

*Kansas City's  
Overflow Control Program*

January 23, 2017



# National Data: Combined Sewer Overflows



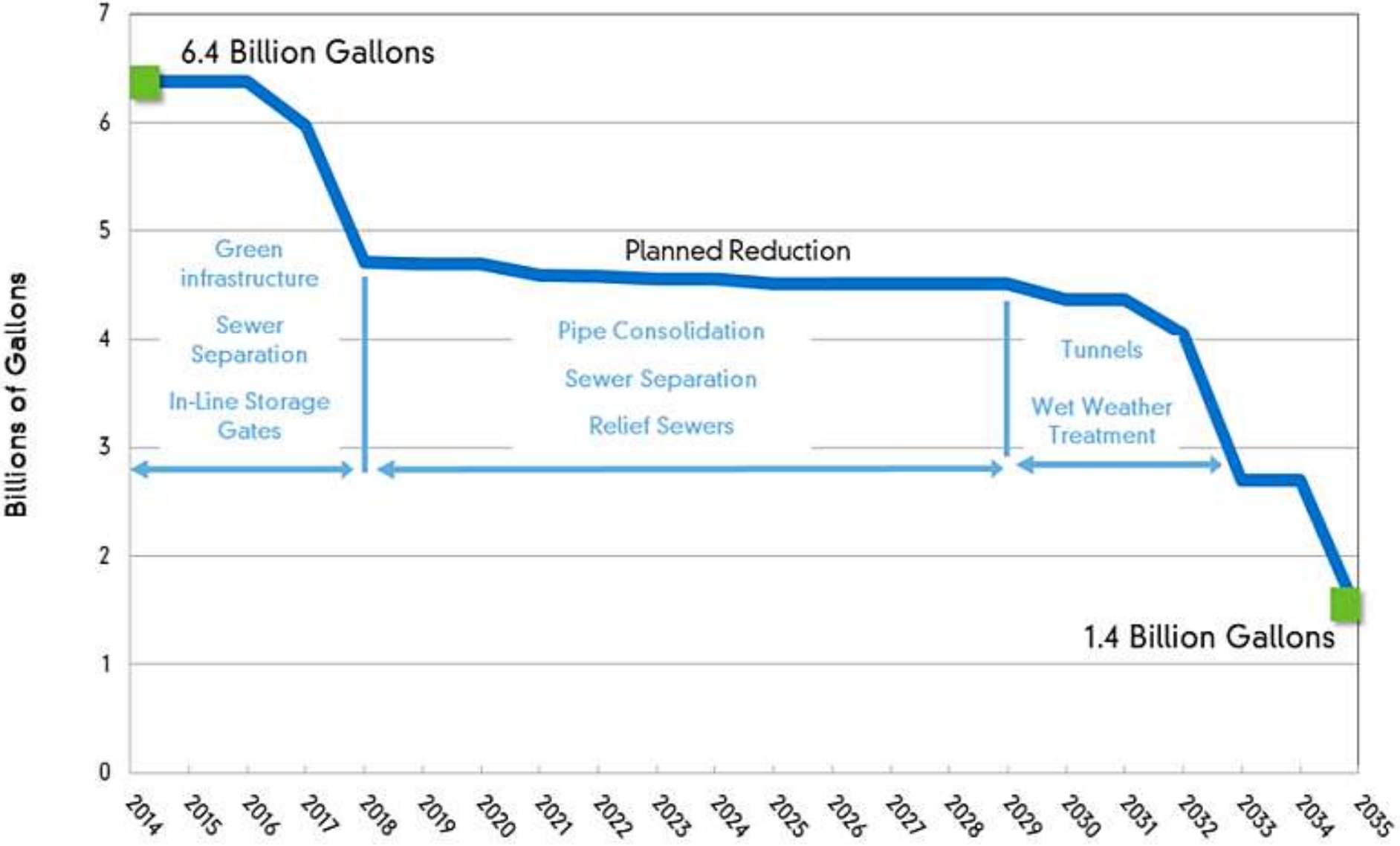
**850 Billion  
Gallons**

**772  
Communities**  
**40 Million  
People**

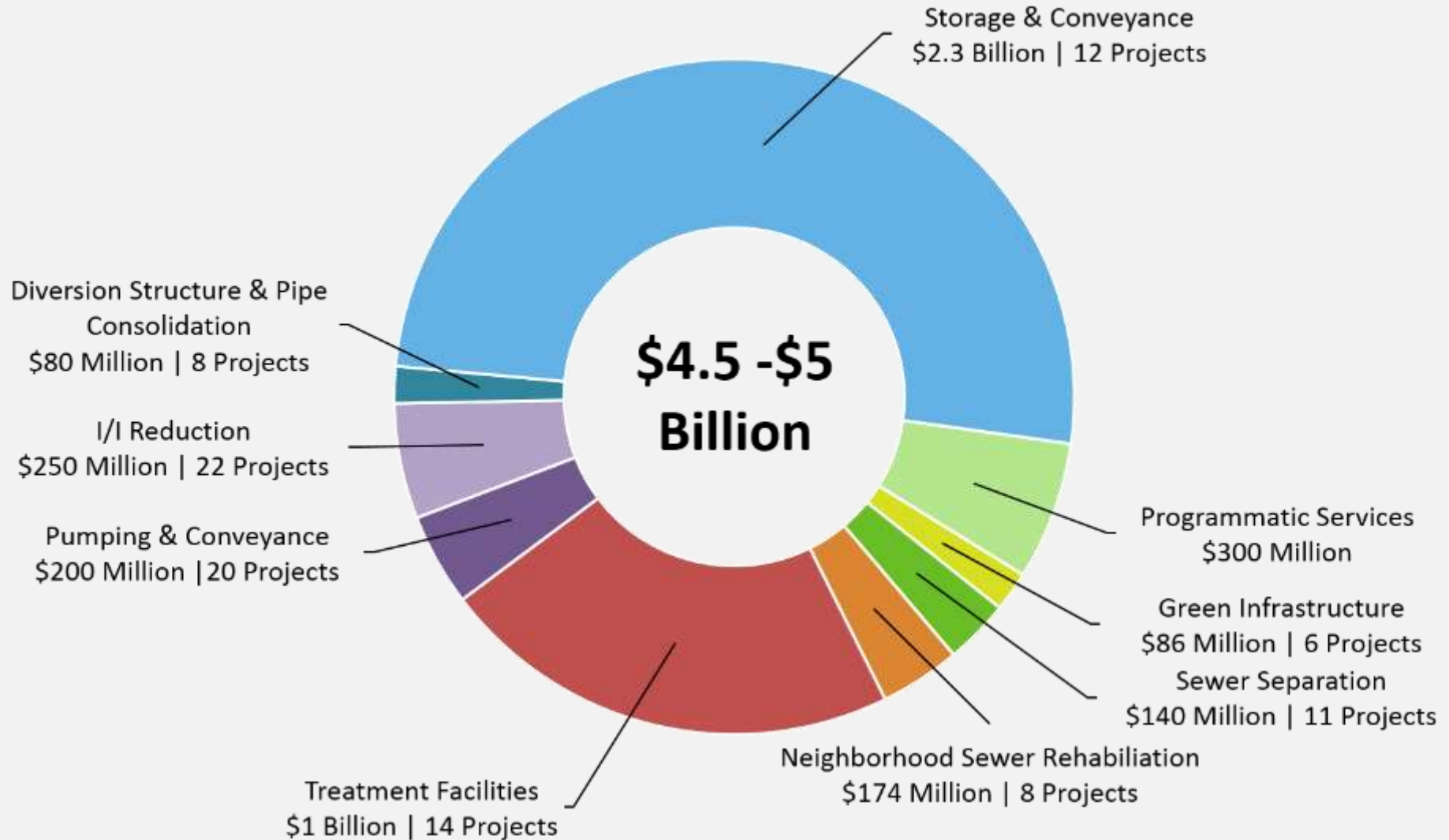
**\$57 Billion  
Investment**

*2004 EPA Report to Congress: Impacts and Control of CSOs and SSOs*

# Annual Combined Sewer Overflow Volume

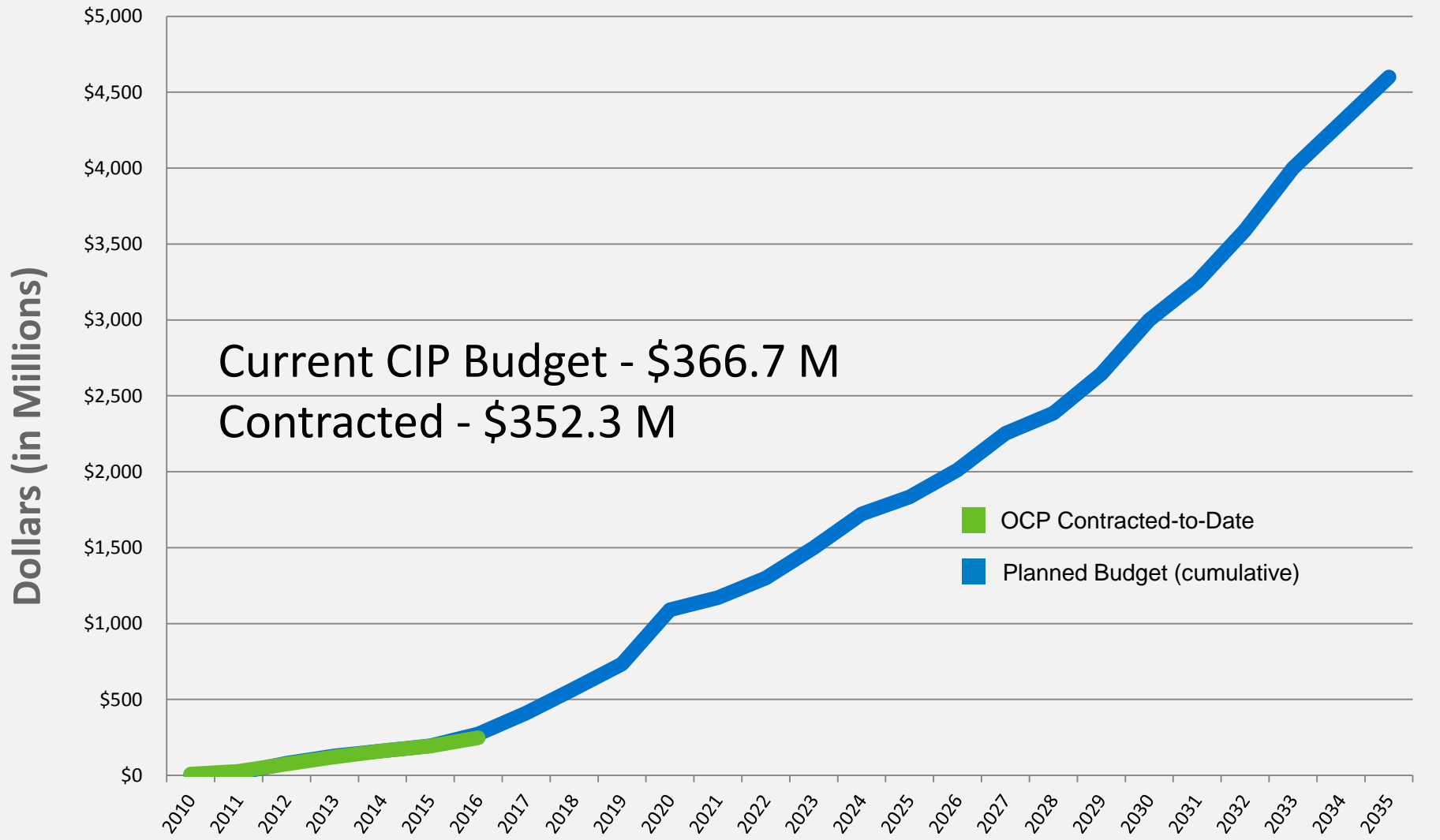


# Overflow Control Program Overview

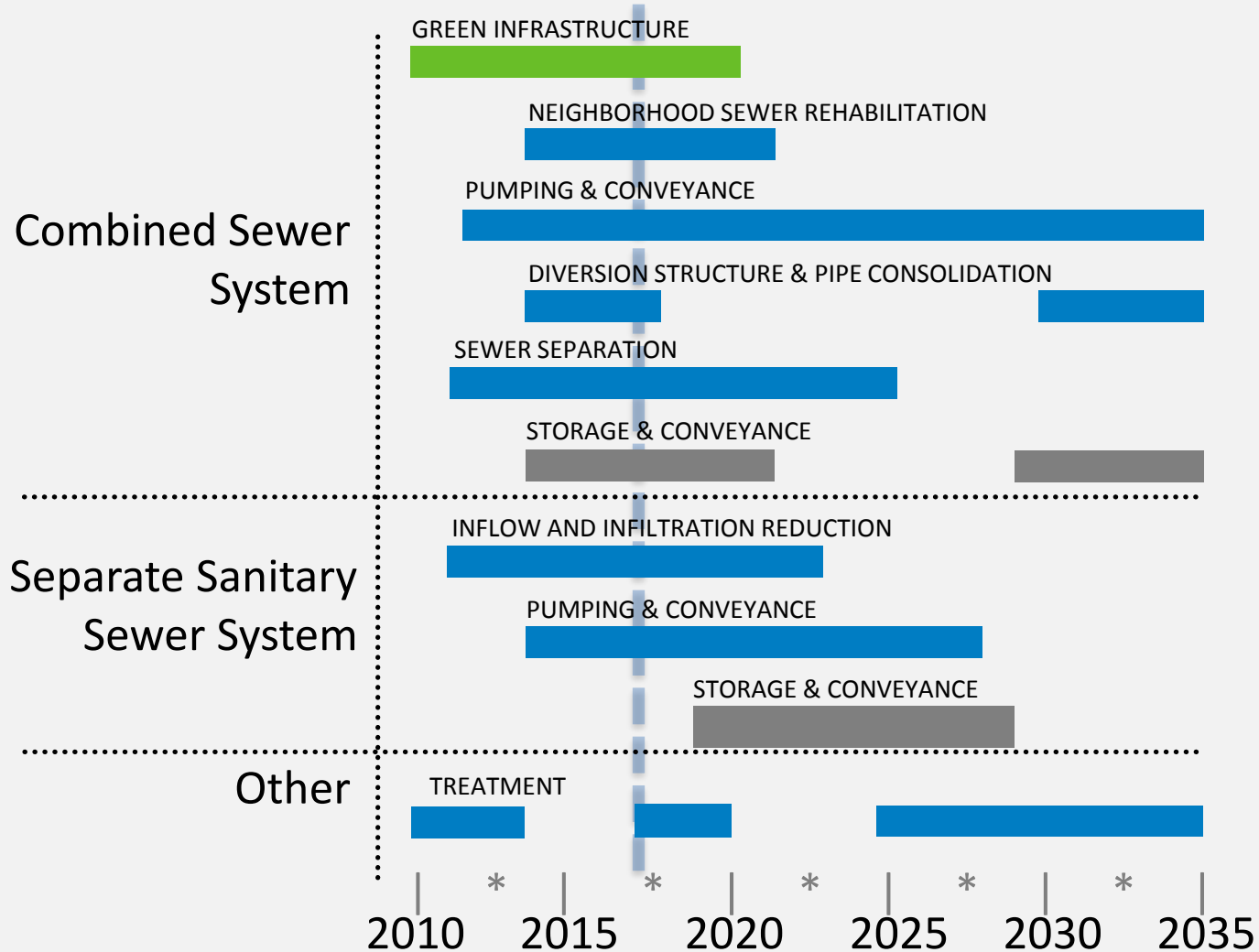


# OCP Projects

## Contracted-to-Date vs. Budget



# Program Implementation Schedule



# Green Infrastructure:

*Our Commitment through Sept. 2016*

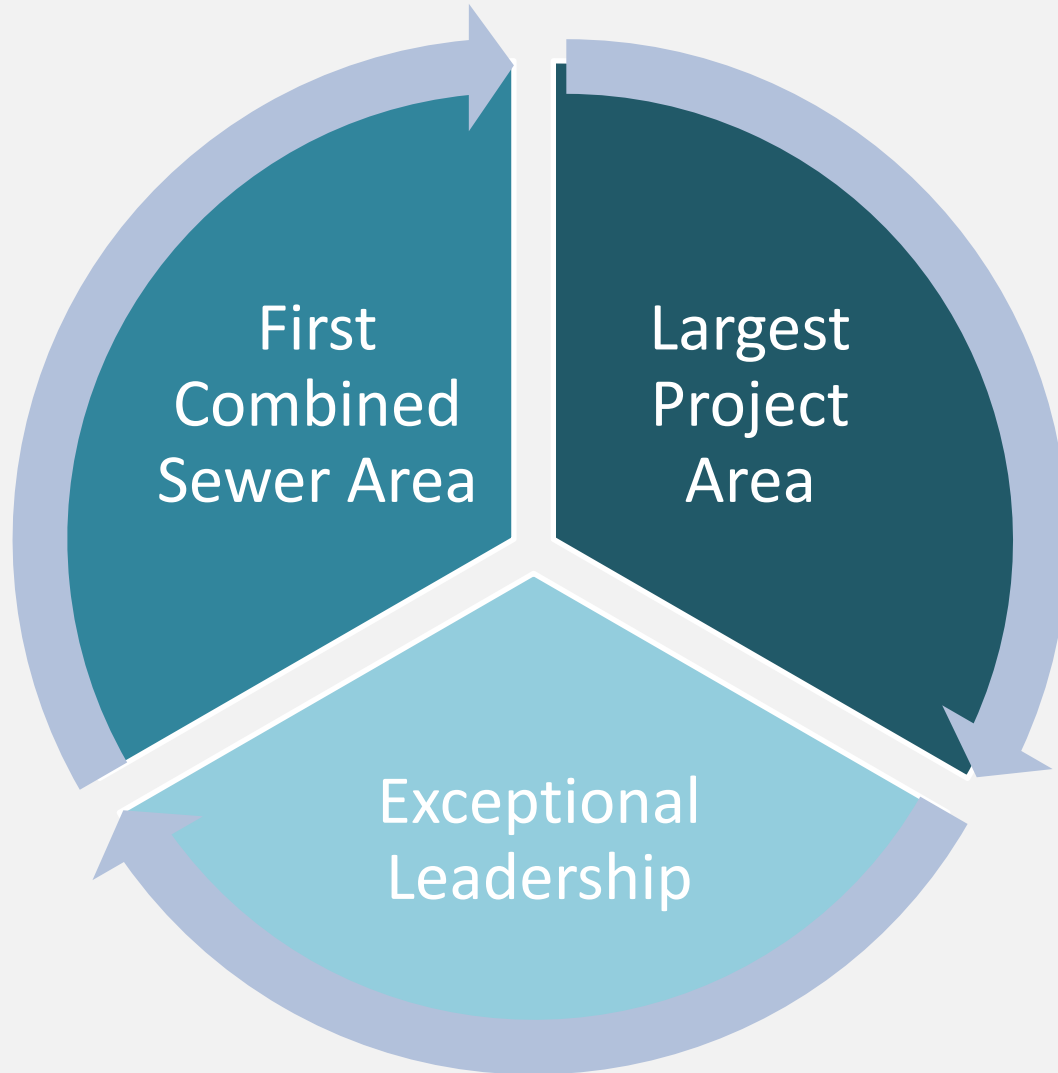


**\$64.0M**  
Investment

*Total Program Element Investment: \$86M*

# Envision Platinum Award:

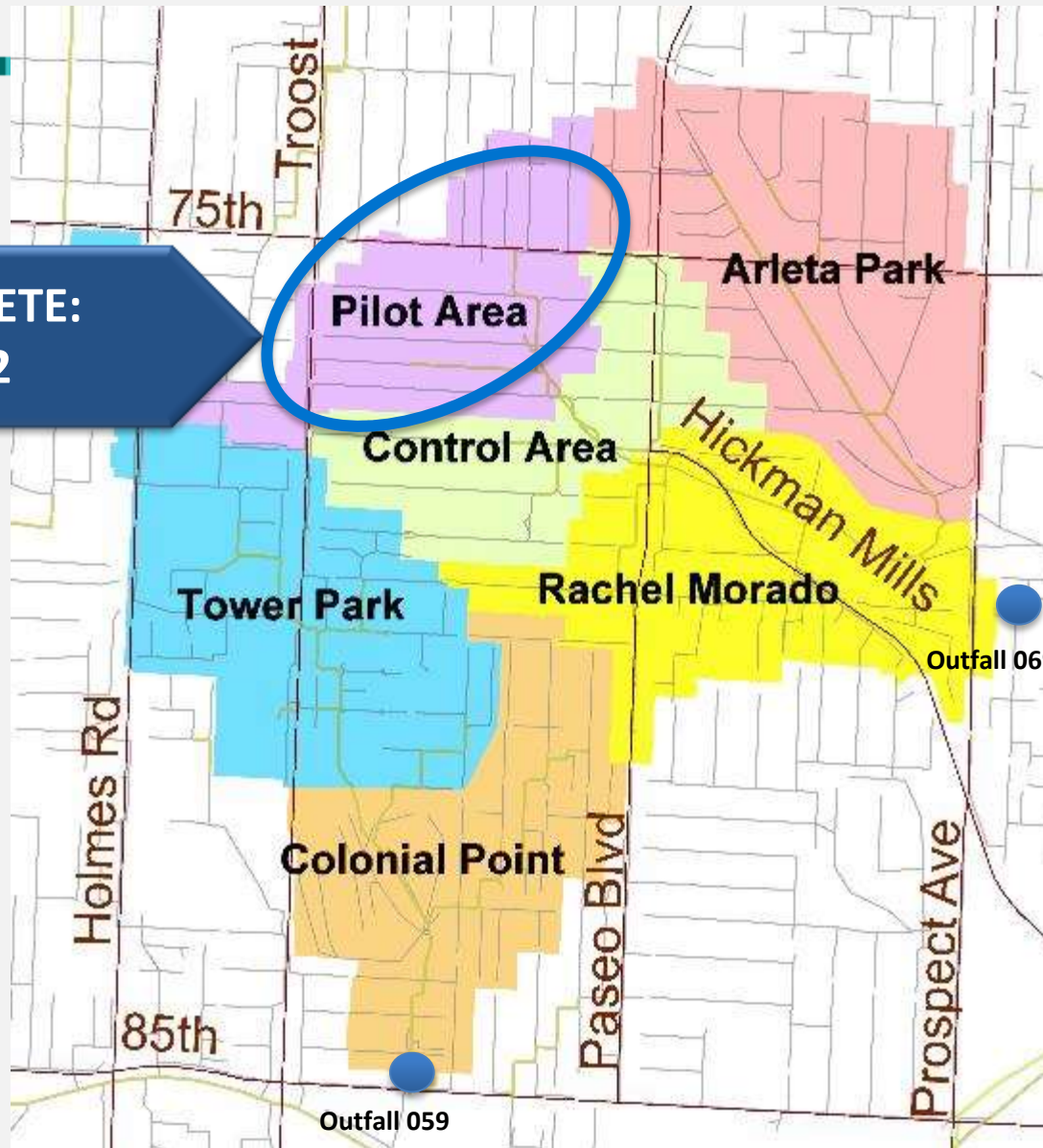
## *Middle Blue River Basin Green Infrastructure Project*





# Middle Blue River Basin Green Infrastructure

**COMPLETE:  
2012**



# Green Infrastructure Pilot Project

**1,100**  
Linear Feet  
Permeable Pavers



**4,300**  
Linear Feet  
Porous Sidewalk

**67**  
Rain Gardens



**2**  
Cascade  
Rain Gardens

**28**  
Curb Extension  
Rain Gardens

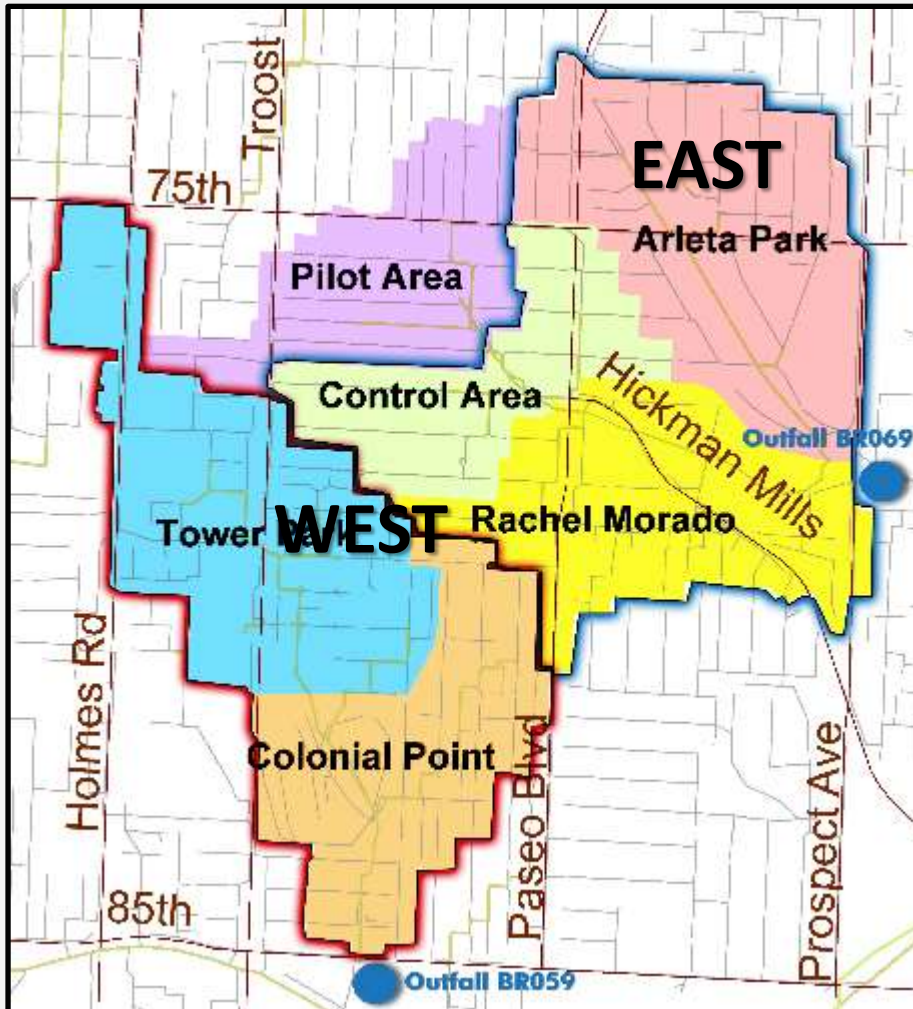


**36**  
Bioretention  
Rain Gardens

# Green Infrastructure Pilot Project



# Green Infrastructure:Next Steps



- Remaining 644 acres under construction
- 4.7M gallons of storage
- Strategic sewer separation

# Arleta Park: Before



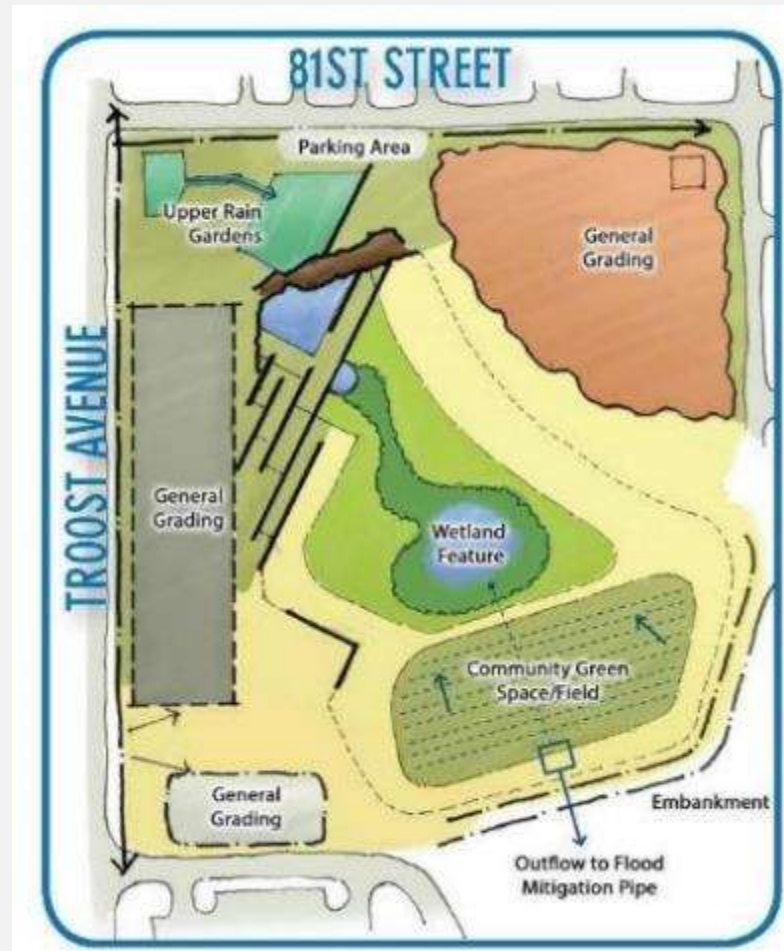
# Arleta Park: After



# 81st and Troost: Before



# 81st Street & Troost Avenue: After





# Rachael Morado: Before



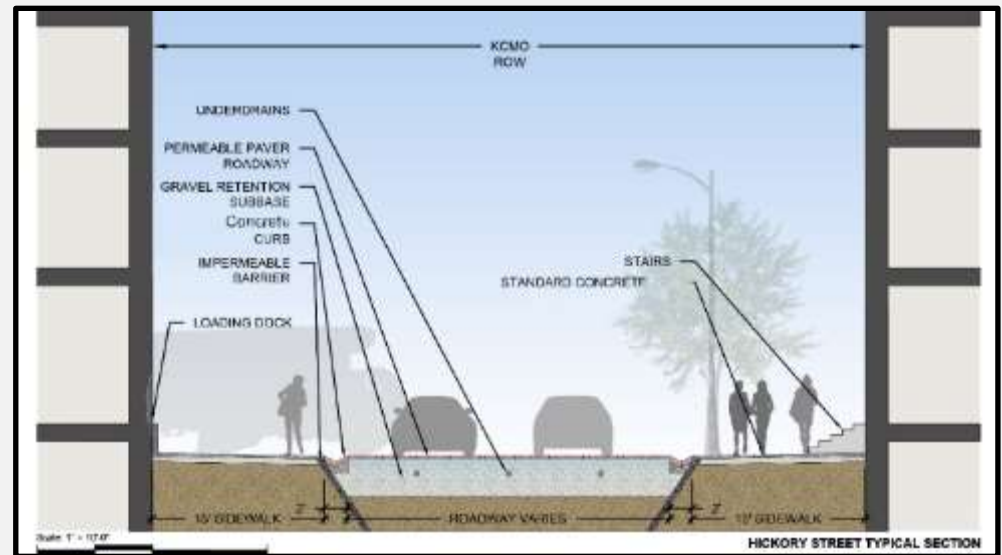
# Rachel Morado



# Target Green Lower Blue River:



# CID Green Infrastructure Projects



# N.E. Industrial District Admiral Plaza



# Kansas City's \$1B Smart Infrastructure Challenge



## Kansas City's Billion-Dollar Smart Infrastructure Challenge

Miscou's largest city is betting that the next generation of water distribution pipelines — smarter, stronger, and highly efficient — is well worth the investment.

In 1858 the city of Kansas City, MO, was born within the heart of the nation. Created the crossroads of the world, Kansas City's legacy of innovation began with a smart grid of water and wastewater infrastructure systems designed to withstand the rigors of the times ahead.

More than 150 years later, some of Kansas City's original infrastructure still serves the city's modern masses. Kansas City is now the most connected "smart city" in the world thanks to a network of smart data, technology and transportation investments along a 2.5-mile corridor in the heart of downtown — not far from the city's original foundation along the banks of the Missouri River. Underneath Kansas City's smart city corridor lies a second innovation — miles of water infrastructure that are intelligently selected and managed through the use of over 150 years of water utility data.

2012 was a pivotal year for Kansas City. Extreme drought conditions during the summer months resulted in a record number of water main breaks, which emphasized the city's need to replace aging water infrastructure. That same year, the American Water Works Association (AWWA) issued a staggering report, highlighting a \$1 trillion need to address the nation's critically aging water infrastructure. There was no question that Kansas City, along with other cities across the nation, was being challenged to address a backlog of aging water mains. Ready to rise to the challenge, city leaders sought a strategic and data-driven solution for residents.

"Kansas City is committed to investing in innovative solutions to meet exceptional challenges," said City Manager Trey Schulte. "In 2012, the need to invest in the city's water system was crucial, but our future for residents was a serious concern. Strategic use of data led to the development of the city's first water main replacement program and one of the first examples of Kansas City's transformation toward leading Smart City initiatives."

**Pipe Performance: Past, Present, And Future**  
Using web-built information, getting back to 100% SC Water

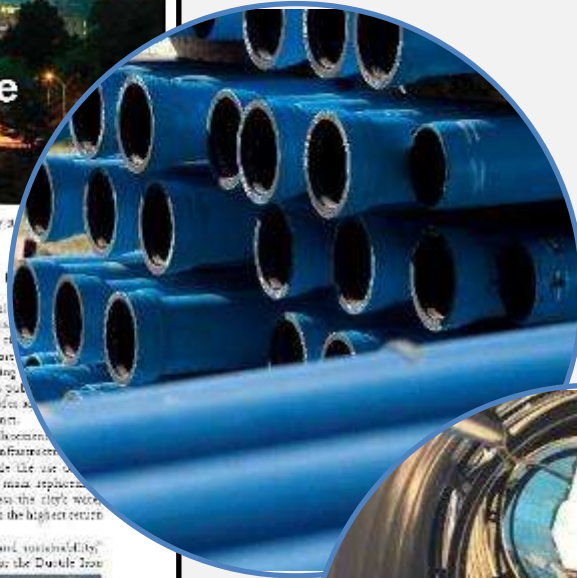
Services' Chief Engineering Officer Andre Sliwa analyzed the age, pipeline material and best pipe segments. The city then ran a business to determine which segments of pipe were most and most importantly, which of those aging segments would have the greatest impact on the city's public transportation networks. The program provides a road map for the 100-year water life of the program.

Kansas City's 100-year water main replacement program replaces 1 percent of the city's water infrastructure each year. The program and the city's water main replacement program are strategically designed to address the city's water infrastructure challenge in a way that delivers the highest return on investment.

"Kansas City is a model of innovation and sustainability," says Gregg Horn, VE of technical services for the District Iron



Andriy Shvets, chief engineering officer at City of Kansas City, MO



# Kansas City's Infrastructure Investment

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**Join Us!**

**02/21/17**



*THANK YOU.*

