

# Portland Green Infrastructure Project





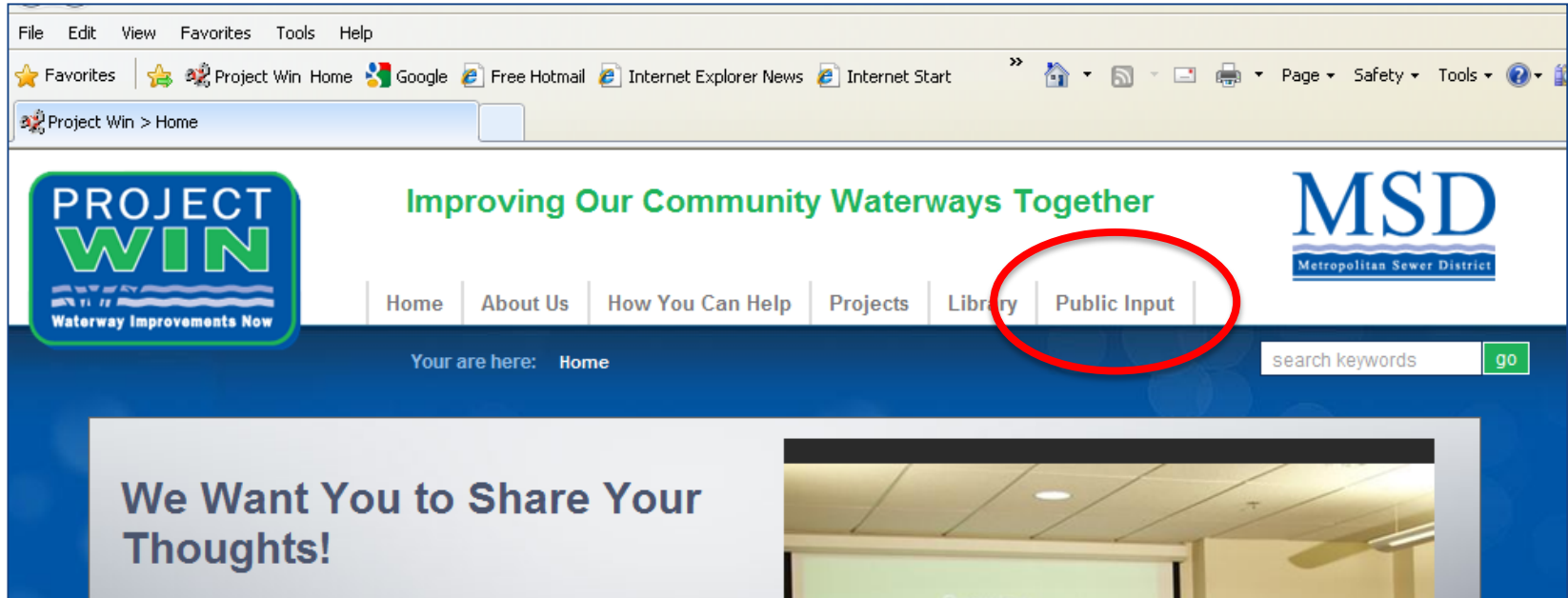
# Project Background

- Orientation Meeting was held at Western Middle School on February 9
- Discussed
  - Causes of Overflows
  - What you can do
  - What MSD is doing
- Back to Talk With You About Conceptual Design



# Find Out More

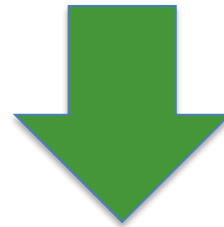
## msdprojectwin.org



**Learn More at the Website Created Just for YOU!**  
**Please Tell Your Friends and Neighbors to Take  
the Survey Online!**



# Phase 2: Conceptual Design



**Project Phase**

Orientation

Conceptual Design

Advanced Design

Construction

**MSD Role**

Provide Background and Information

Concept Options

Design Options

Announce Construction

**Citizen Role**

Understand Roles and Responsibilities

Ideas and Preferences

Ideas and Preferences

Prepare for Pending Work





# Conceptual Design Meeting Agenda

1. Consent Decree Overview-Why We Are Here
2. Getting to Know You: Demographic and Portland Area Use Questions
3. Update on Portland Green Infrastructure Design Process
  - What is Green Infrastructure?
  - How We Can Use it Here.
4. Present Conceptual Design Options to You
5. Gather Your Ideas & Preferences on Concept Options
6. Collect Comments from You (Cards Provided)

# CONSENT DECREE OVERVIEW















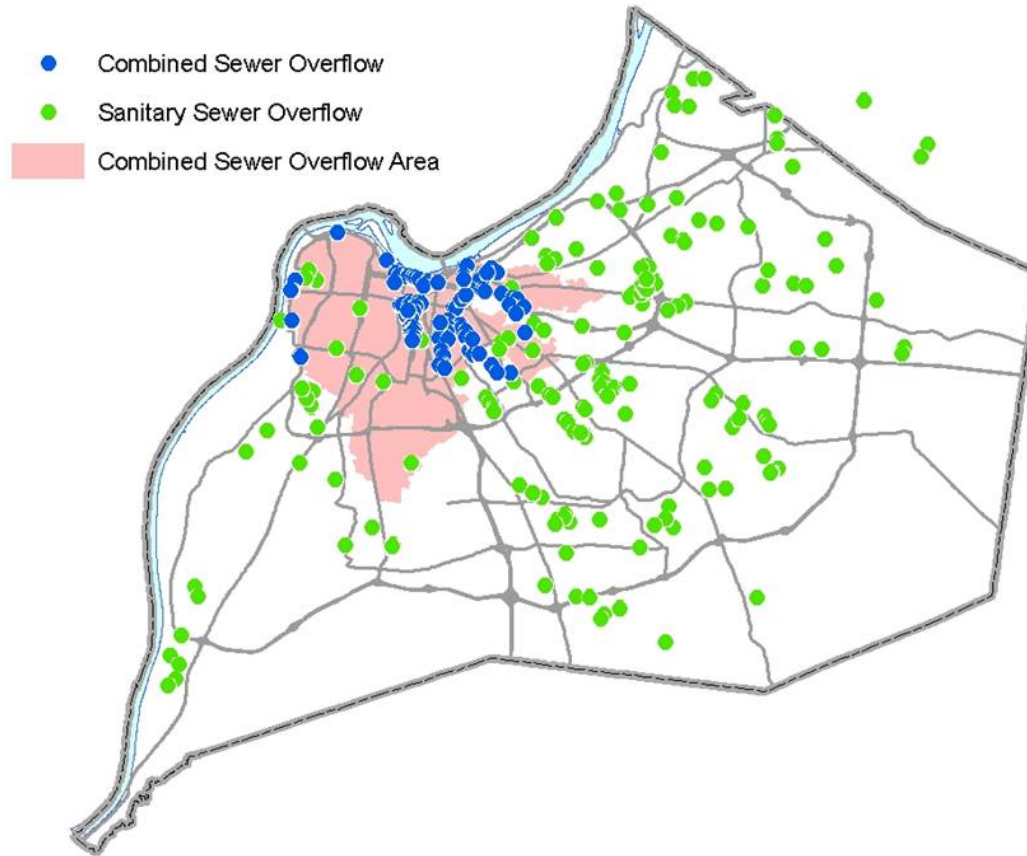








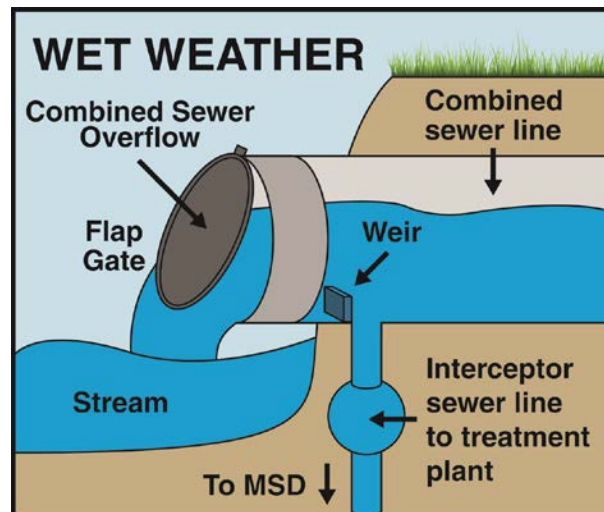
# Current Overflow Sites in Louisville Metro Area





# What is a Combined Sewer Overflow?

- What is a combined sewer?
  - Both stormwater and wastewater conveyed in the same pipe.
- What is a Combined Sewer Overflow (CSO)?
  - Untreated combined sewage discharged into a water body (creek, stream, river, etc.)



# Public Health and Safety Mandate

<b>2005</b>	<b>Federal EPA &amp; State of Kentucky mandate overflow abatement</b>
<b>2008</b>	<b>MSD submitted \$850 million plan to satisfy the mandate</b>
<b>2009</b>	<b>Federal EPA &amp; the State of Kentucky approve the plan</b>
<b>2020</b>	<b>Combined Sewer Overflow Program complete</b>
<b>2024</b>	<b>Separate Sewer Overflow Program complete</b>

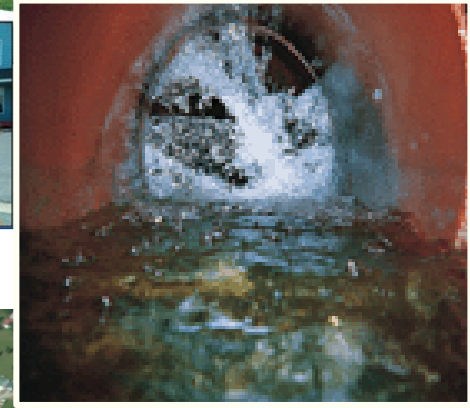




# How Do We Control Sewer Overflows (CSOs)?

## Source Control Projects

- Green infrastructure
- Downspout disconnections
- Sump pump disconnections
- Sewer rehabilitation

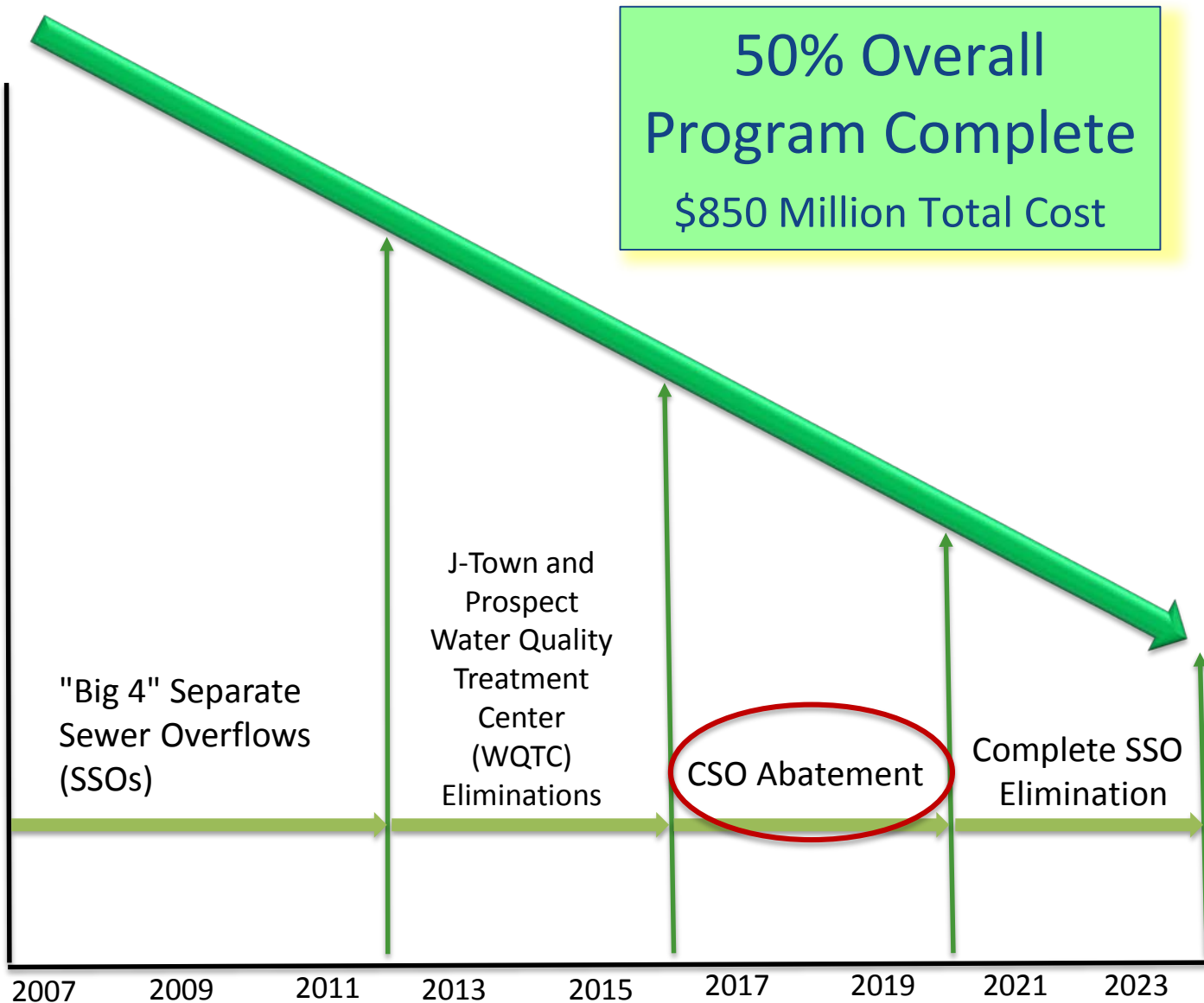


## Gray Infrastructure Projects

- Pipeline projects
- Pump station expansions
- Wastewater treatment plant expansions
- Storage Basins



OVERFLOW OCCURENCES





# MSD Overflow Projects Across Louisville

## IOAP Storage

-  I-64 and Grinstead Dr Storage Basin
-  13th St and Rowan St Storage Basin
-  Lexington Rd and Payne St Storage Basin
-  Bells Ln Storage Basin
-  Clifton Heights Storage Basin
-  Logan St and Breckinridge St Storage Basin
-  Portland Wharf Storage Basin
-  Southwestern Pkwy Storage Basin
-  Story Ave and Main St Storage Basin
-  Nightingale PS Replacement and Storage Basin

## Green Infrastructure Projects

-  Story Ave and Spring St Green Infrastructure
-  18th St and Northwestern Pkwy Green Infrastructure



# Getting to Know You: Demographic and Portland Area Use Questions





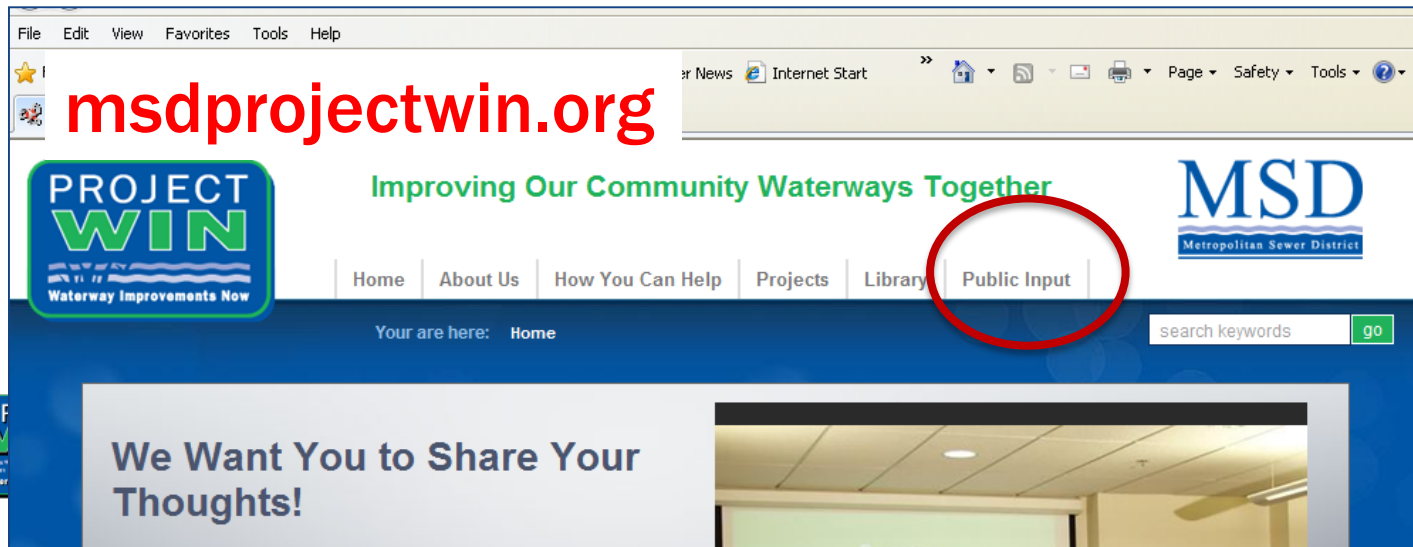
# Public Engagement Tools: “Clickers” and Online Polling

## “Clickers” for Public Meetings

- Simple To Use
- Anonymous (No One Knows Your Answers)
- Simultaneous (We All See the Results At the Same Time)
- Equal Voice for All



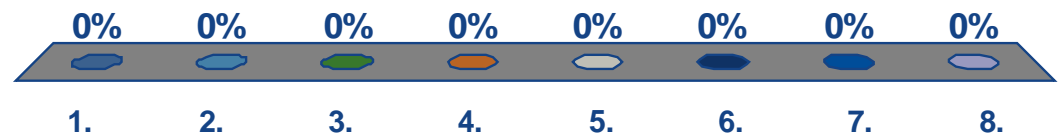
## Online Polling for Those Who Can't Attend Public Meetings



The screenshot shows a web browser window displaying the website [msdprojectwin.org](http://msdprojectwin.org). The page features the Project Win logo on the left, the tagline "Improving Our Community Waterways Together" in the center, and the MSD Metropolitan Sewer District logo on the right. A navigation menu includes links for Home, About Us, How You Can Help, Projects, Library, and Public Input. The "Public Input" link is circled in red. Below the navigation menu, a banner reads "We Want You to Share Your Thoughts!" with a photograph of a meeting room. A search bar is located in the bottom right corner.

# How Young Are You?

1. 0-19
2. 20-29
3. 30-39
4. 40-49
5. 50-59
6. 60-69
7. 70-79
8. 80+



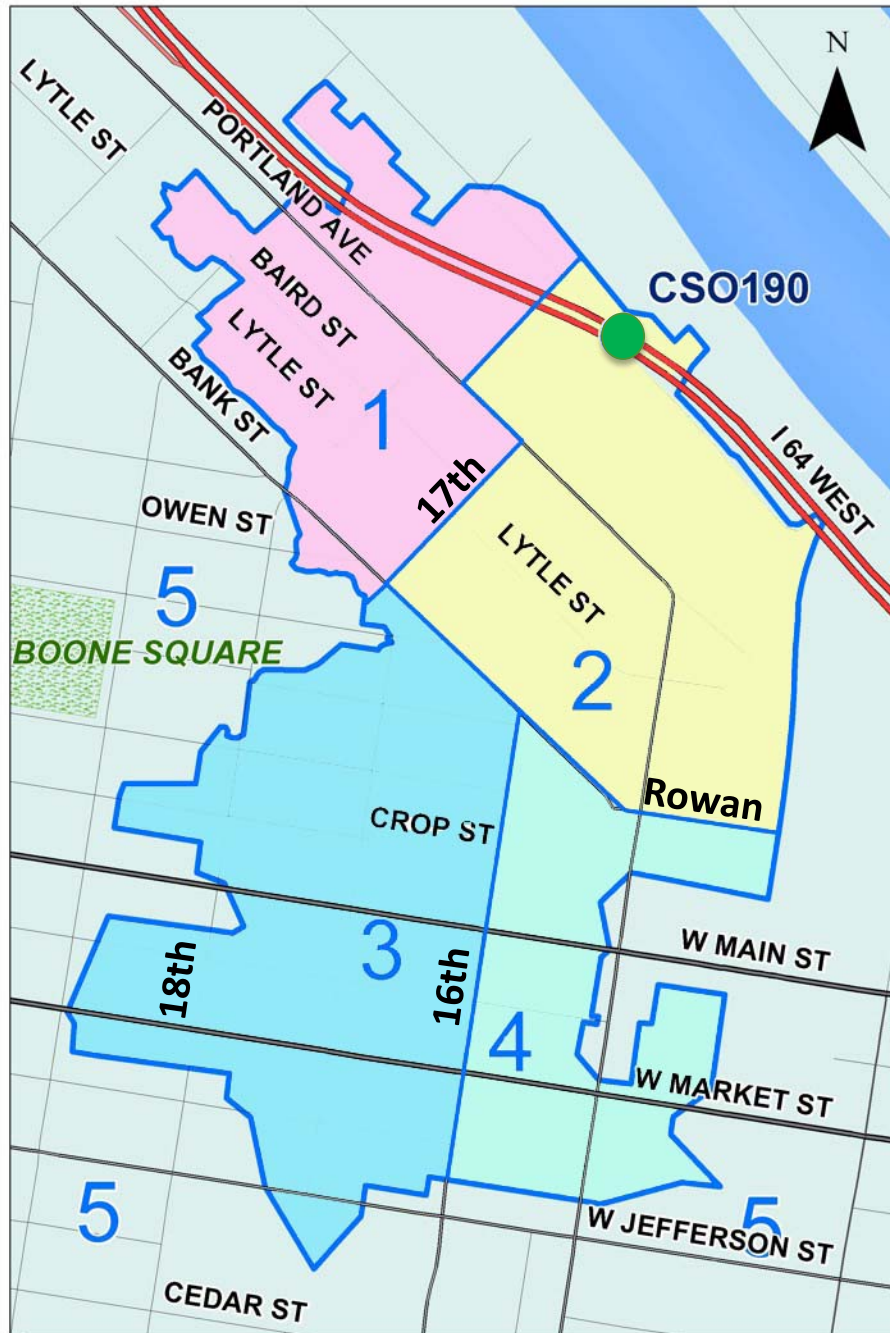


# Gender?

1. Male
2. Female



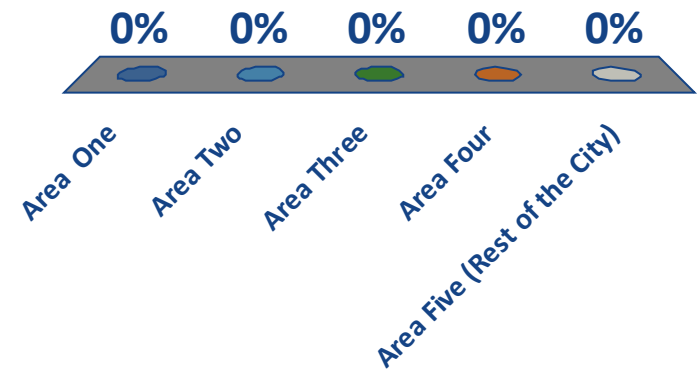
# Where Do You Live?



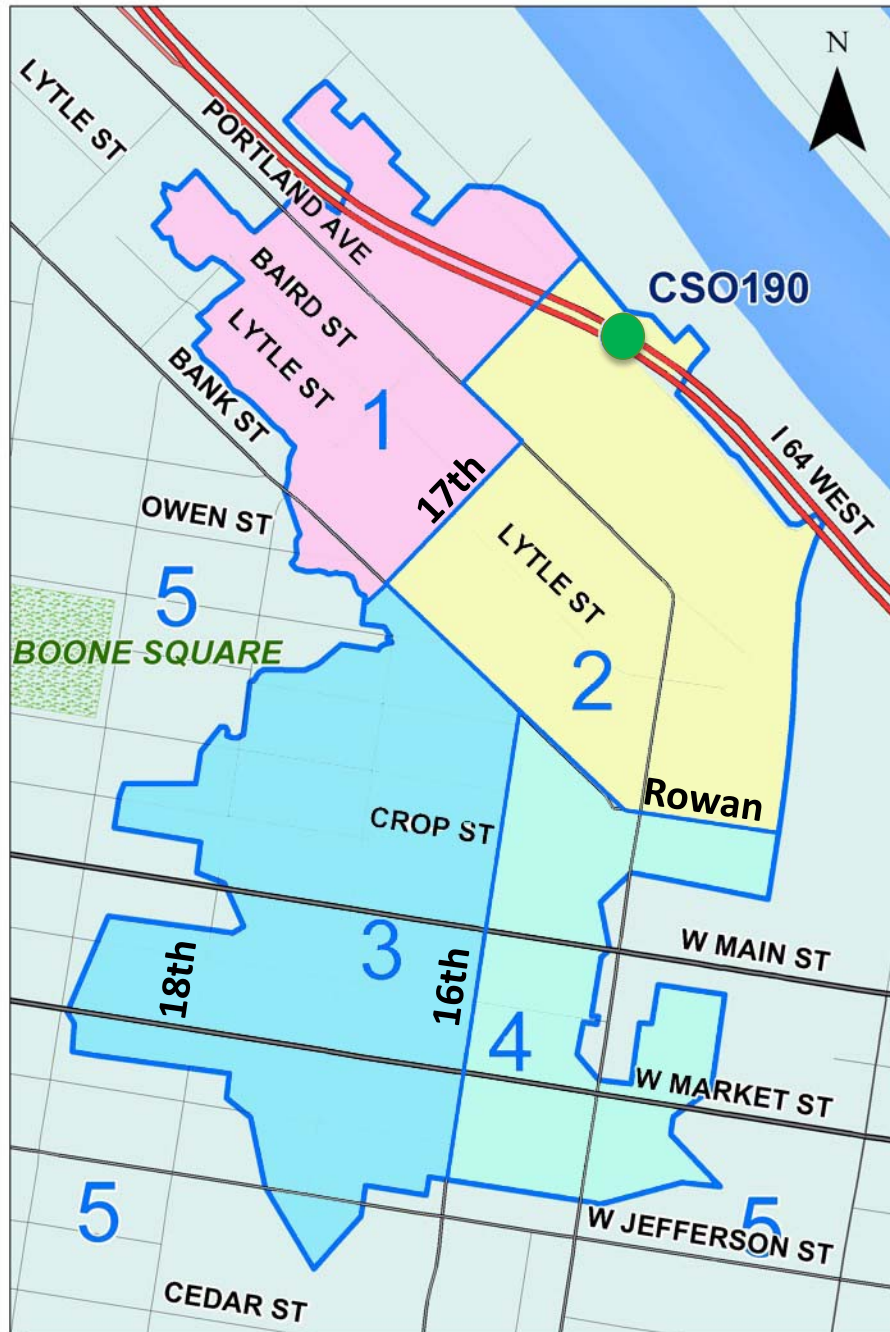


# Where Do You Live?

1. Area One
2. Area Two
3. Area Three
4. Area Four
5. Area Five (Rest of the City)



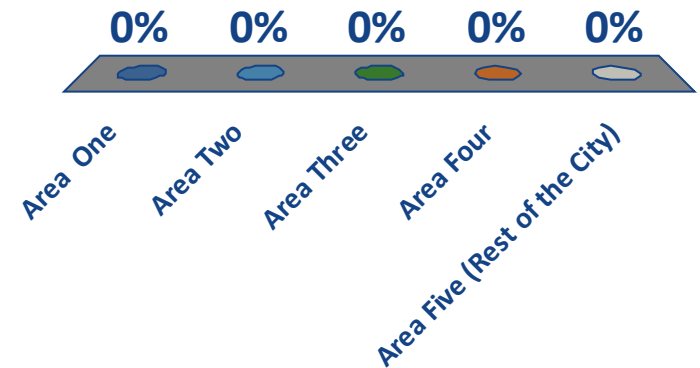
# Where Do You Spend Your Day?



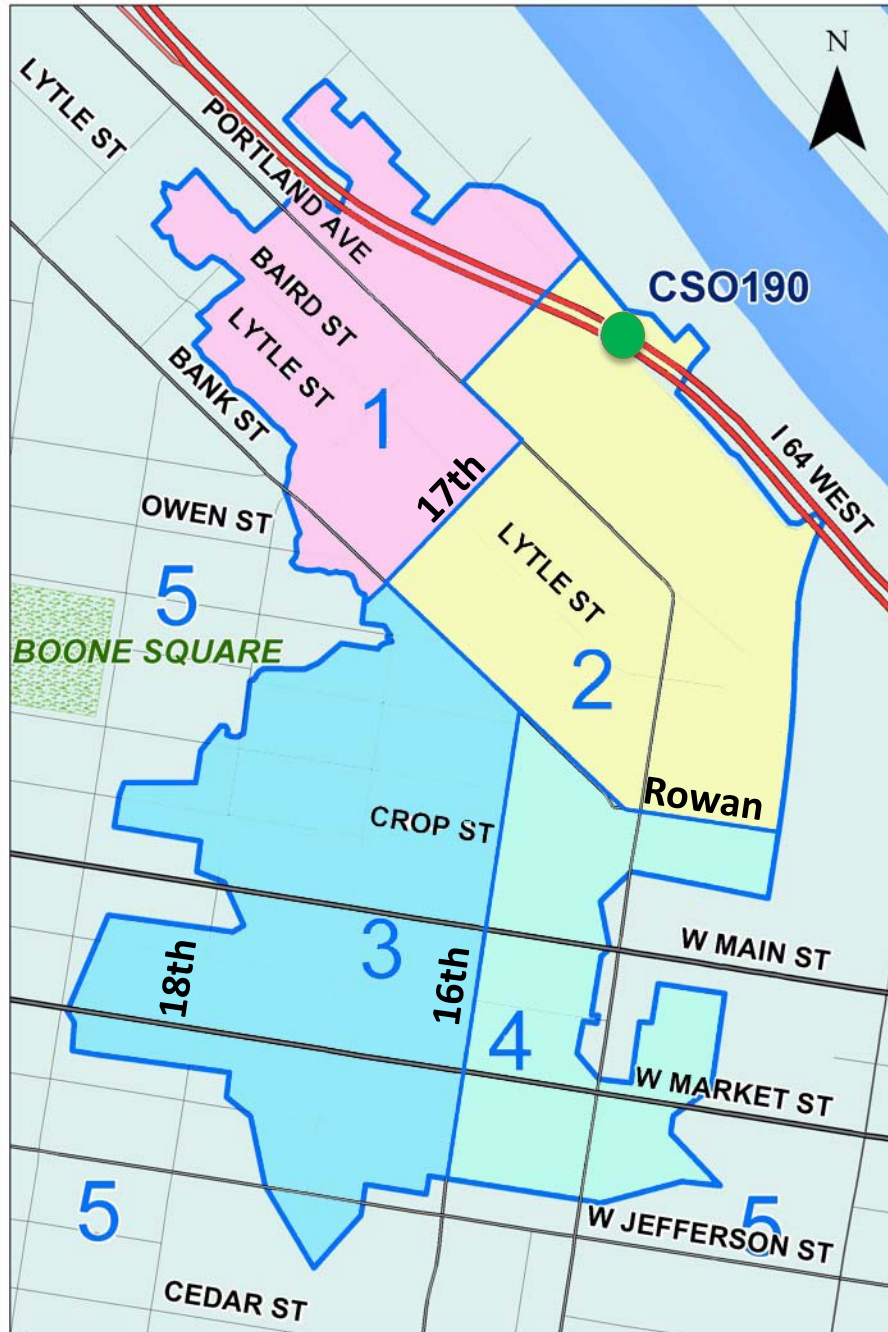


# Where Do You Spend Your Days? (3)

1. Area One
2. Area Two
3. Area Three
4. Area Four
5. Area Five (Rest of the City)



# Where Do You Operate a Business?



# Where Do You Operate a Business?

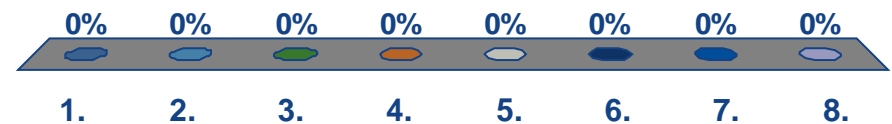
1. Area One
2. Area Two
3. Area Three
4. Area Four
5. Area Five (Rest of the City)
6. I don't operate any businesses.





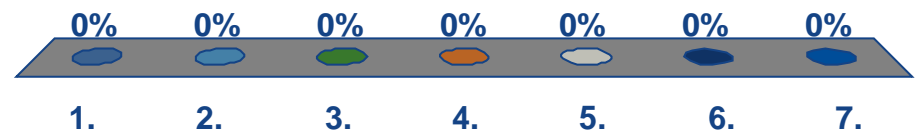
# How Did You Hear About This Meeting? (Up to 3)

1. Post Card
2. Saw It in the CJ
3. Saw it in a Council Newsletter
4. Heard About it From Someone
5. Received a Flyer
6. Project WIN website
7. MSD Email
8. Other



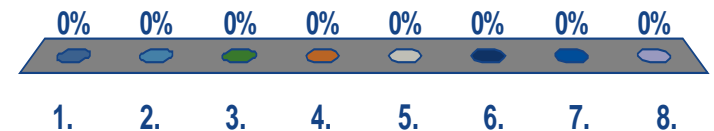
# What Are Your Primary Sources of Information About MSD Projects? (Up to 3)

1. Public Meetings
2. Metro TV Videos
3. Project WIN website
4. Local Mainstream Print or Broadcast Media
5. Alternative Press or Online Media
6. Word of Mouth
7. I don't have any previous knowledge of MSD projects.



# How Would You Like to Learn About MSD's Projects? (Up to 3)

1. Public Meetings
2. Metro TV Videos
3. Project WIN website
4. Local Mainstream Print or Broadcast Media
5. Social Media
6. MSD Email
7. Metro Council District Newsletter
8. Bill Inserts





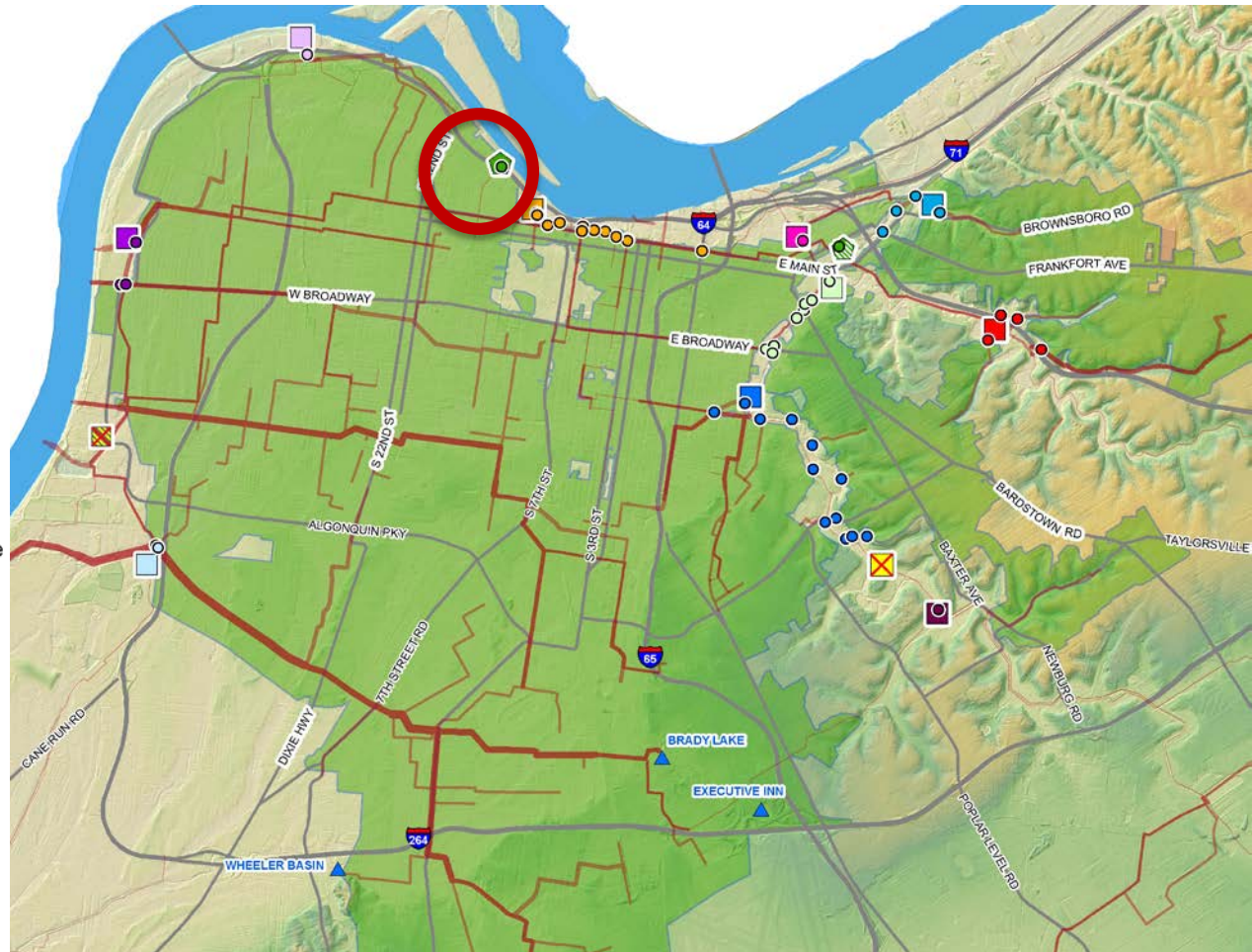
# Portland Green Infrastructure Project Update

## IOAP Storage

-  I-64 and Grinstead Dr Storage Basin
-  13th St and Rowan St Storage Basin
-  Lexington Rd and Payne St Storage Basin
-  Bells Ln Storage Basin
-  Clifton Heights Storage Basin
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## Green Infrastructure Projects

-  Story Ave and Spring St Green Infrastructure
-  18th St and Northwestern Pkwy Green Infrastructure





# Bird's Eye View of Green Infrastructure Area



Built up with commercial and residential buildings, roads, and parking lots.

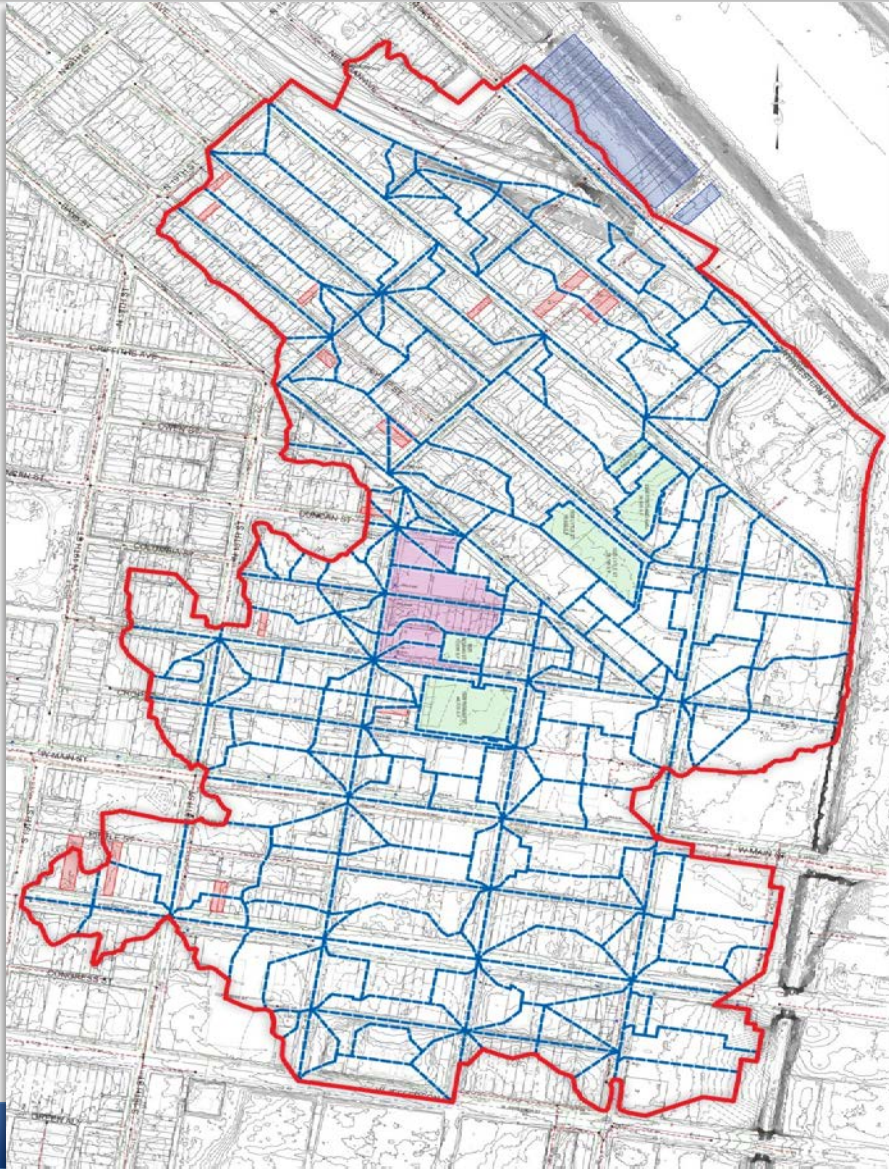
# The Goal

- Reduce Overflows from **61** to **8** in a Typical Year
- Capture **32 Million Gallons** of Overflow in a Typical Year



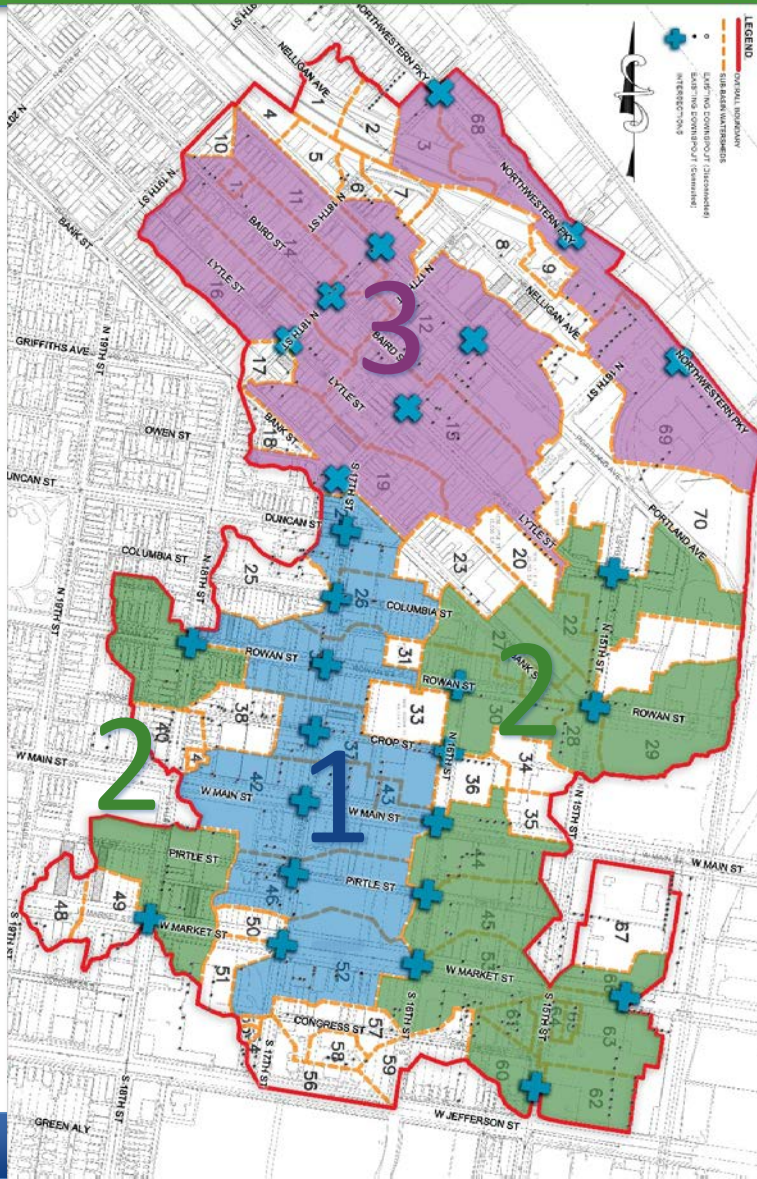





# What It Will Take to Accomplish That



- 142 Total Acres
- 2/3 (96 Acres) is Impervious (Asphalt, Roofs, Sidewalks, etc.)
- Runoff from 2/3 of Impervious area (64 acres) must be captured.

# Project Phases

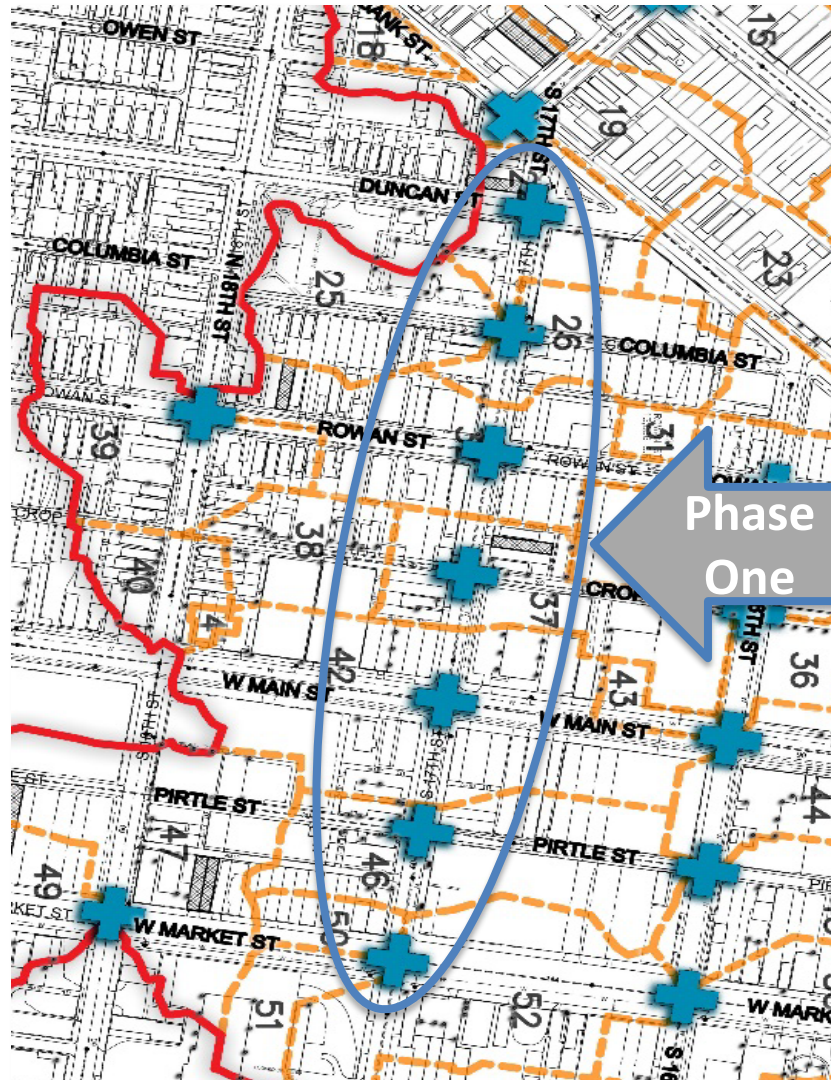


-  Phase 1  
66,843 C.F. Captured
-  Phase 2  
106,230 C.F. Captured
-  Phase 3  
82,477 C.F. Captured





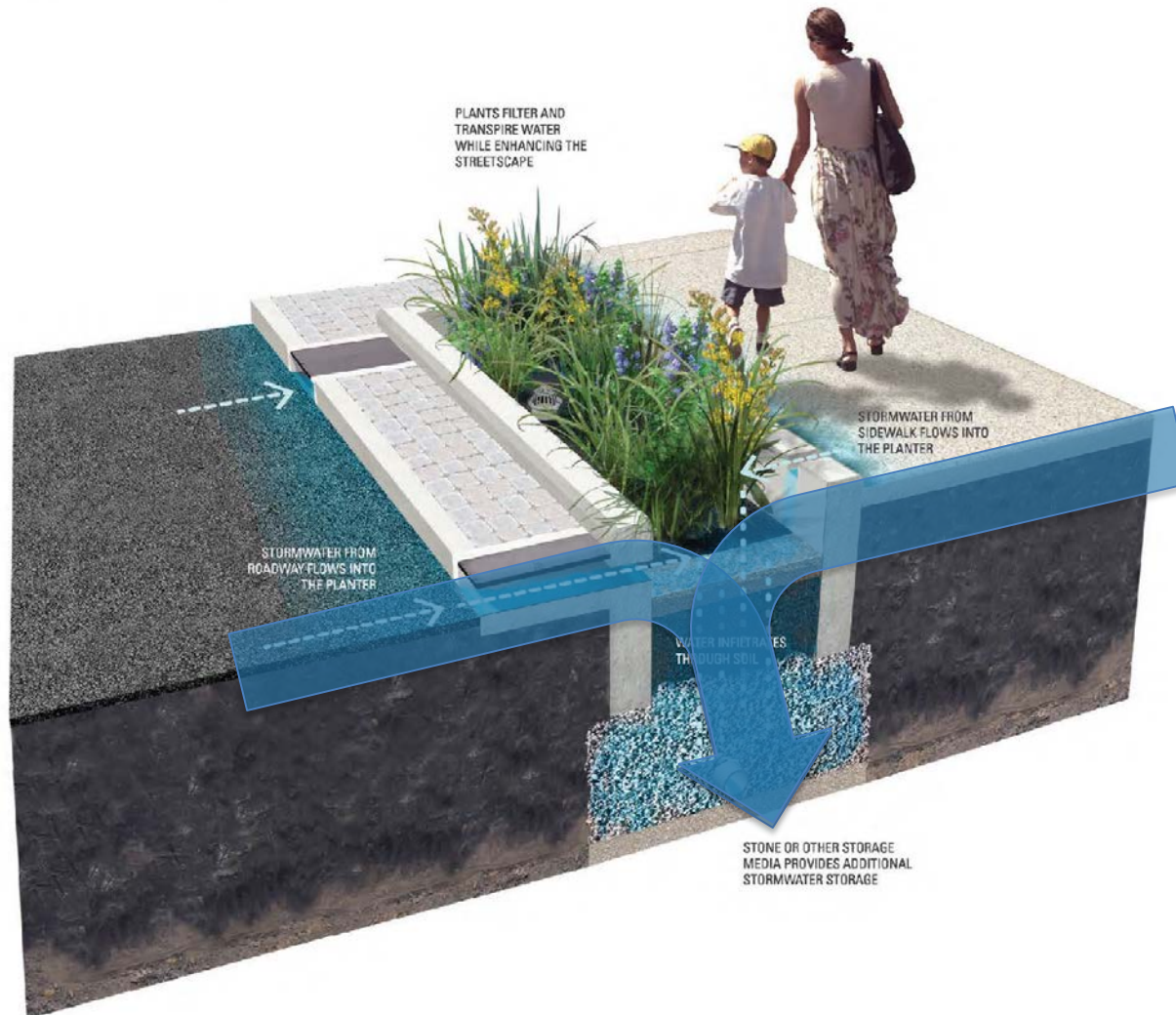
# How We Will Do It?



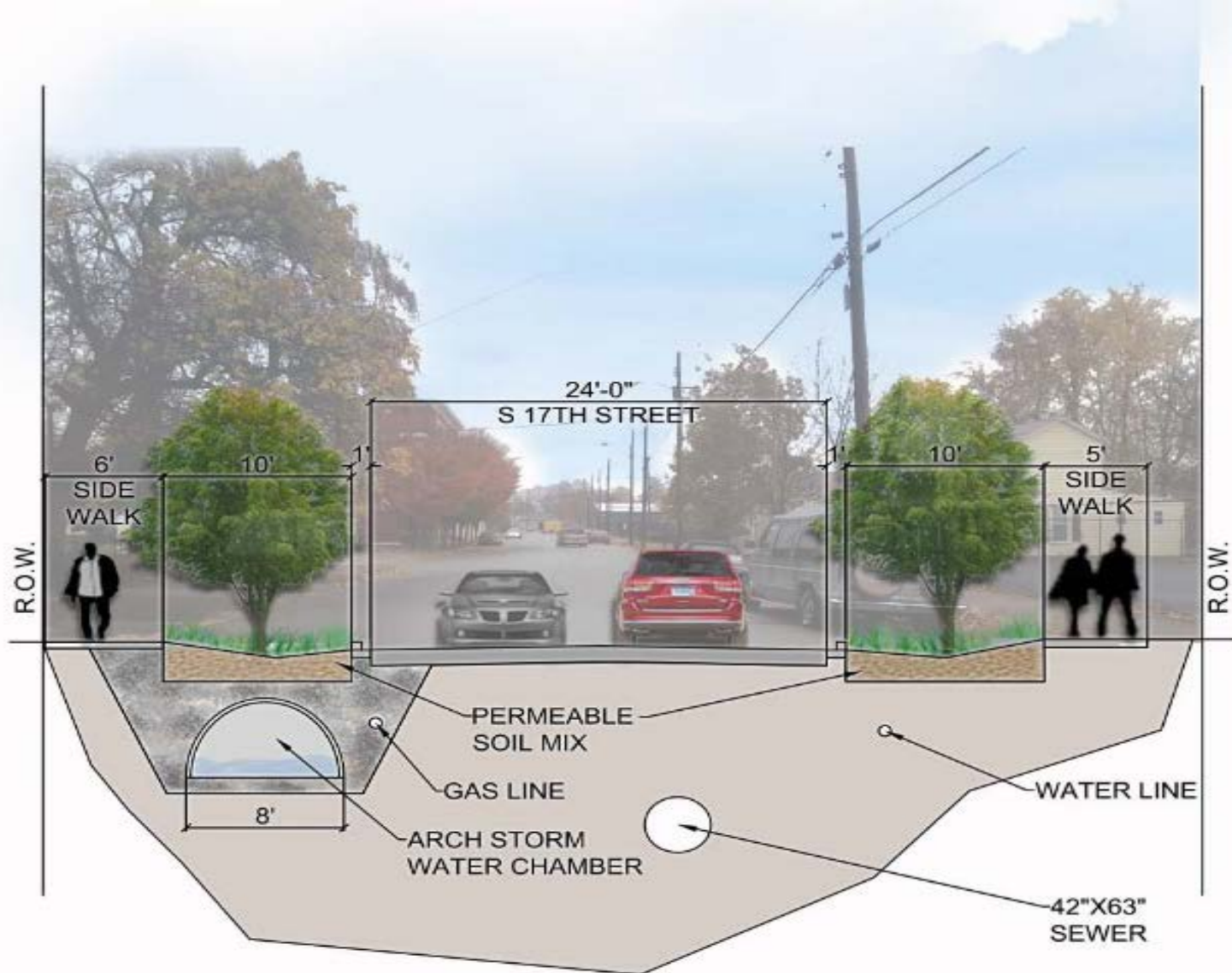
- Stormwater Drains Already at Intersections
- Focus on Capturing Water at Each Intersection
- 27 Intersections
- Phase 1: 7 Intersections



# Green Infrastructure: Routing Stormwater Back to the Ground.



# Above and Below Ground





# We Need Your Input

- The Stormwater Intake Areas can have a variety of surface treatments and still do their job.
- Intake can even be through a curb inlet (“Drain”).
- Following are some alternative concepts.
- Tell us how suitable you think they are for your neighborhood or business district.



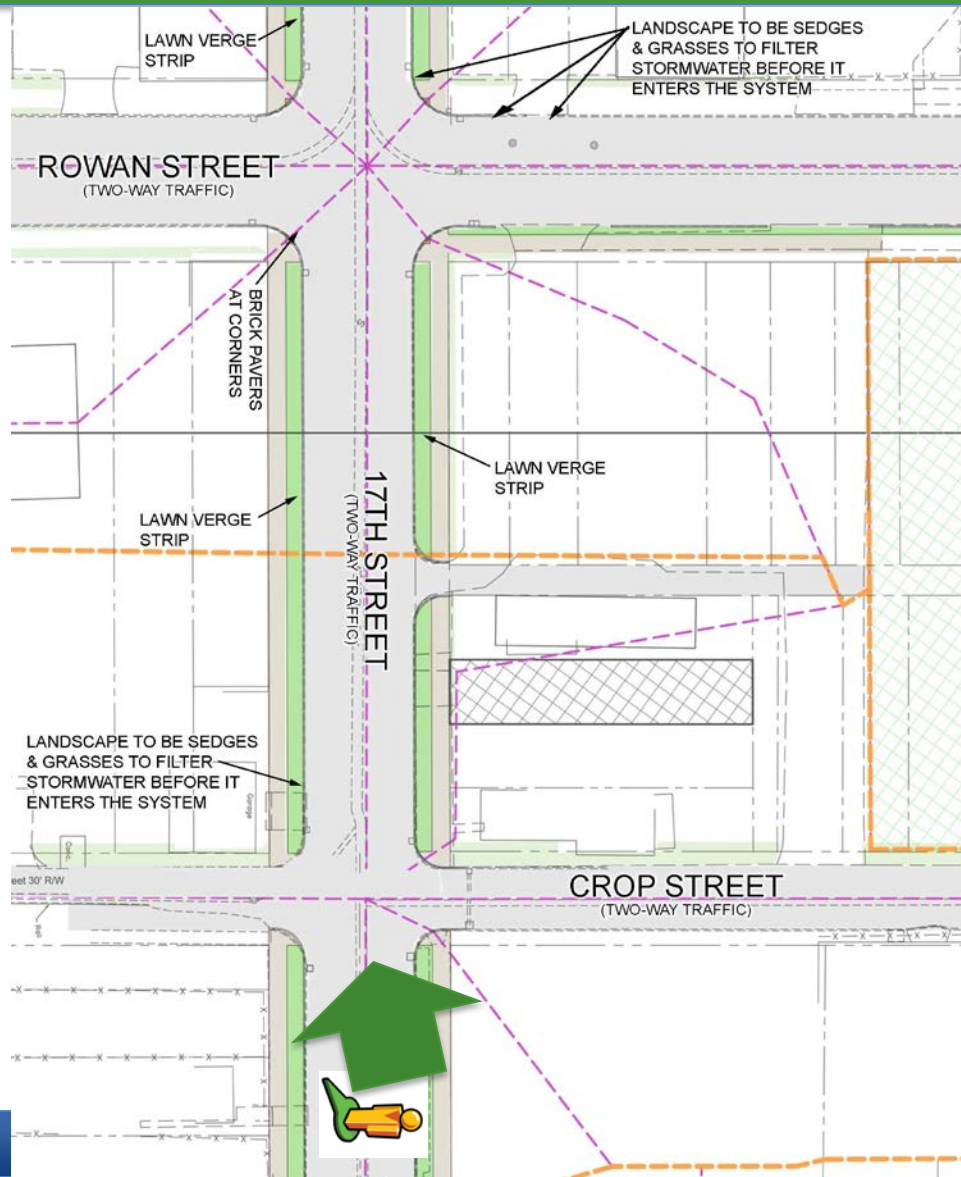


# Existing Conditions at 17<sup>th</sup> and Crop Street



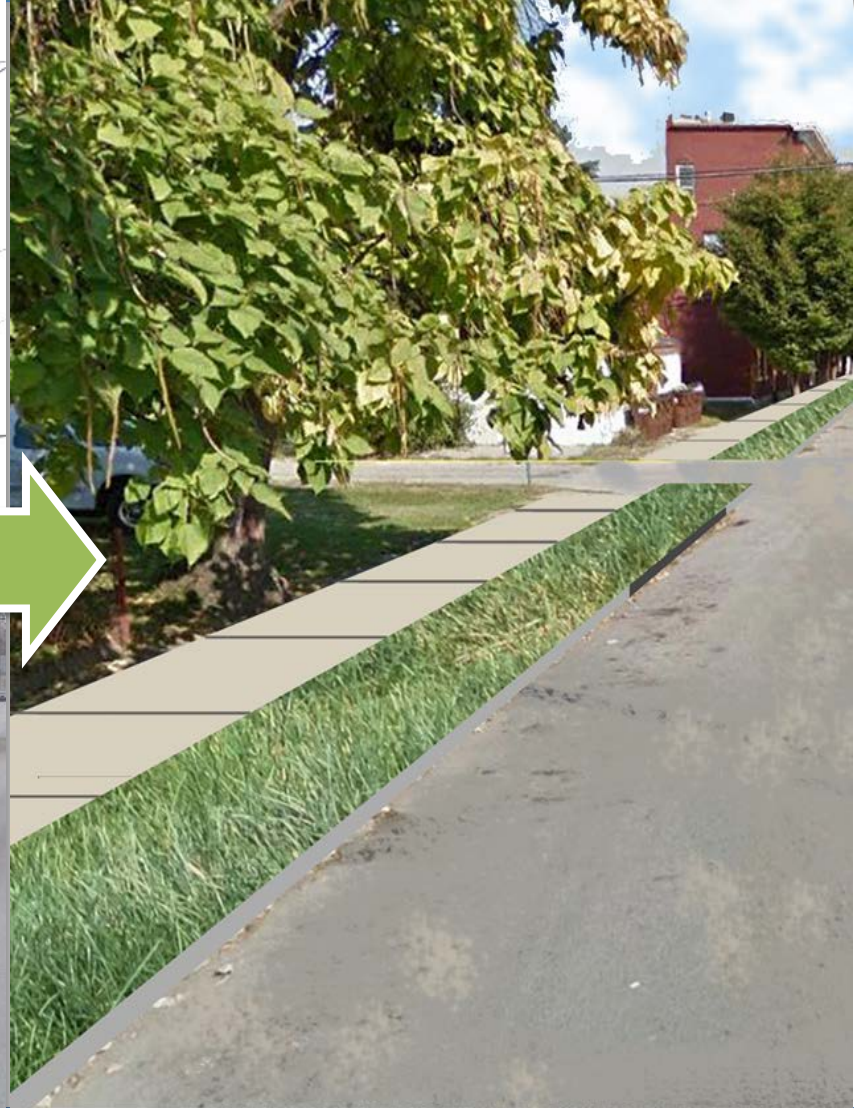
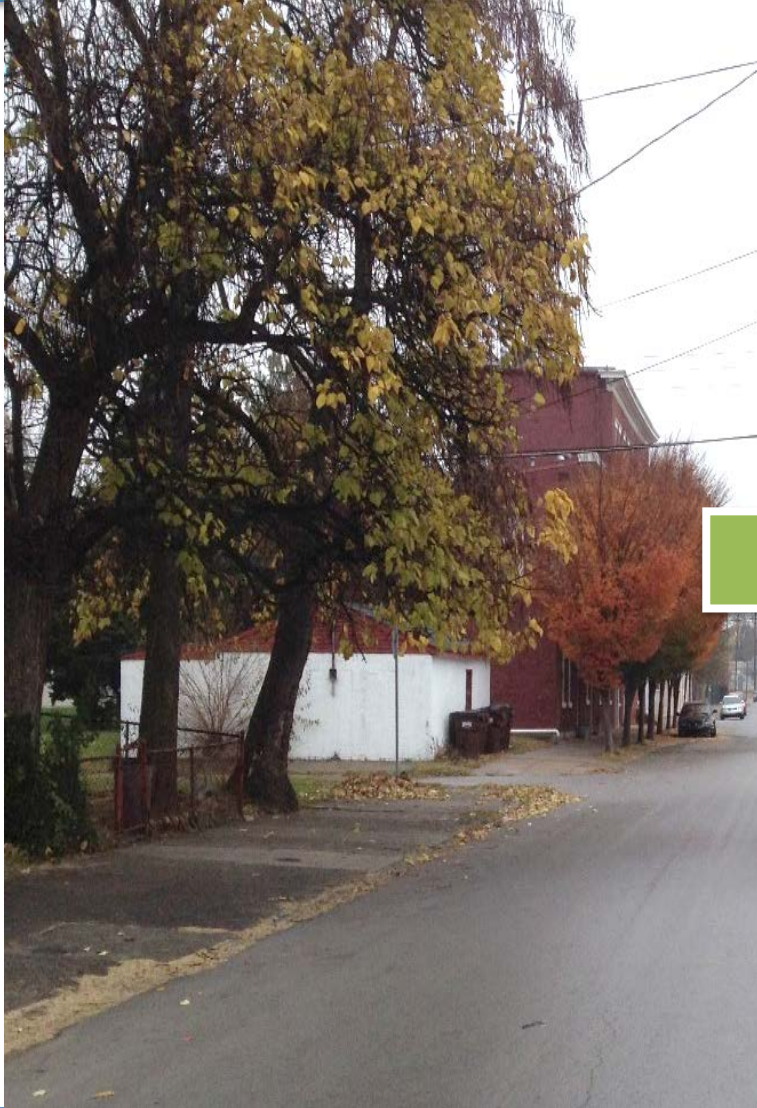
Crop  
Street

# Possible Street Cross-Section: Grass Strips With Intersection Inlets



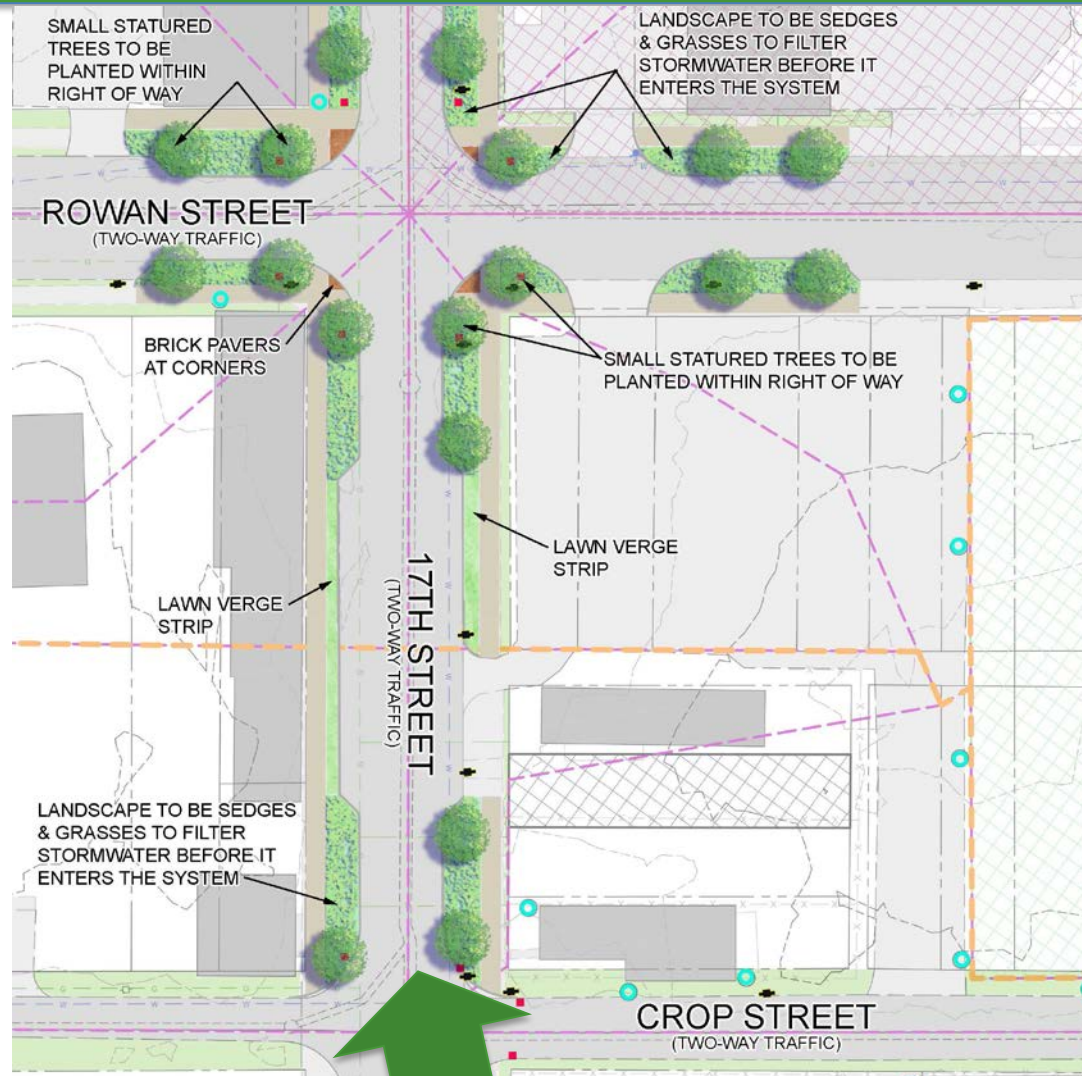


# Possible Street Cross-Section: Grass Strips With Intersection Inlets





# Possible Street Cross-Section: Grass Strips + Bump-outs at Intersections



# Possible Street Cross-Section: Grass Strips + Bump-outs at Intersections





# Possible Street Outcomes from MSD Green Infrastructure Project

OPTIONS:	Grass	Plantings	Trees
Grass Strip	X		X
Intersection Bump-out	X	X	X

1. Grass strip
2. Grass strip + Trees
3. Grass strip + Intersection Bump-out
4. Grass strip + Intersection Bump-out + Trees
5. Grass strip + Intersection Bump-out + Plantings
6. Grass strip + Intersection Bump-out + Plantings + Trees



# Concept 1: Grass Strip

**Features:**

**6 foot sidewalk**

**Grass next to road**

**Lowest cost concept**





# Concept 2: Grass Strip With Trees

**Features:**

**6 foot sidewalk**

**Grass next to road**

**Shaded sidewalks**

**Low cost concept.**





# Concept 3: Grass Strip + Intersection Bump-out

## Features:

- Additional grass roots help absorb more water
- Shorter pedestrian crossing distance at intersections

-Lower maintenance





# Concept 4: Grass Strip + Bump-out + Trees

## Features:

- Additional grass roots help absorb more water
- Shorter pedestrian crossing distance at intersections
- Trees shade sidewalks
- Higher maintenance





# Concept 5: Grass Strip + Bump-out + Plantings

## Features:

- Plant roots help absorb water
- The plants look uniform through out the growing season.
- Shorter pedestrian crossing distance at intersections





# Concept 6: Bump-out + Plantings + Trees

## Features:

- Plant roots help absorb water
- The plants look uniform through out the growing season.
- Shorter pedestrian crossing distance at intersections
- Trees shade sidewalk
- Higher maintenance





# So What Do You Think?

1. General Thoughts About Any of These?
2. Rate Each One for Suitability in Residential and Commercial Areas.







# Concept 1: Grass Strip

**Features:**

**6 foot sidewalk**

**Grass next to road**

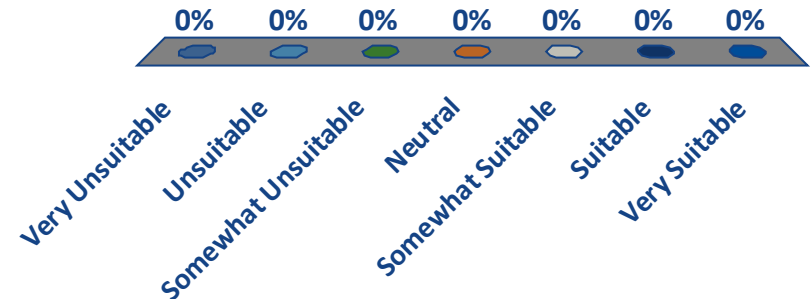
**Lowest cost concept**



# Suitability of Concept 1 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

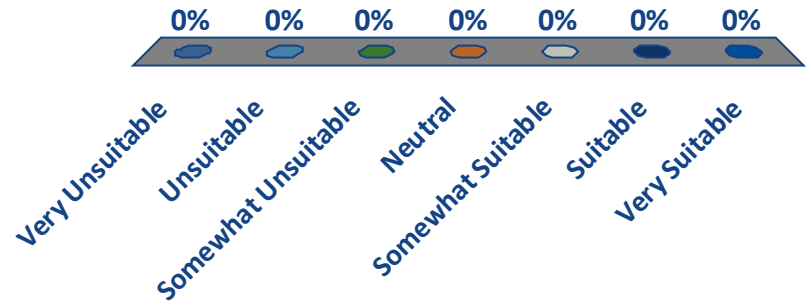
Mean =



# Suitability of Concept 1 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean =





# Concept 2: Grass Strip With Trees

**Features:**

**6 foot sidewalk**

**Grass next to road**

**Shaded sidewalks**

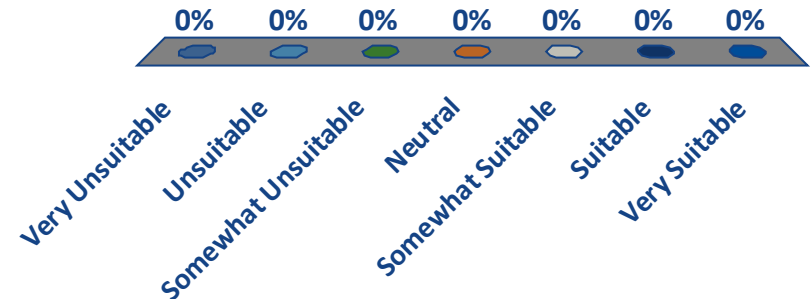
**Low cost concept**



# Suitability of Concept 2 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

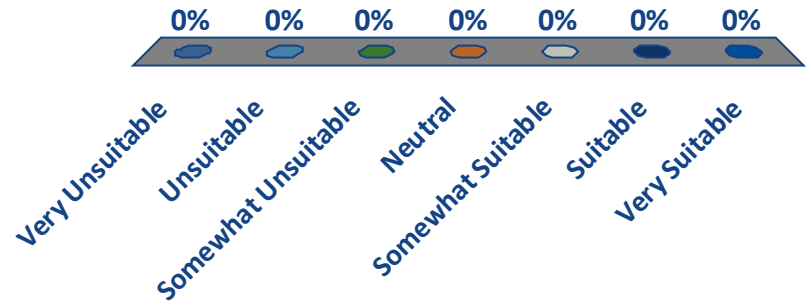
Mean =



# Suitability of Concept 2 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean =





# Concept 3: Grass Strip + Intersection Bump-out

## Features:

- Additional grass roots help absorb more water
- Shorter pedestrian crossing distance at intersections

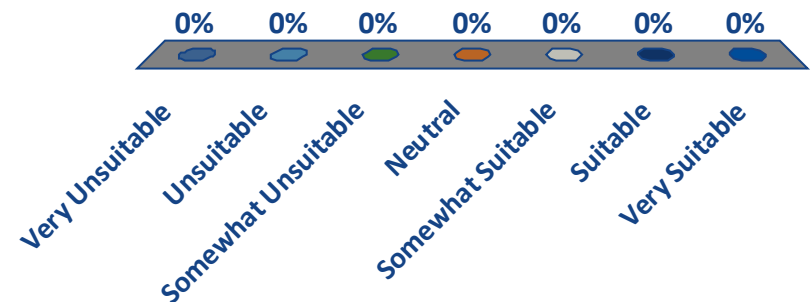
-Lower maintenance



# Suitability of Concept 3 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

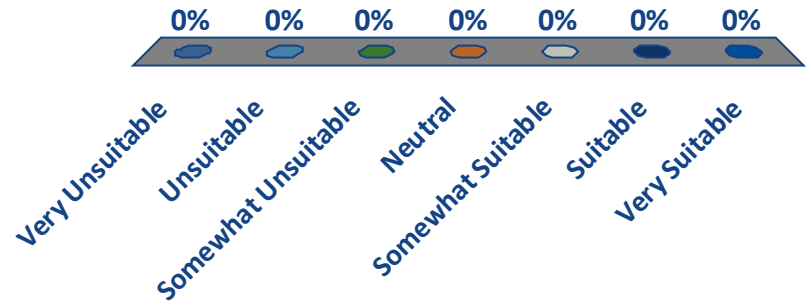
Mean =



# Suitability of Concept 3 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean =





# Concept 4: Grass Strip + Bump-out + Trees

## Features:

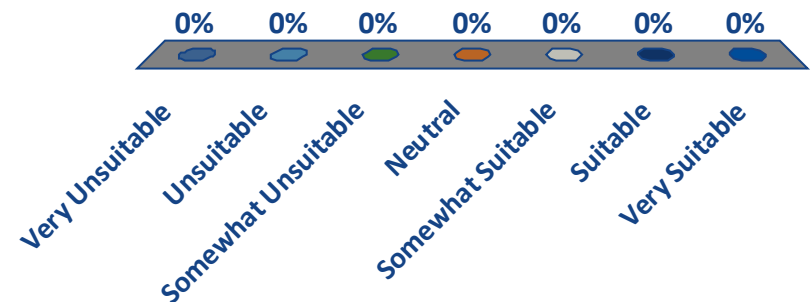
- Additional grass roots help absorb more water
- Shorter pedestrian crossing distance at intersections
- Trees shade sidewalks
- Higher maintenance



# Suitability of Concept 4 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

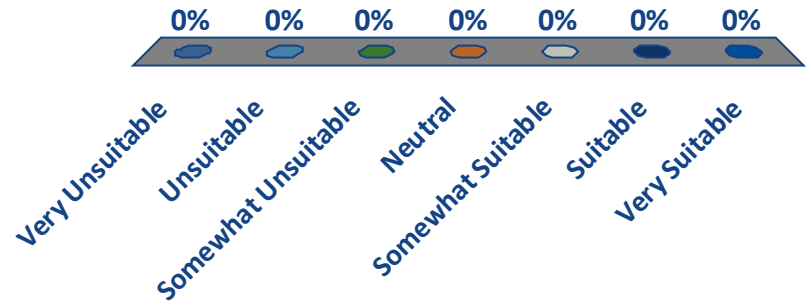
Mean =



# Suitability of Concept 4 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean =





# Concept 5: Grass Strip + Bump-out + Plantings

## Features:

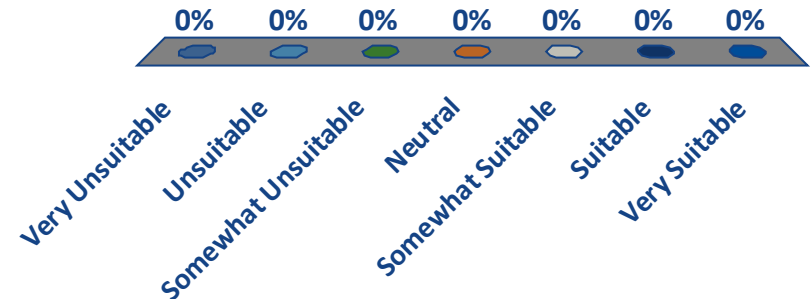
- Plant roots help absorb water
- The plants look uniform through out the growing season.
- Shorter pedestrian crossing distance at intersections



# Suitability of Concept 5 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

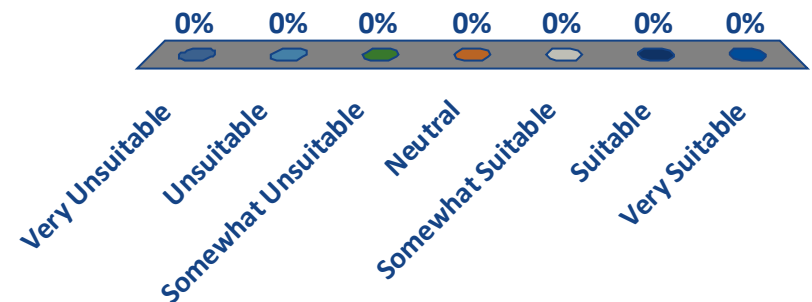
Mean =



# Suitability of Concept 5 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean =





# Concept 6: Bump-out + Plantings + Trees

## Features:

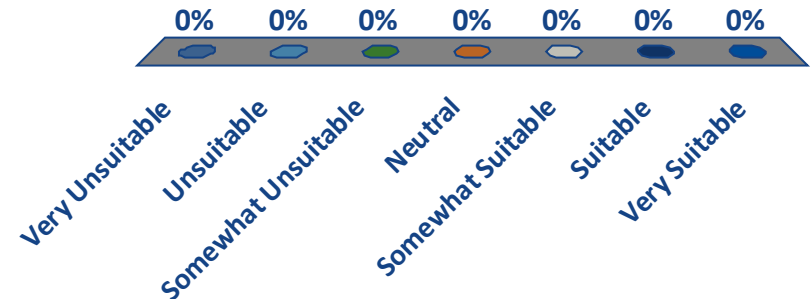
- Plant roots help absorb water
- Trees shade sidewalk
- The plants look uniform through out the growing season.
- Higher maintenance
- Shorter pedestrian crossing distance at intersections



# Suitability of Concept 6 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

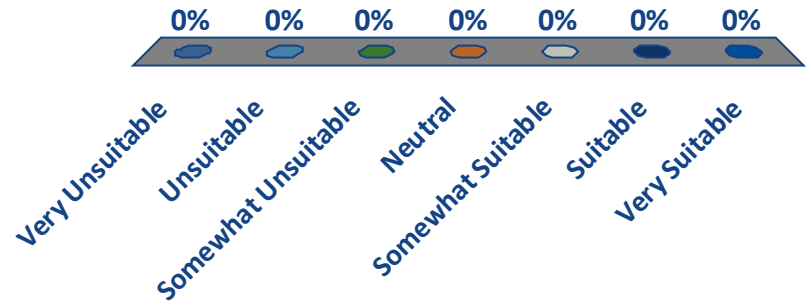
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# Suitability of Concept 6 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

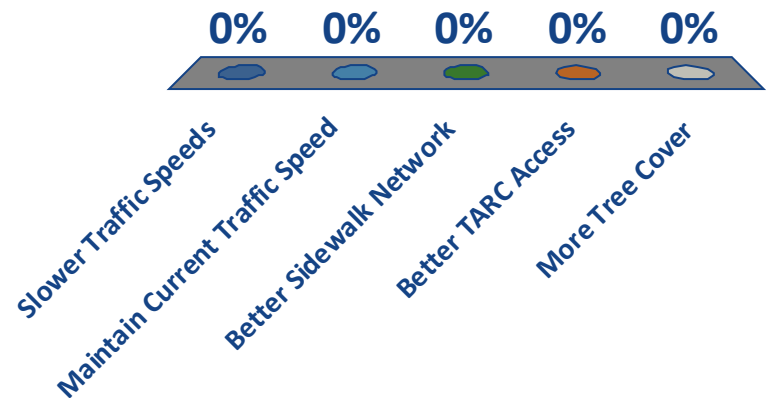
Mean =





# Choose Up To 2 Neighborhood Priorities That Are Most Valuable to You.

1. Slower Traffic Speeds
2. Maintain Current Traffic Speed
3. Better Sidewalk Network
4. Better TARC Access
5. More Tree Cover



# Your Own 'Green Infrastructure' Task

- Turn downspouts onto the ground!
- Capture rain from downspouts to use for watering your gardens and landscaping
  - Rain barrels
  - Rain gardens

*MSD will reimburse up to \$100 per disconnected downspout.*

*Call 502-587-0603*



# Working Together for Public Health and Safety

If you see this...

**Call MSD Immediately!**

**502-587-0603**

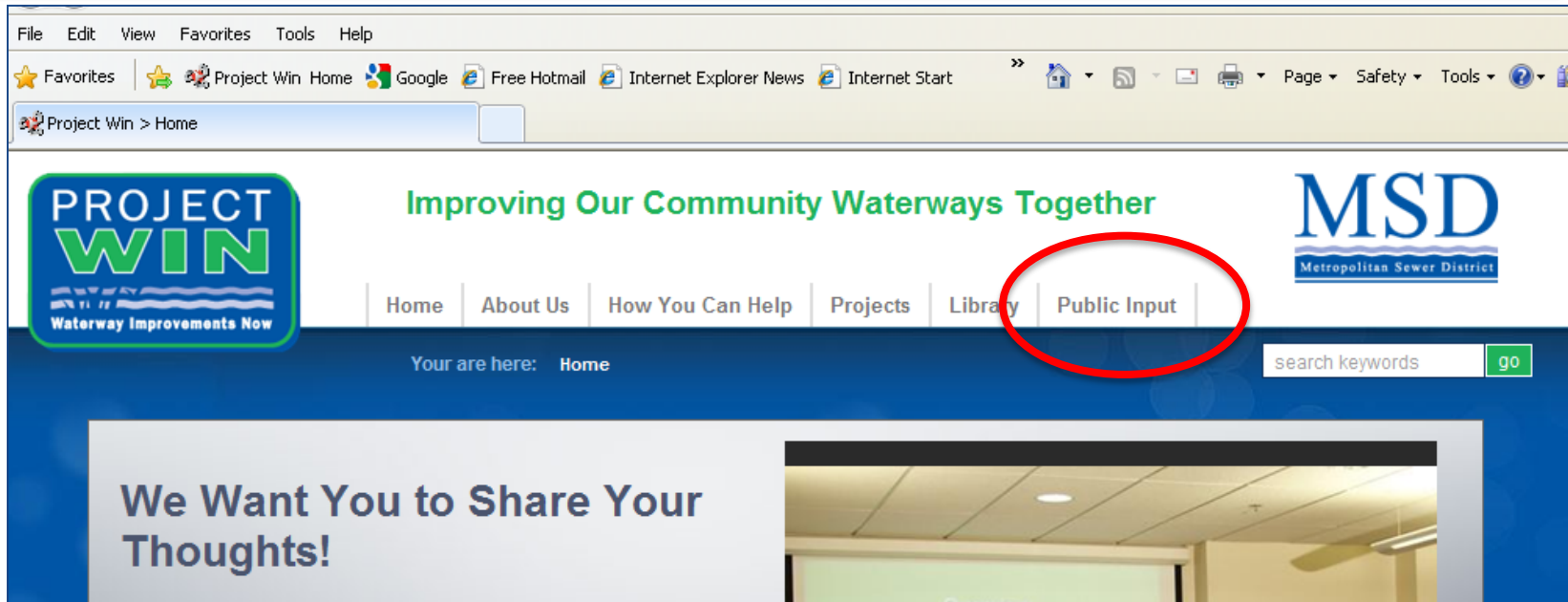


**MSD**  
Metropolitan Sewer District

**PROJECT  
WIN**  
Waterway Improvements Now



Find Out More: [msdprojectwin.org](http://msdprojectwin.org)



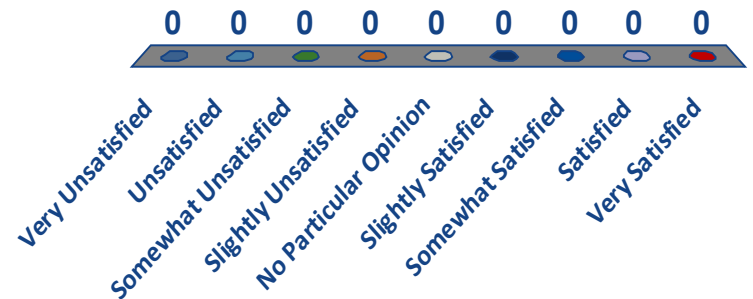
**Learn More at the Website Created Just for YOU!  
Invite Your Friends and Neighbors to Take the  
Survey Online!**



# How satisfied are you with this process?

1. Very Unsatisfied
2. Unsatisfied
3. Somewhat Unsatisfied
4. Slightly Unsatisfied
5. No Particular Opinion
6. Slightly Satisfied
7. Somewhat Satisfied
8. Satisfied
9. Very Satisfied

Mean =



# Next Steps

- We'll evaluate your input
- Further develop design
- Return with Advanced Design Meeting May 12, 2015
- To be put on the email list for this project, send a note mentioning this project to:  
[commentsIOAP@msdlouky.org](mailto:commentsIOAP@msdlouky.org)
- Or take the online survey and leave your email address at the end.





For general information about the MSD  
system, call:

**502-587-0603**

Staffed 24 hours per day (24/7/365)





**THANK YOU**  
**FOR YOUR TIME AND ASSISTANCE!**

