.6 additional jobs

--US Conference of Mayors

Potential Project Groundwork Impact

Economy Can
Grow by more
than \$900M

MSD spends \$150M/yr
on infrastructure



STRATEGY

PEOPLE

PROCESS

TECHNOLOGY



Building for the Future

Learning from the Past

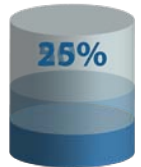
Drainage & Stormwater flows



RUNOFF



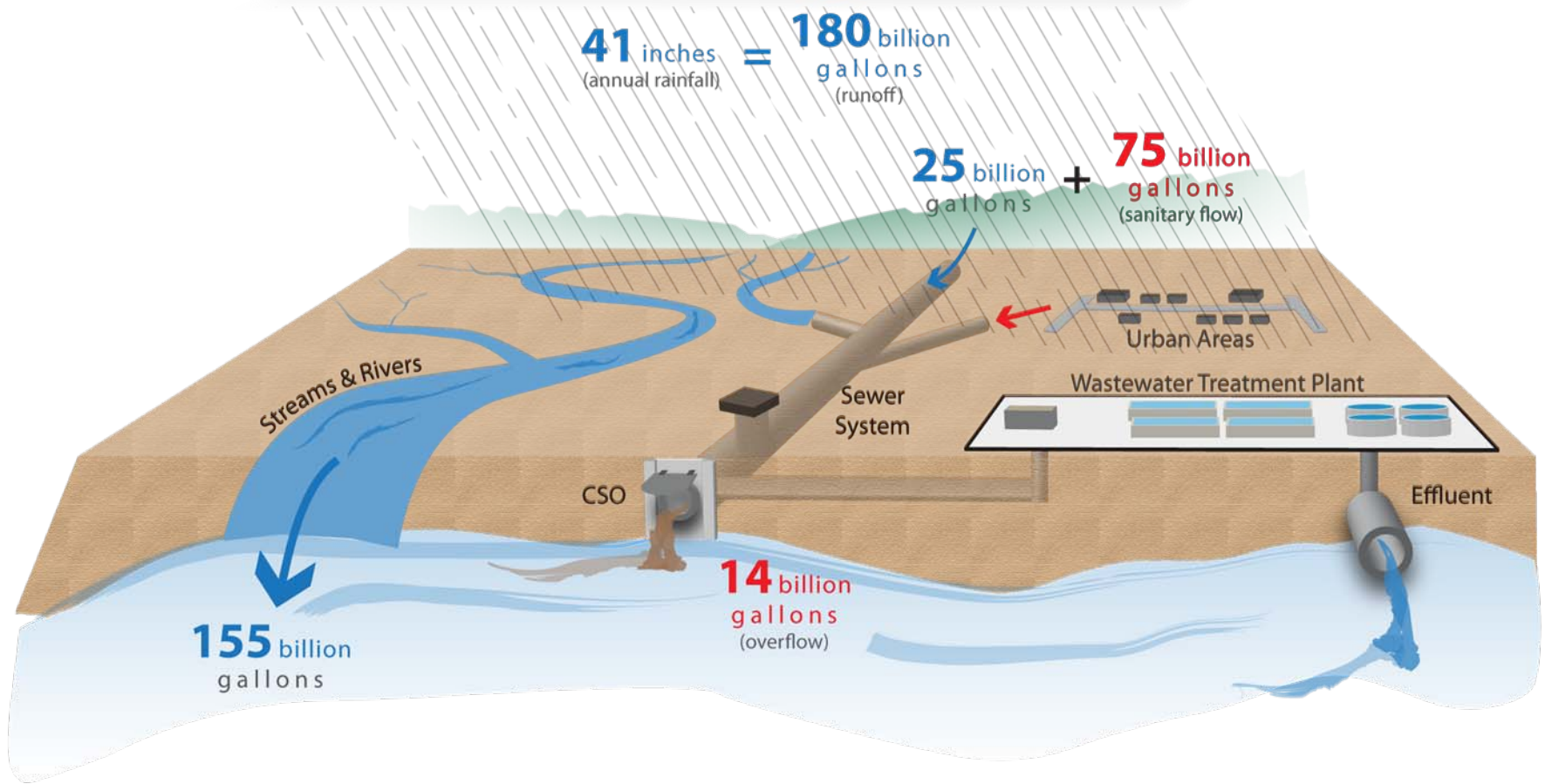
EVAPOTRANSPIRATION



INFILTRATION

260 miles of historic sewers, 603 miles of combined sewers

How Great is the Challenge?



Lower Mill Creek Partial Remedy (LMCPR)

- The project as identified in WWIP (\$343M*)
 - Short deep tunnel from the Mill Creek WWTP site to Lick Run (CSO 005)
 - Enhanced High Rate Treatment (HRT) facility
- Study/Detailed Design
 - Due by December 31, 2012
- Project Completion
 - December 31, 2018

*from 2010 Capital Budget fact sheet

Existing Challenges...

- Absence of tools, framework for evaluating sustainable CSO solutions with a watershed focus
 - CSO solutions were developed in isolation
 - Solutions were focused on quantity only
 - Community benefits not considered

....Make Way for Opportunities

- Absence of tools, framework for evaluating sustainable CSO solutions with a watershed focus



Existing Challenges...

- Resistance to depart from traditional way of thinking
 - No integration of grey & green solutions
 - Lack of community stakeholders
 - Not fully leveraging the economic benefit of capital investment

...Make Way for Opportunities

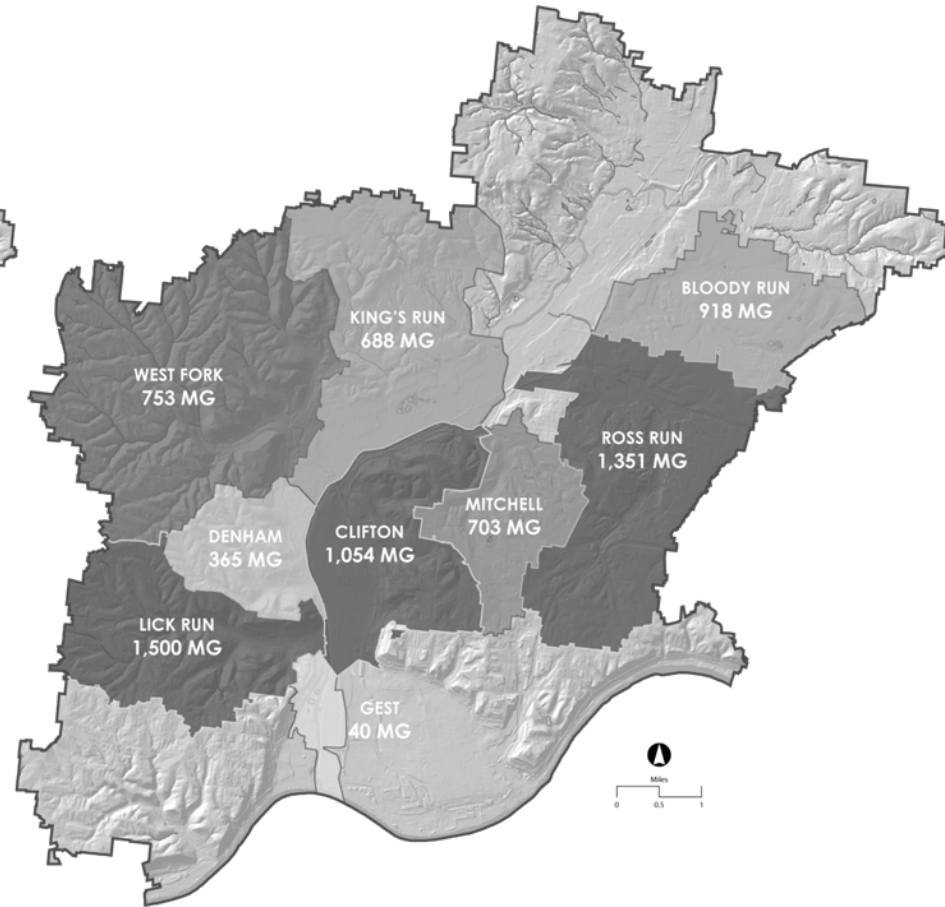
- Resistance to depart from traditional way of thinking

Inform & Influence

Context

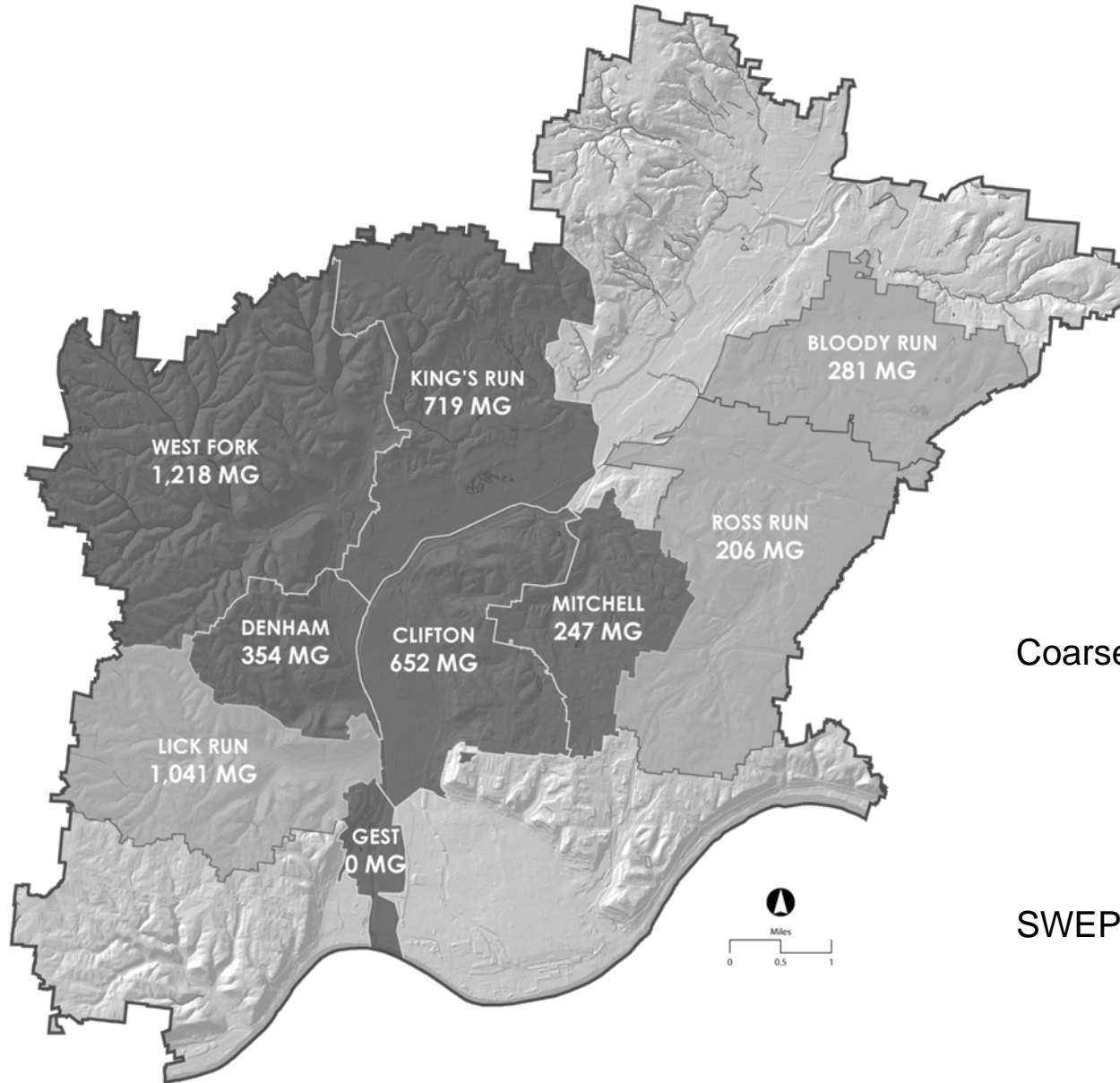


Number of CSOs
60



Annual CSO Volume
7,372 MG

LMC Watershed Overview



Coarse Evaluation: **3,192 MG**

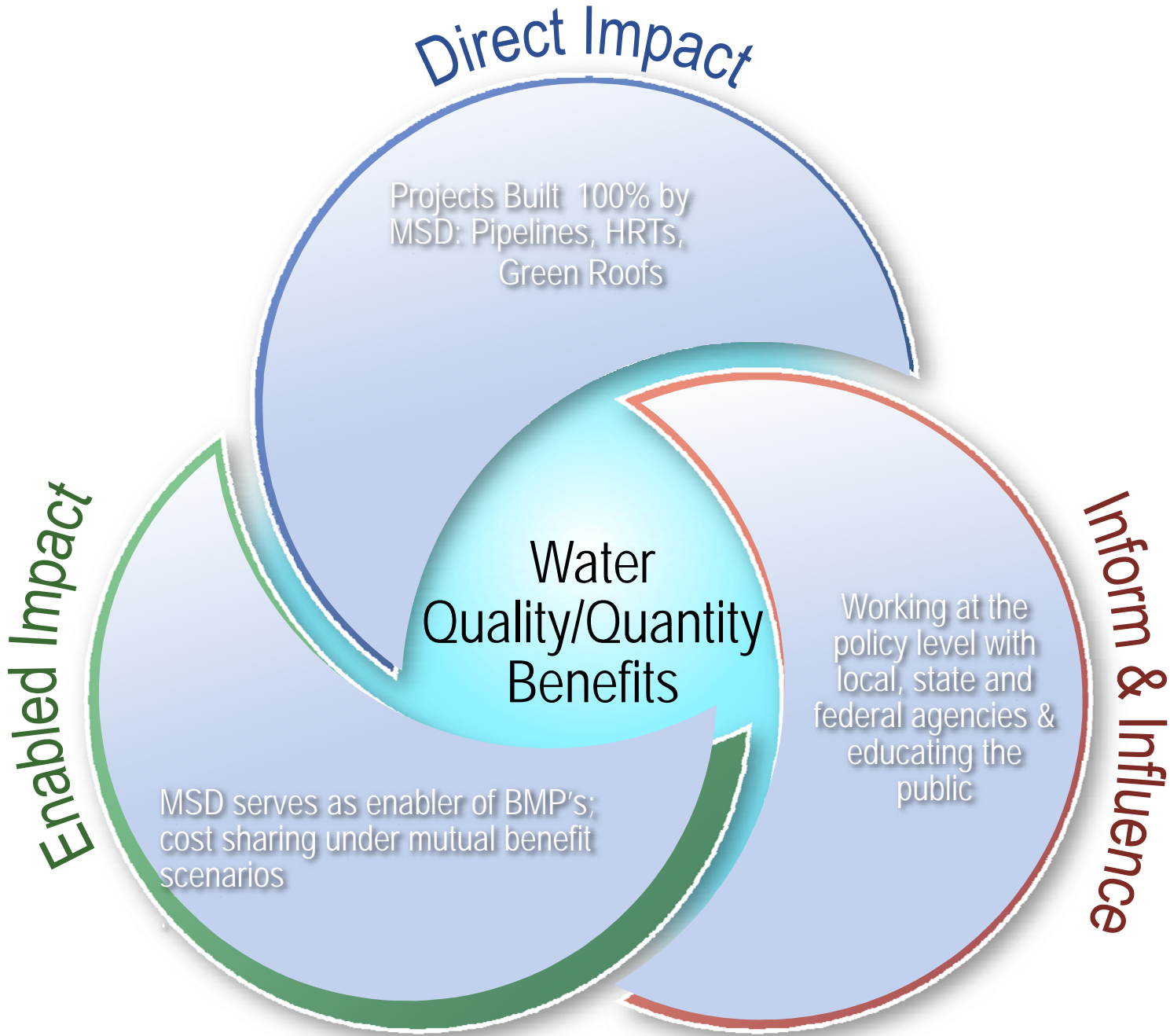
Annual Runoff within
Direct Project Areas

SWEP Evaluations: **1,528 MG**

Targeted Stormwater
Reduction

MSD Approach

- Sustainable Watershed Evaluation Process (SWEPP)
 - Coarse Evaluation completed in November
 - Three pronged sustainable approach
 - Direct
 - Enabled Impact
 - Inform/Influence
- System Hydraulic Grade Line Optimization
- Keep the Tunnel Planning & Design on schedule
- Phased Approach
 - Step I: Systematic Identification of opportunities (based on SWEPP)
 - Nov 2011
 - Step II: Consolidate opportunities into a comprehensive plan
 - Dec 2012 (WWIP Milestone date)





Communities of the Future

- Think “Outside the Pipe” to develop holistic solutions to infrastructure needs
- Community Inclusion to Decision Making
- Integrate water quantity/quality solutions
- Public/Private partnerships building community value
- Create the Factor conditions for commercial and industrial redevelopment
- Urban/Brownfield Redevelopment as outgrowth of infrastructure projects



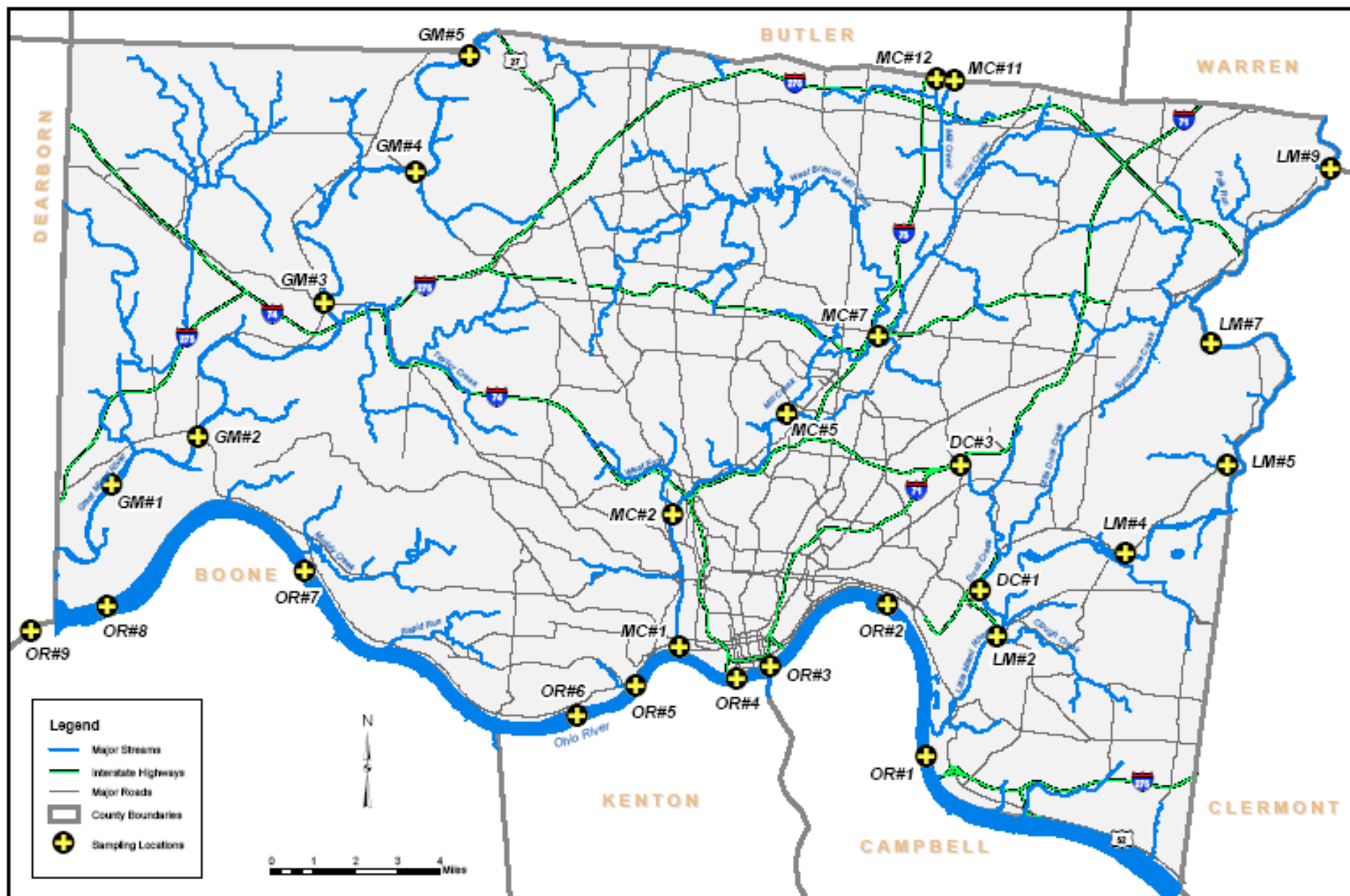
Greater Cincinnati Recreation Management -

Overview


- Cooperative Effort
 - MSDGC
 - Hamilton County General Health District
 - City of Cincinnati Department of Health
 - US EPA – Office of Research and Development
- Weekly WQ Sampling for Bacteria
- Wet Weather Sampling for Bacteria
- Website

Program Development

- Build on 2004 LTCP Work & Health Department WQI
- Monitoring on Ohio River
 - Nine Locations
 - Multiple Points Across Stream
- Monitoring on Cincinnati Area Tributaries
 - Great Miami River, Mill Creek, Little Miami River / Duck Creek
 - 18 Locations
 - Single Mid-point Sample



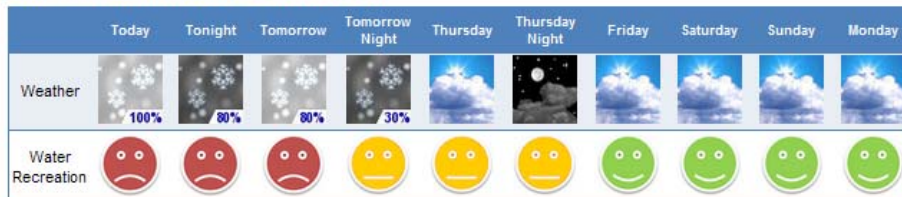
Uses of Collected Data




- Provide Public:
 - Easily Interpreted Information
 - Timely Information 
 - Familiar Format Based on National Weather Service Forecast
- Allows Informed Decision Making for Recreation Purposes
- <http://recreationmanagement.org>

Cincinnati & Hamilton County Water Recreation (beta)

This site is currently under evaluation and testing only and should not be used for recreation decisions at this time.

Water Recreation Forecast for Ohio River East



Legend	
	Avoid water recreation
	Be wary about water recreation
	Available for water recreation

River Segment

Ohio River East
Ohio River Central
Ohio River West
Little Miami River



When is Water Quality Suitable for Recreation?

Water quality models are the basis of the predictions presented in the following website pages for the Ohio River and the Little Miami River. They are updated daily and use locally observed rainfalls from the past three days, seven-day future weather forecasts from the National Weather Service and current river flows as inputs. The water quality forecasts are used to provide the information shown below to predict when it is and is not appropriate to engage in water contact recreation, based on Ohio EPA criteria. **These guidelines and advisories do not apply to some groups of people who present a higher risk of disease. All users of this site, especially those in the high risk category, should read Section "Safety, Quality and Standards".**

When the water quality forecasts indicate that bacteria levels are likely above water quality standards due to rainfall in previous days a red "frown" face is shown meaning that water recreation should be avoided.

When the water quality forecasts are based on future predicted rainfall a "neutral" amber face is shown meaning that future water recreation may not be appropriate.

When the water quality forecast indicates that bacteria levels are within standards a green "smile" face is shown meaning that unless conditions change, criteria suggests it is appropriate to engage in water recreation.

The forecasts are only a guide to water recreation. Other conditions, such as the number and types of watercraft on the water, floating debris, river and stream currents, and other conditions not directly related to these water quality forecasts, can impact the safety of water recreation. Please use individual judgment when determining whether or not to engage in water recreation.



This site is the collaborative effort of the Metropolitan Sewer District of Greater Cincinnati (MSD/GC), Hamilton County Public Health and the Cincinnati Health Department. The banner photo was provided courtesy of Thomas Dwyer.

Beta Test Underway

This site is currently being tested for the 2010 Water Recreation season. Please email your comments or suggestions about the site.

First time visitor?

Before jumping into the forecasts, it is important that you learn more about the what, where, why and how of Water Recreation forecasts:

[Safety, Quality & Standards](#)
[When is Water Quality Suitable for Recreation?](#)

Water Recreation in Cincinnati & Hamilton County

The Greater Cincinnati Area offers its residents wonderful opportunities for water recreation. Local streams and the Ohio River provide aesthetic enjoyment as well as many venues for boating, kayaking, water skiing, jet skiing and fishing. Some of the great choices for water recreation can be found by visiting the Water Recreation Links located at the right side of this page. The purpose of this website is to help recreation users make informed choices about when it is safe to engage in water contact recreation.

Water Recreation Links

[River Facts/Conditions \(from ORSANCO\)](#)
[Cincinnati USA Regional Chamber of Commerce](#)
[Ohio State Parks](#)

Next Steps

- Development and Refinement of Modeling Tools
 - WASP WQ Model
 - Neural Network
- Collection of Additional Data
 - Refinement of “Avoid Water Recreation” Recommendation



What We Need From You

- Recognition of Affordability constraints on communities addressing Consent Decrees
- Partner with Utilities in developing Strategy for Managing Watershed Issues
- Water Quality & Quantity solutions must be integrated
- ORSANCO Policy Guidance and influence on Clean Water Act
- Support lobbying efforts for Maximizing Federal funding

PROJECT GROUNDWORK

in Your Community



Clean Streams



Protecting the Environment



Partnering with our Communities



Revitalizing the Economy



Designing Innovative Solutions



PROJECT GROUNDWORK
your pipeline to clean water

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



Neighborhood Construction Projects



Strengthened Economy



Green Roofs

Communities of the Future

