

Story and Main CSO Basin Conceptual Design Meeting

American Printing House for the Blind
February 10, 2016

What We Will Talk About Tonight

1. Why We Are Here
2. Public Outreach Process
 - Project Phases
 - MSD & Citizen Roles
3. Getting to Know You
 - Demographics
4. Introduction to the Story and Main CSO Basin Project
5. Design Considerations
6. Next Steps
7. Feedback

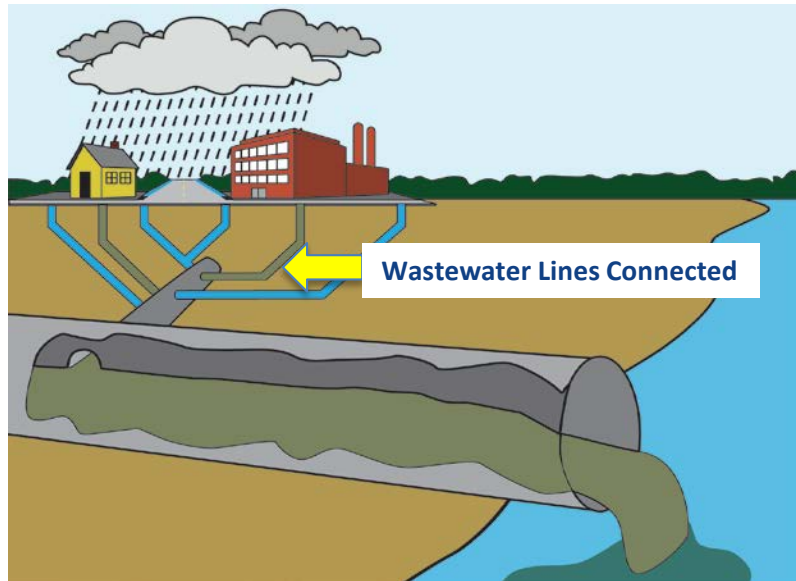


1. Why We Are Here

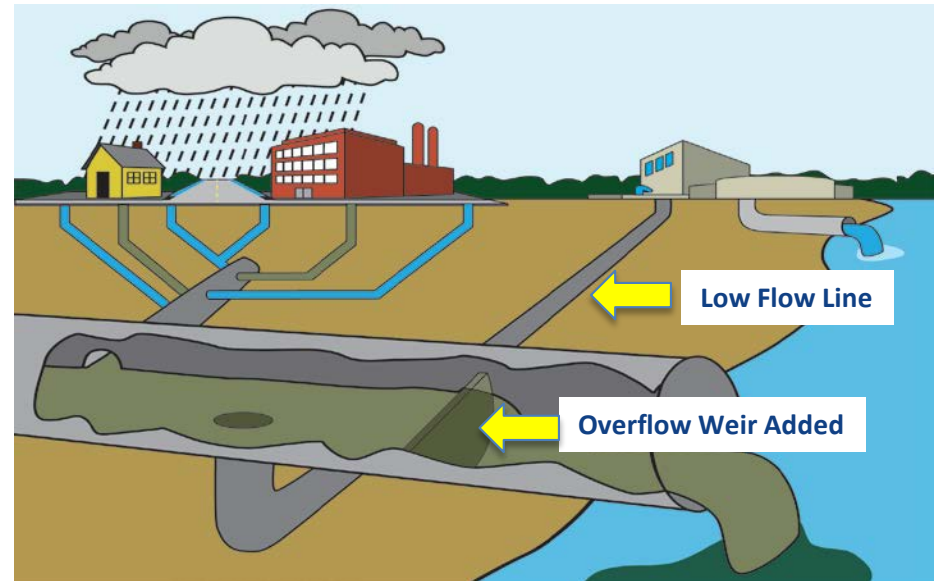
What is a Combined Sewer?

What is a combined sewer?

- Both storm water and wastewater conveyed in the same pipe



Original Combined Sewers discharged directly to rivers and streams

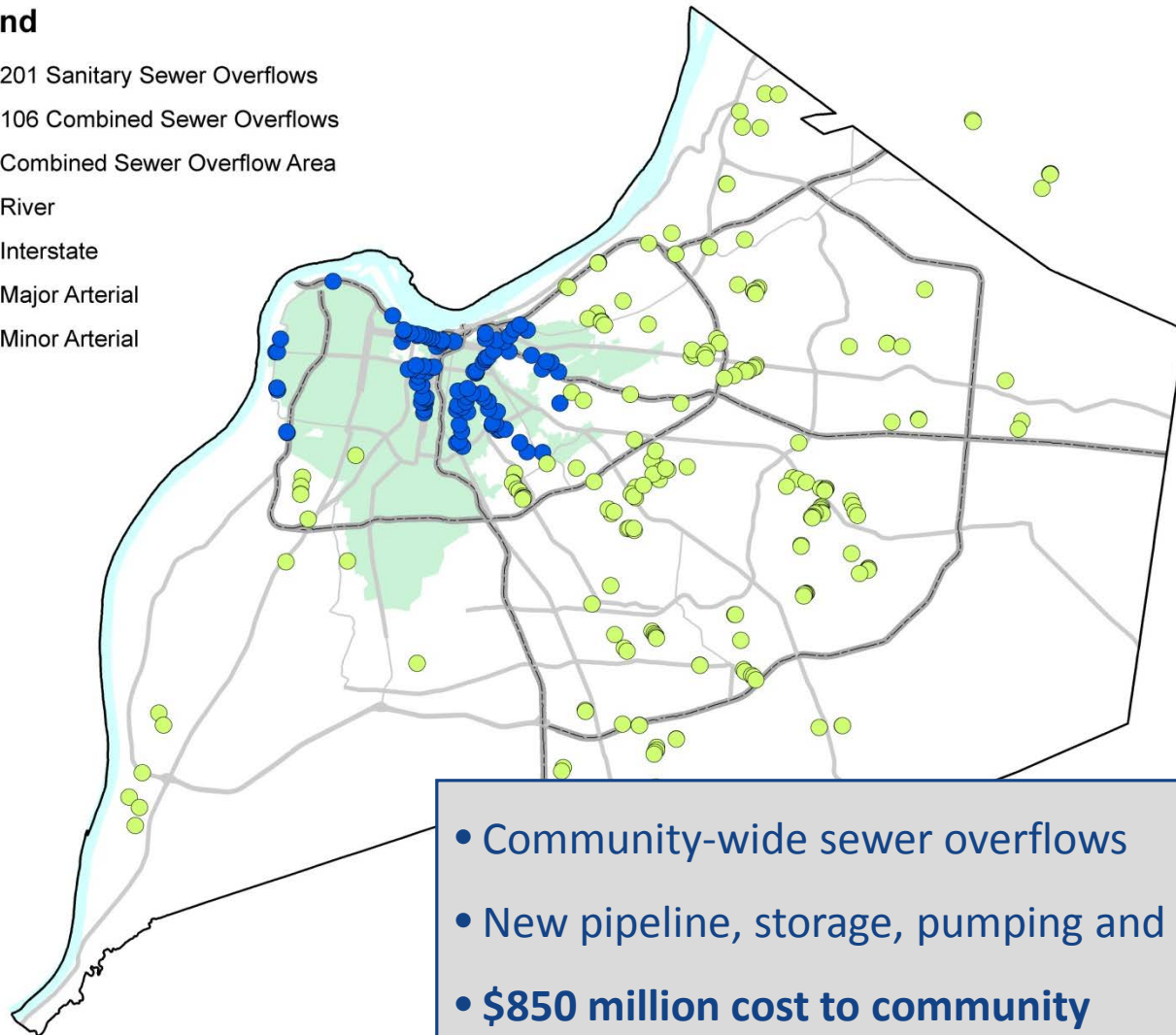


Wastewater treatment added in 1958. Dry weather flow treated. Some wet weather flow discharged to prevent flooding.

Sewer Overflow Locations (2008)

Legend

- 201 Sanitary Sewer Overflows
- 106 Combined Sewer Overflows
- Combined Sewer Overflow Area
- River
- Interstate
- Major Arterial
- Minor Arterial

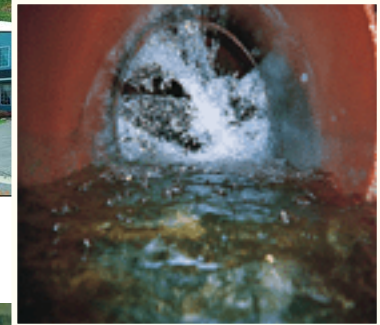


- Community-wide sewer overflows
- New pipeline, storage, pumping and treatment
- **\$850 million cost to community**

How Do We Control Overflows?

Source Control Projects

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

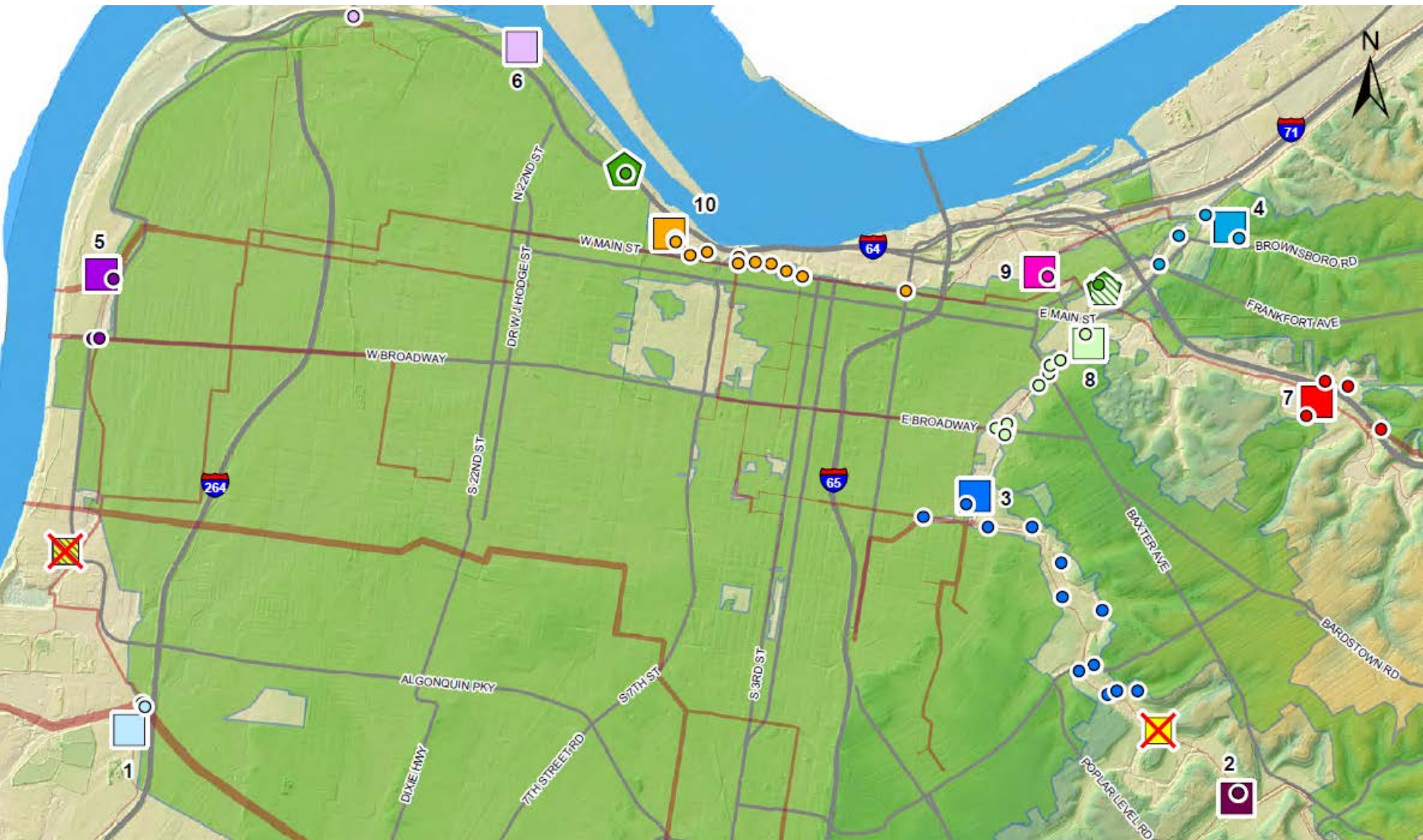


Gray Infrastructure Projects

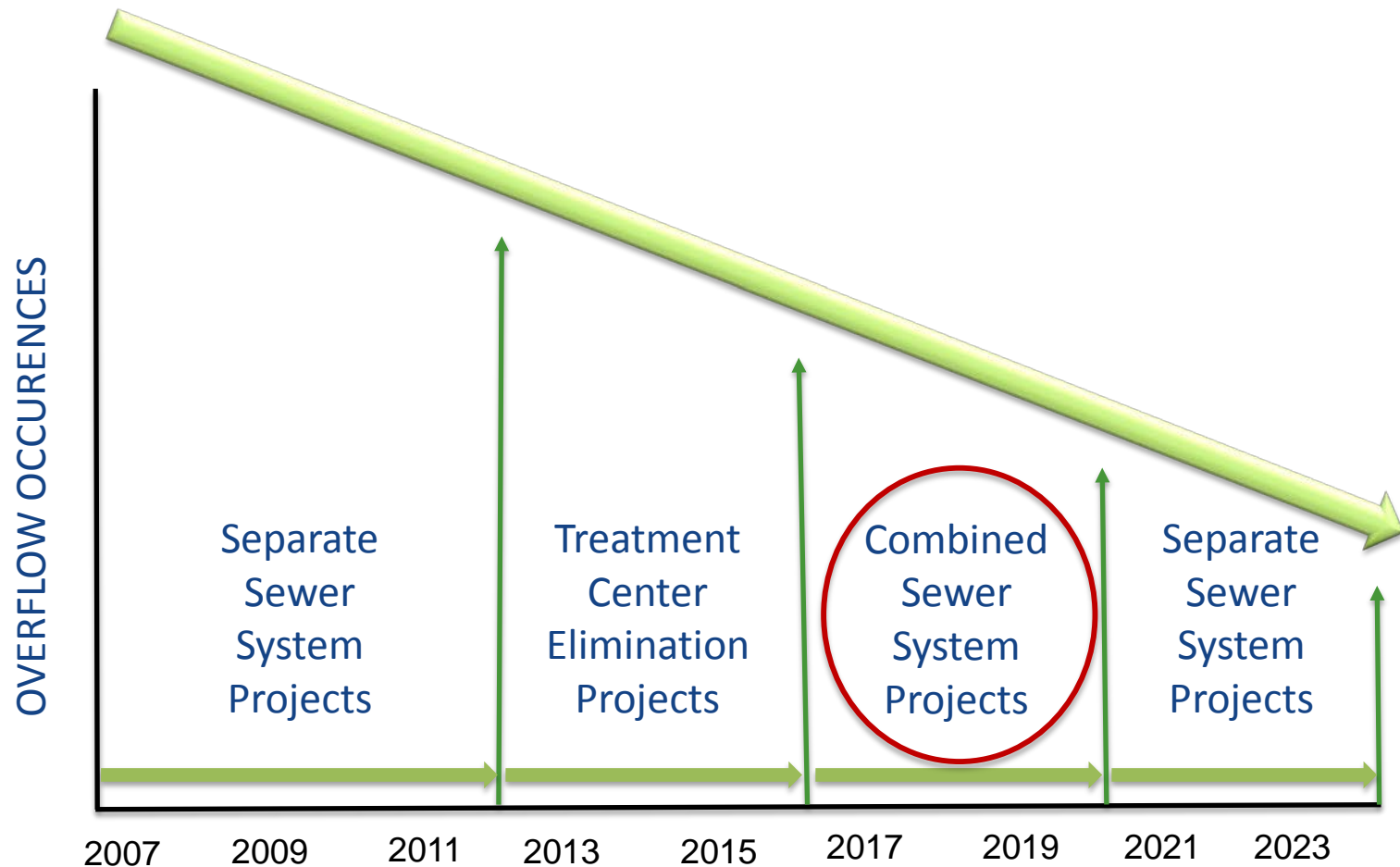
- Pipeline projects
- Pump station expansions
- Wastewater treatment plant expansions
- **Storage Basins**



CSO Storage Basins per Consent Decree

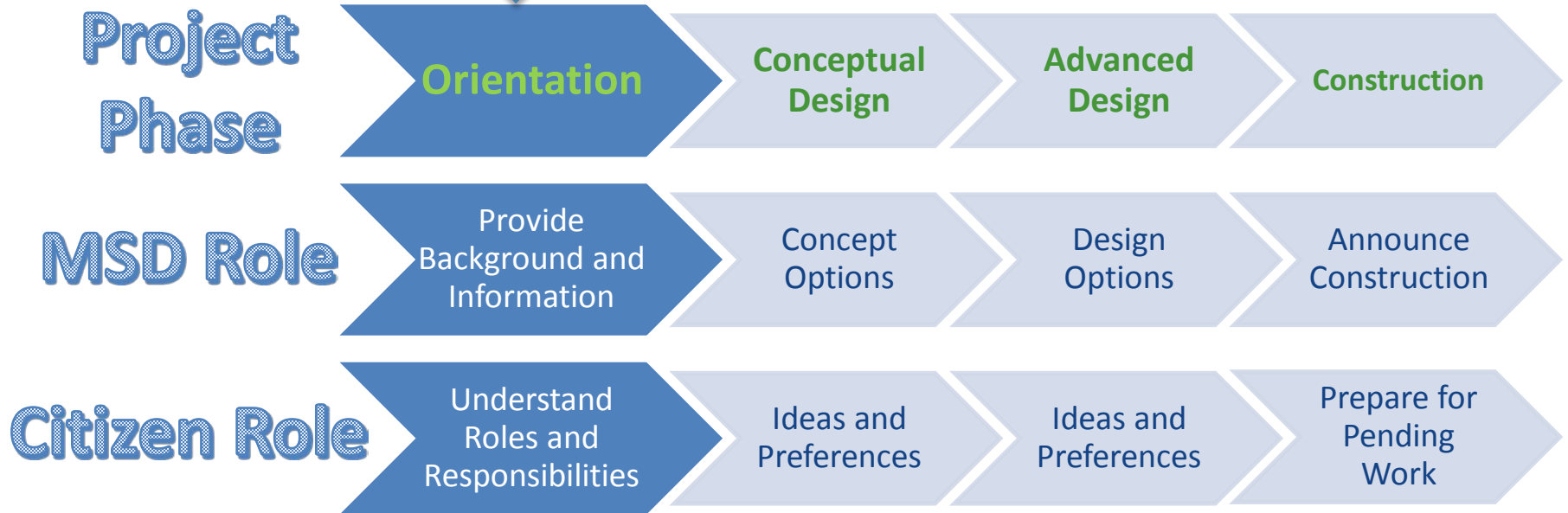


Program Status



2. Public Outreach Process

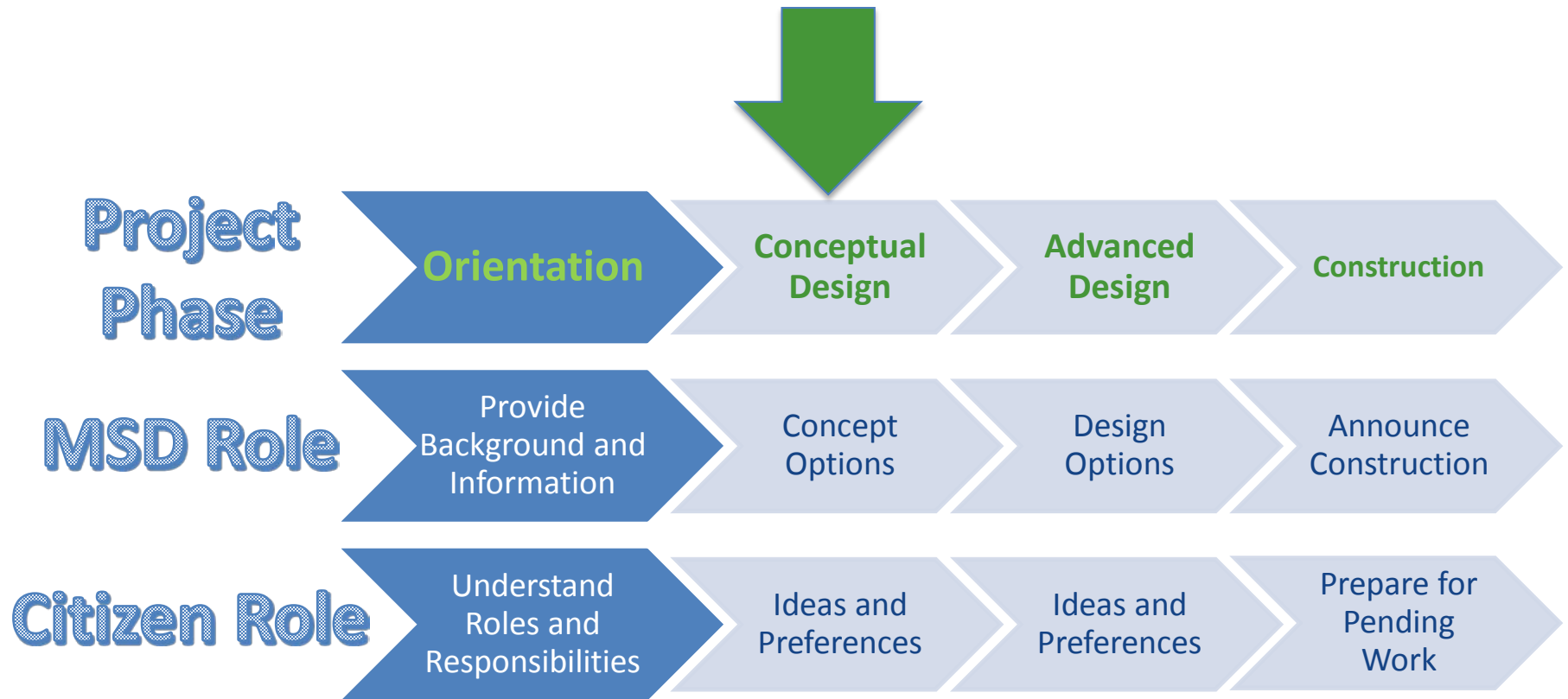
Project Phases and Roles



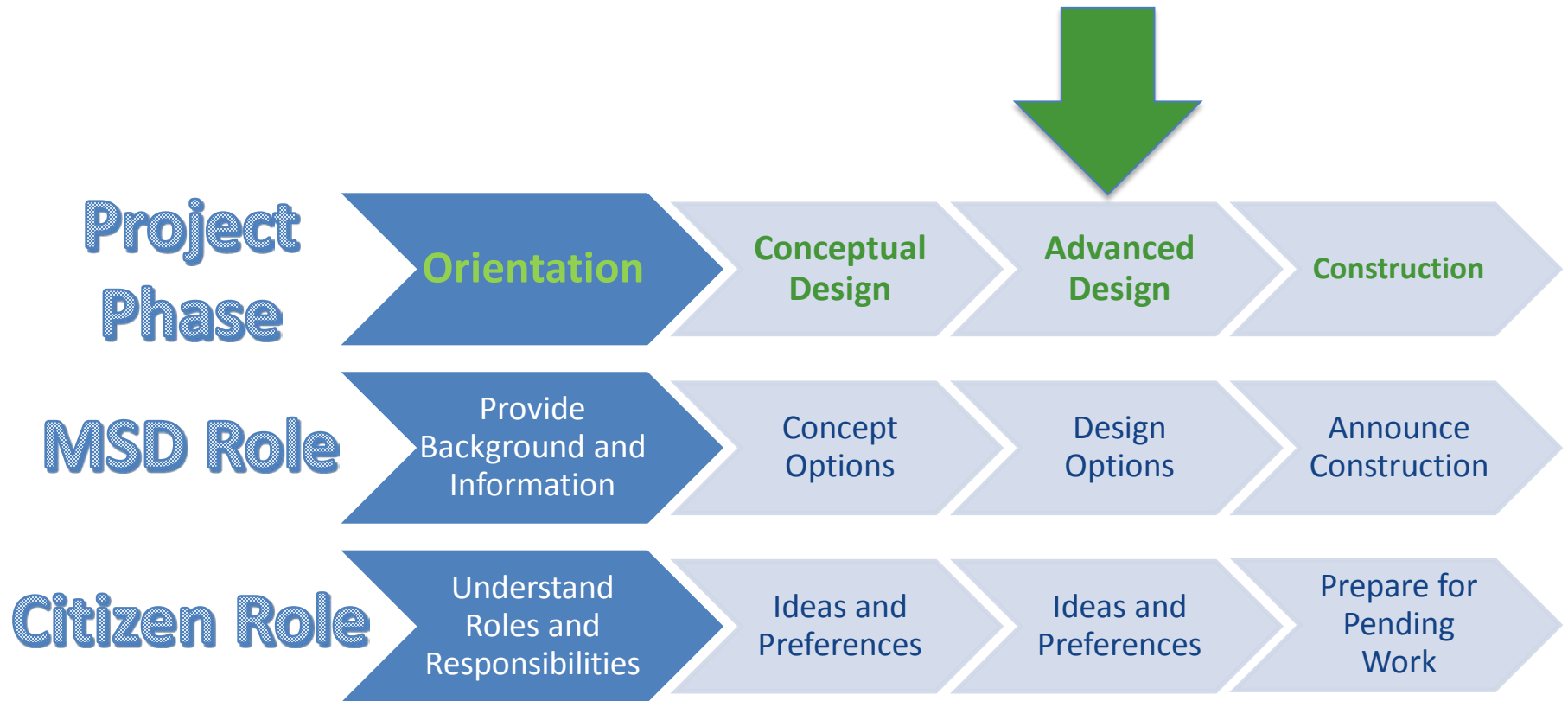
Project Phases and Roles

- Orientation Meeting was held at American Printing House for the Blind on June 16, 2015
- Discussed:
 - Causes of Overflows
 - What you can do
 - What MSD is doing
- Orientation meeting presentation and video are available on ProjectWIN Website
- We're back to talk with you about Conceptual Design

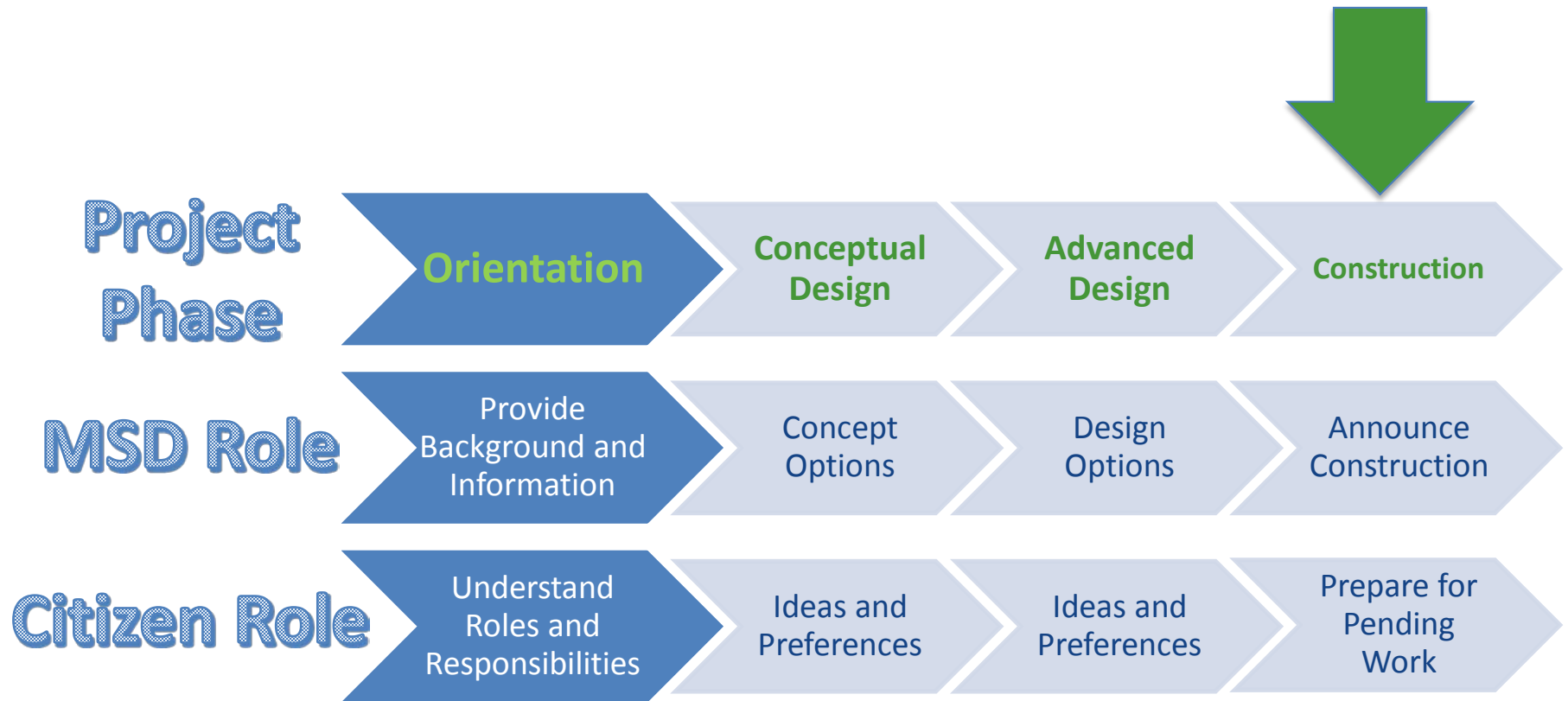
Project Phases and Roles



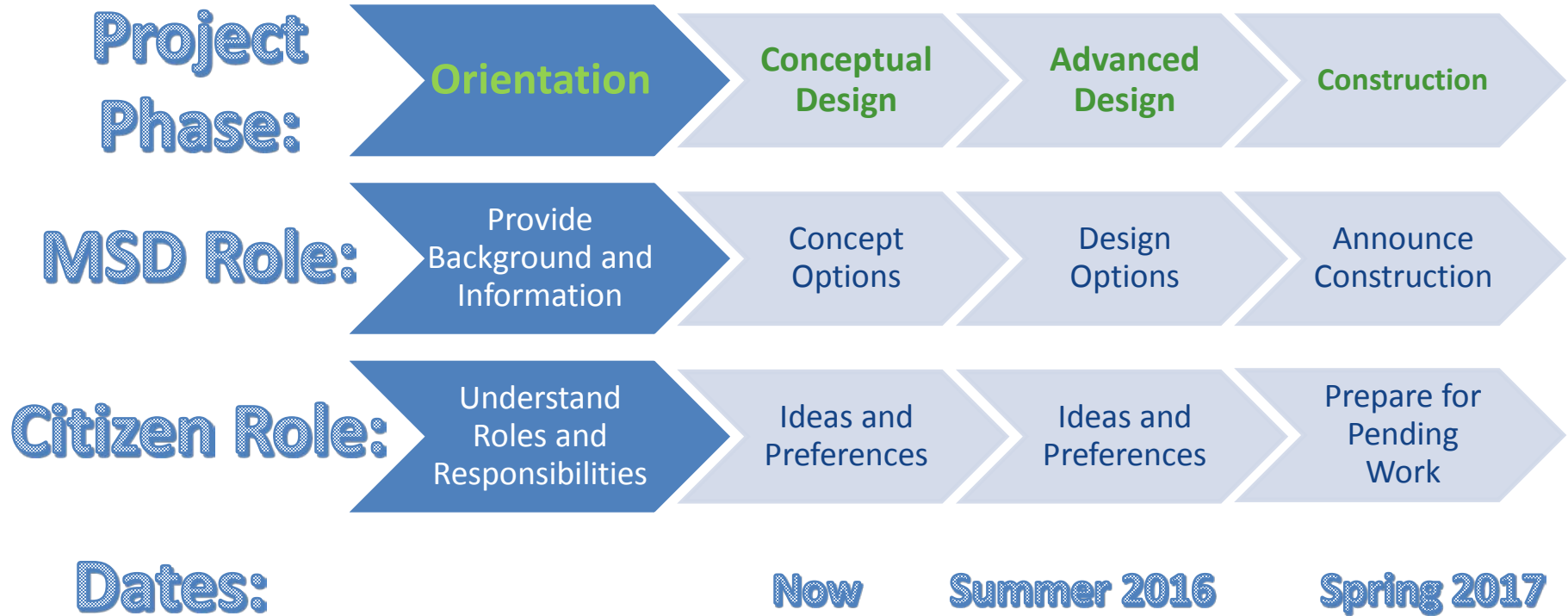
Project Phases and Roles



Project Phases and Roles



Story and Main CSO Basin Schedule



3. Getting to Know You

Public Engagement Tools: “Clickers” and Online Polling

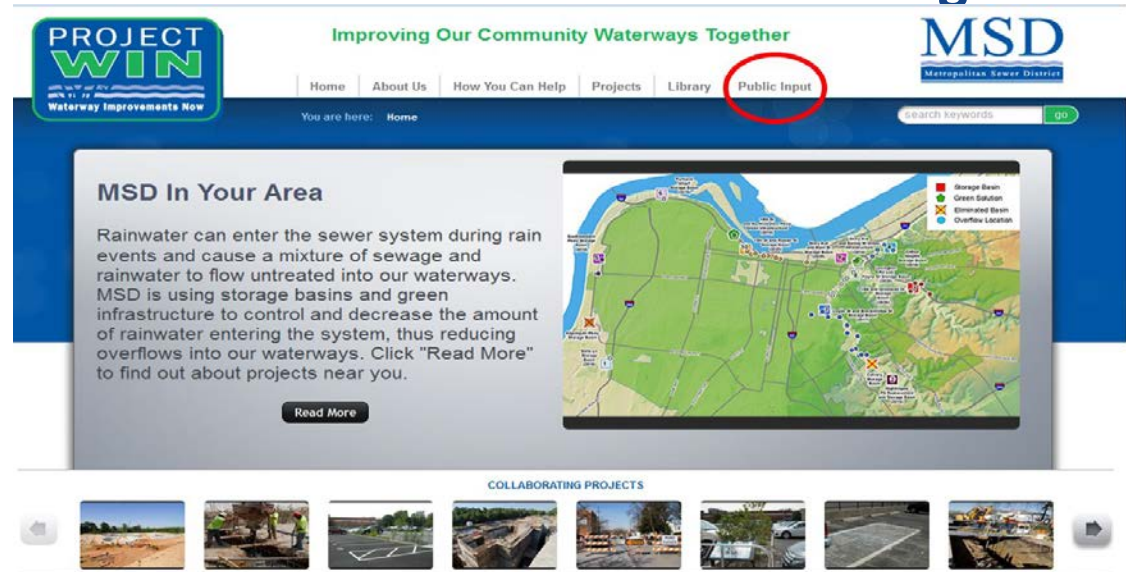
“Clickers” for Public Meetings

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



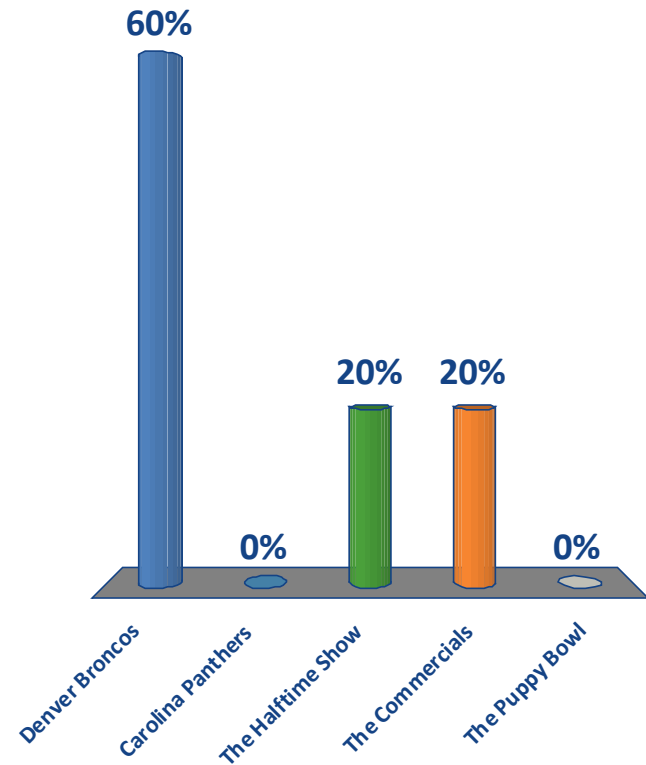
Online Polling for Those Who Can't Attend Public Meetings

msdprojectwin.org



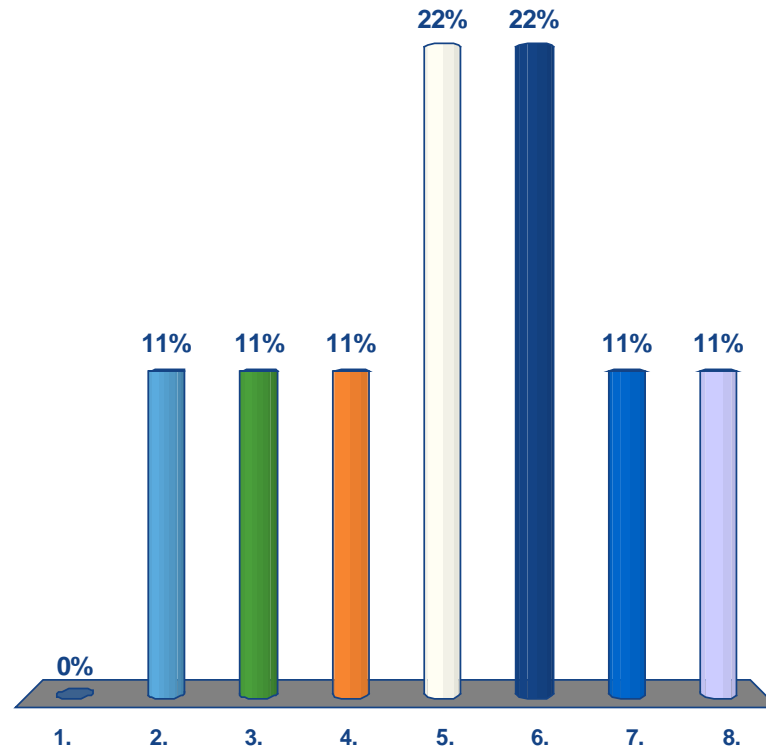
Who did you cheer for in Super Bowl 50?

1. Denver Broncos
2. Carolina Panthers
3. The Halftime Show
4. The Commercials
5. The Puppy Bowl



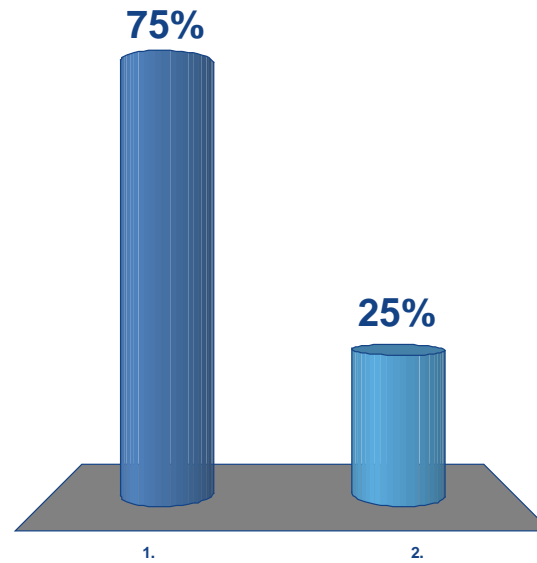
How Young Are You?

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



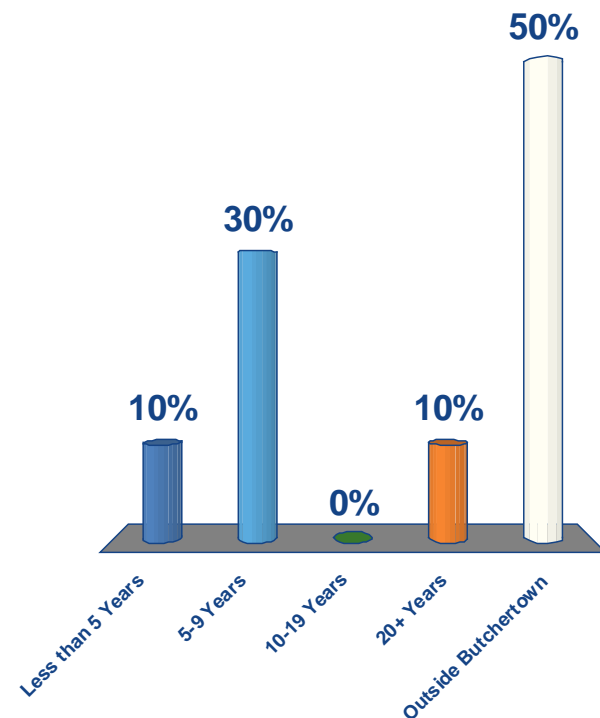
Gender?

1. Male
2. Female

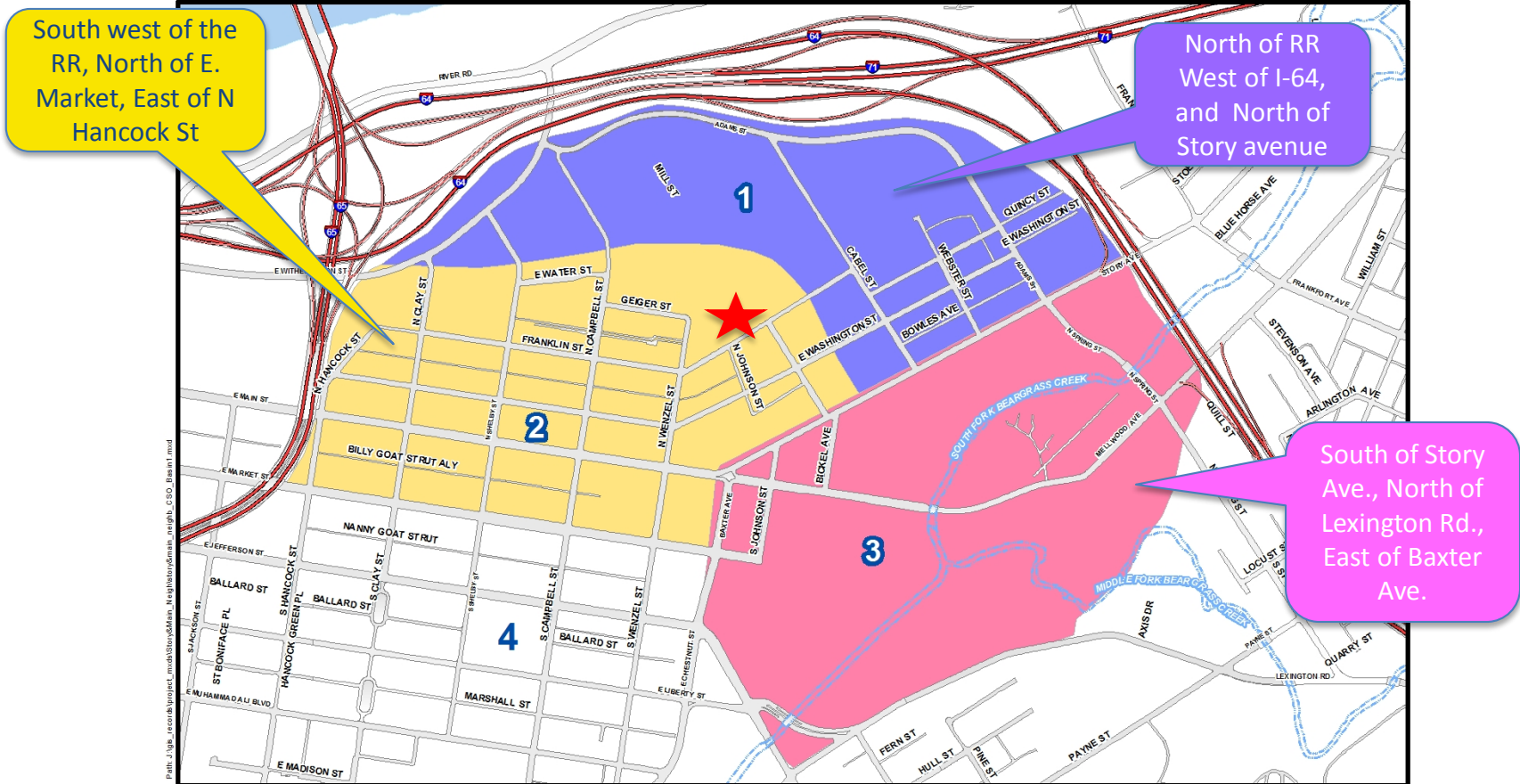


How long have you lived in the Butchertown Neighborhood?

1. Less than 5 Years
2. 5-9 Years
3. 10-19 Years
4. 20+ Years
5. Outside Butchertown

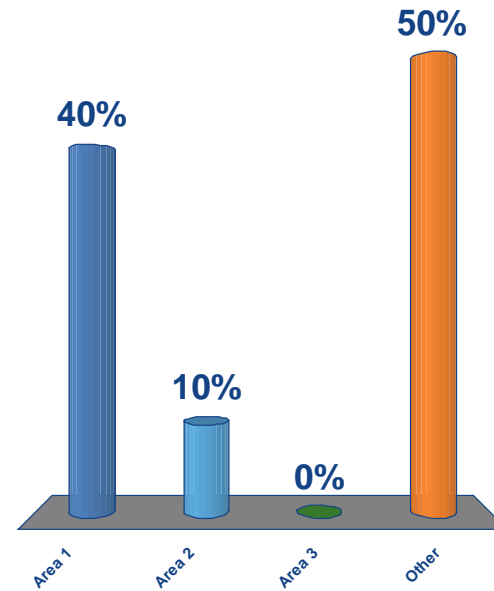


Where Do You Live?

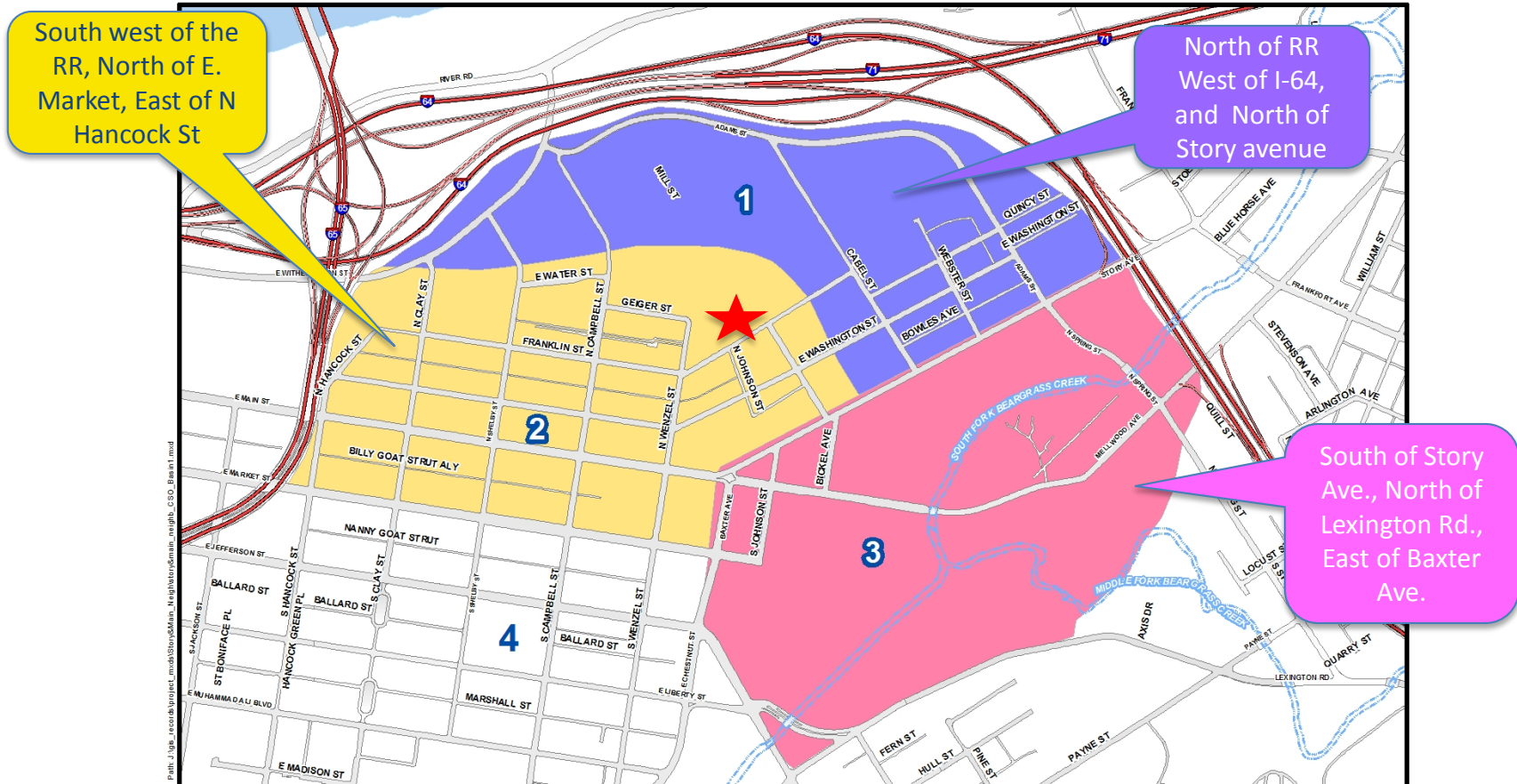


Where Do You Live?

1. Area 1
2. Area 2
3. Area 3
4. Other

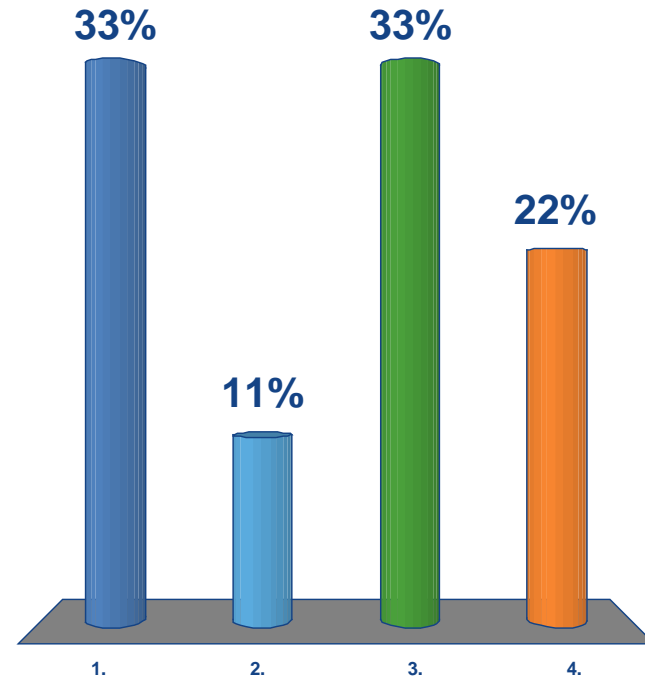


Where Do You Work or Spend Your Days?

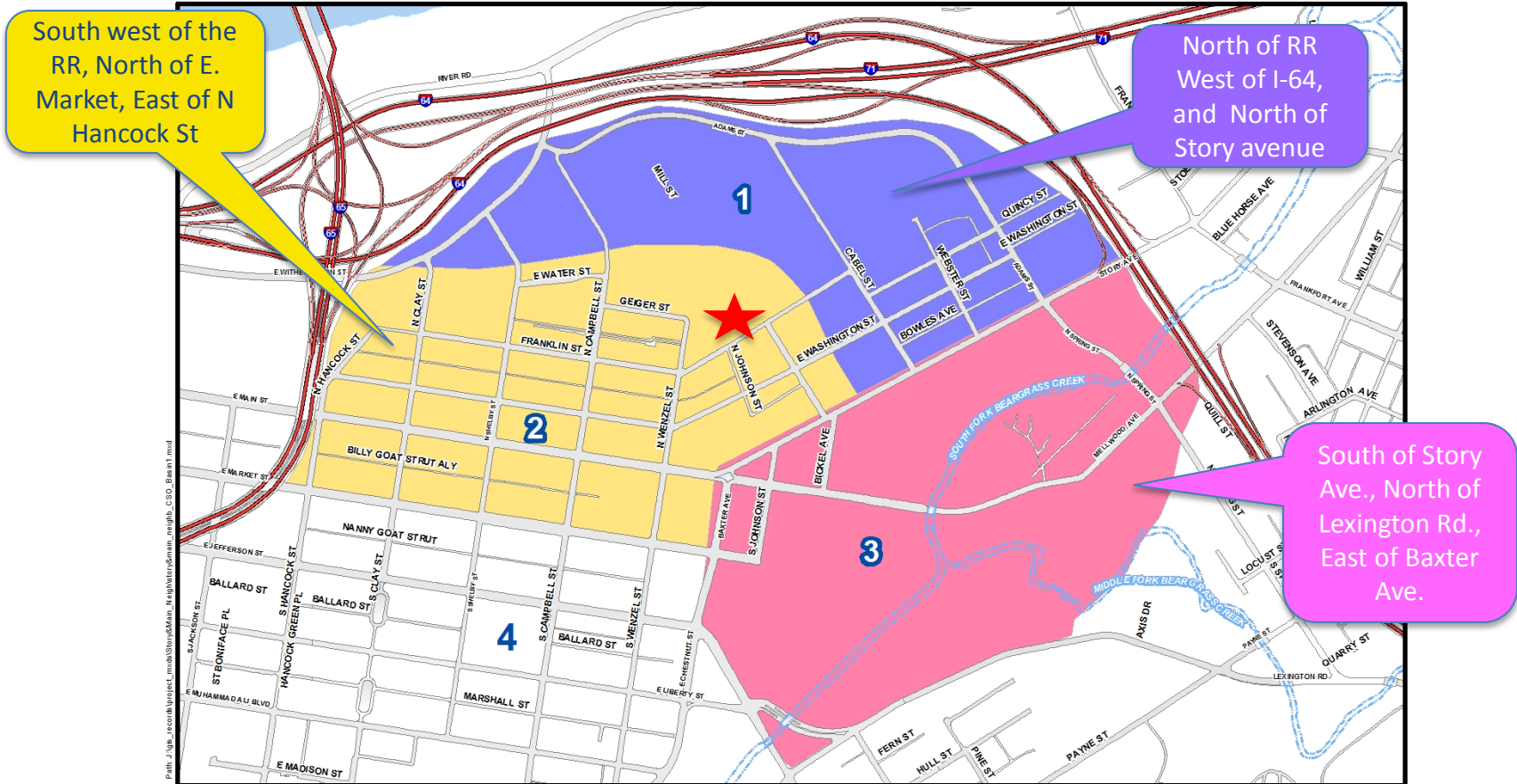


Where Do You Work or Spend Your Days?

1. Area 1
2. Area 2
3. Area 3
4. Area 4

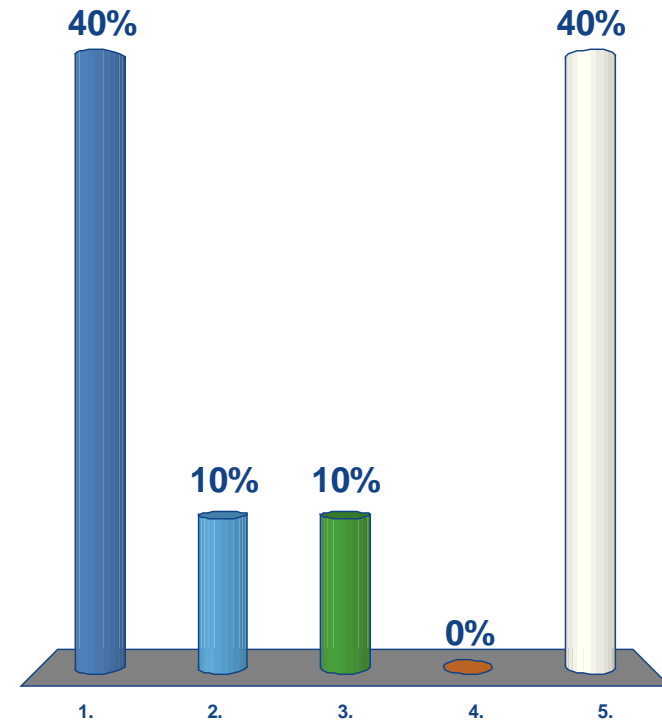


Where Do You Operate a Business?



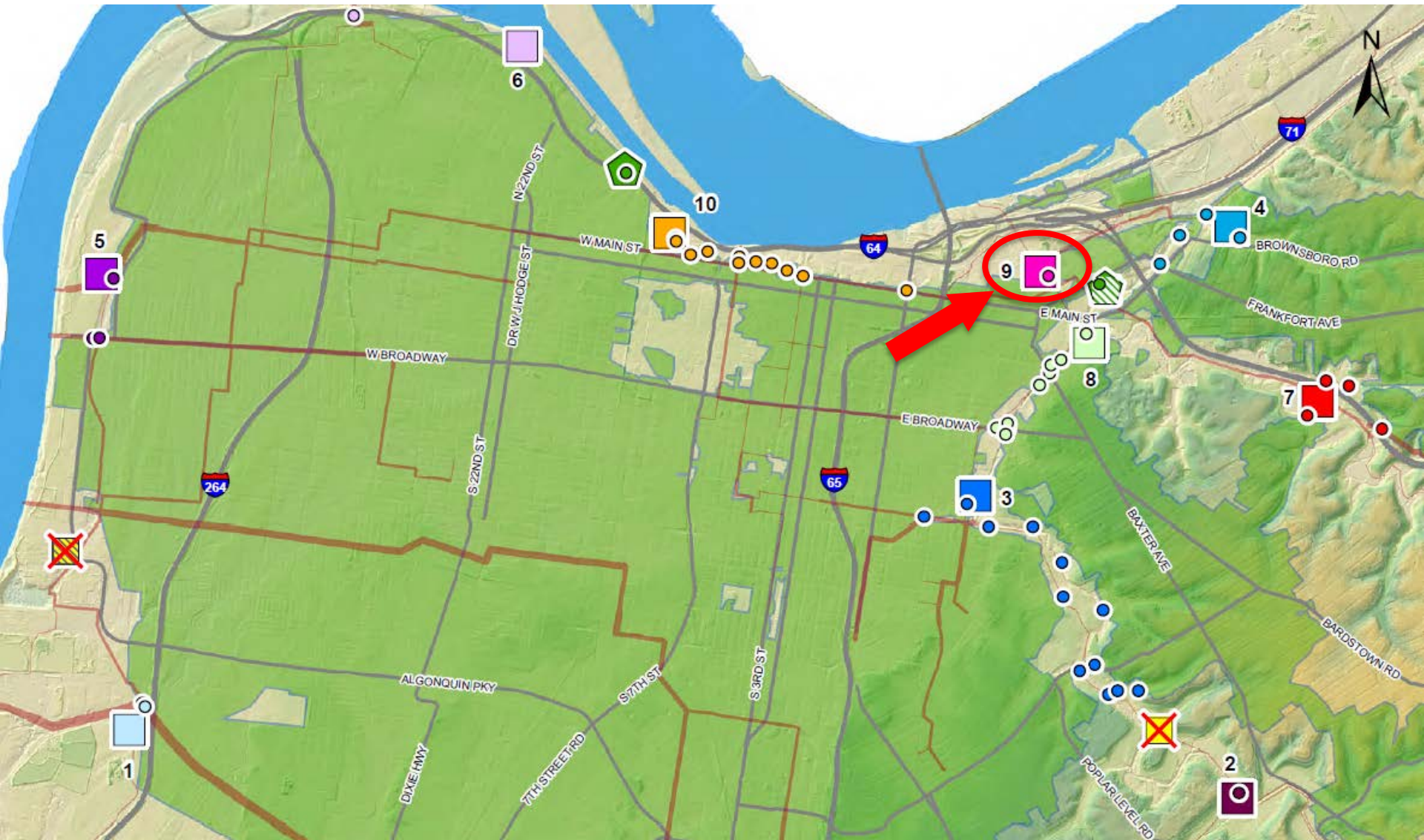
Where Do You Work and/or Operate a Business?

1. Area 1
2. Area 2
3. Area 3
4. Area 4
5. Don't Operate Business



4. Introduction to the Story and Main CSO Basin Project

CSO Basins per Consent Decree



What is a CSO Basin?

- CSO Basin provides temporary storage for wet weather overflows that would otherwise flow directly to creeks, streams, and rivers
- Released back into the collection system for treatment when system capacity is available

Frequently Asked Questions

- What happens when the basin is full?
 - The system will function as it does today
- Will this project reduce flooding?
 - The basin will increase capacity of the combined sewer system during wet weather events
- What about odor?
 - Highly diluted flow (mostly storm water)
 - Basin will be equipped with flushing equipment
 - Typically, odor control not necessary with these types of facilities
 - MSD is being pro-active
 - Performing odor control monitoring/testing
 - Basin will be designed to accommodate a future odor control system

Story and Main CSO Basin Drainage Area



CSO Facts

CSO	Drainage Area (Acres)	# of Overflows*	Overflow Volume* (Million Gallons)
020	64.1	74	355.27
062	106.6	69	100.36

* per Typical Year

CSO Locations



CSO Locations and Flood Plain



5. Design Considerations

Story and Main CSO Basin Site

- Site Requirements/Considerations
 - Hydraulically connected to CSO 020 and CSO 062
 - Large enough to accommodate basin layout
 - Proximity to CSO's
 - Conflicts with Existing Infrastructure
 - Conflicts with Existing Utilities
 - Flood Protection System - Inside of Wall; Outside of Wall
 - Minimize Impacts to Surrounding Areas during Construction

Final Project Design Parameters

Existing Typical Year:

CSO	# of Overflows*	Overflow Volume* (Million Gallons)
020	74	355.27
062	69	100.36
Total	143	455.63

Design: Level of Control (per Typical Year)

- 8 overflows per CSO (reduced from 143)
- 442 MG reductions of combined sewer overflows

Basin storage volume is 8.3 Million Gallons

Planning Level Design



Existing Site Conditions



Existing Site Conditions

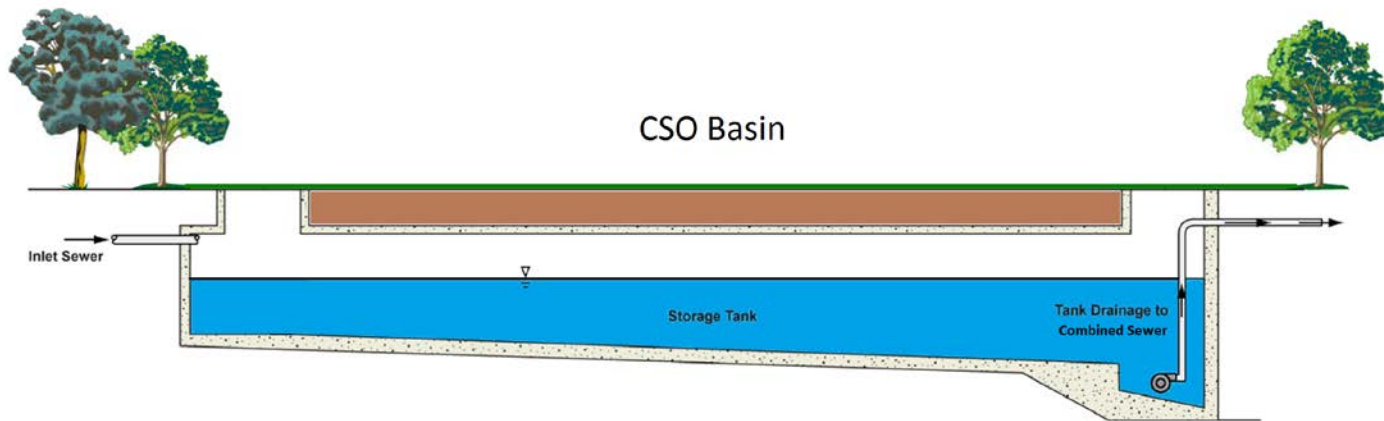


Existing Site Conditions



Challenges of Planning Level Design

- Traditional Below Grade Approach Challenges
 - Depth (> 75 feet)
 - Ohio River Influence
 - Construction Access and Laydown Area
 - Maintenance/Access



Above Grade vs. Below Grade Feasibility Analysis

	Cost	Construction Duration	Impacts to Surroundings
Above Grade	≈ \$15 million in savings	≈ 4-5 months shorter	Reduction of approx. 104,000 yd ³ of excavation ≈ 13,000 truckloads

Conceptual Design



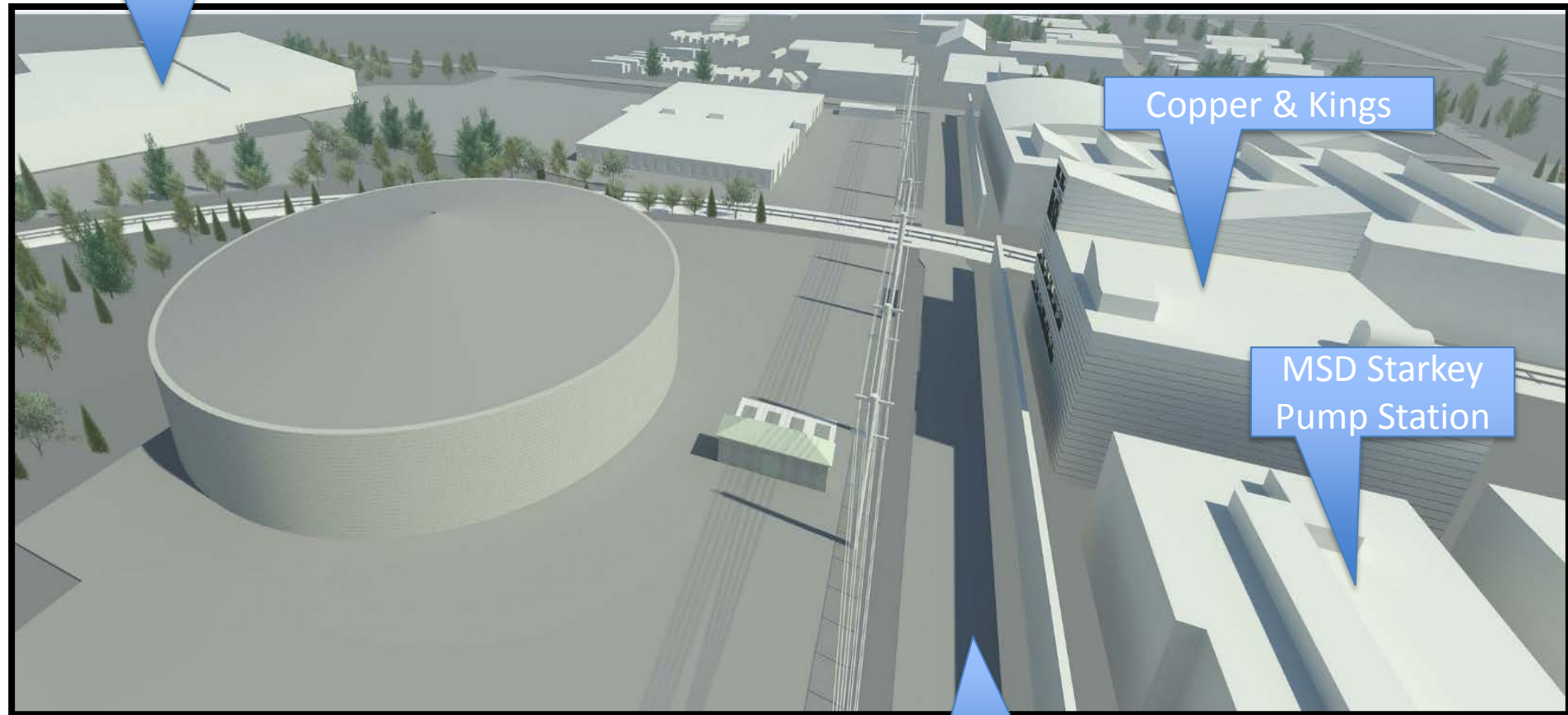
Story and Main CSO Basin Conceptual Rendering

Challenger Lifts

Copper & Kings

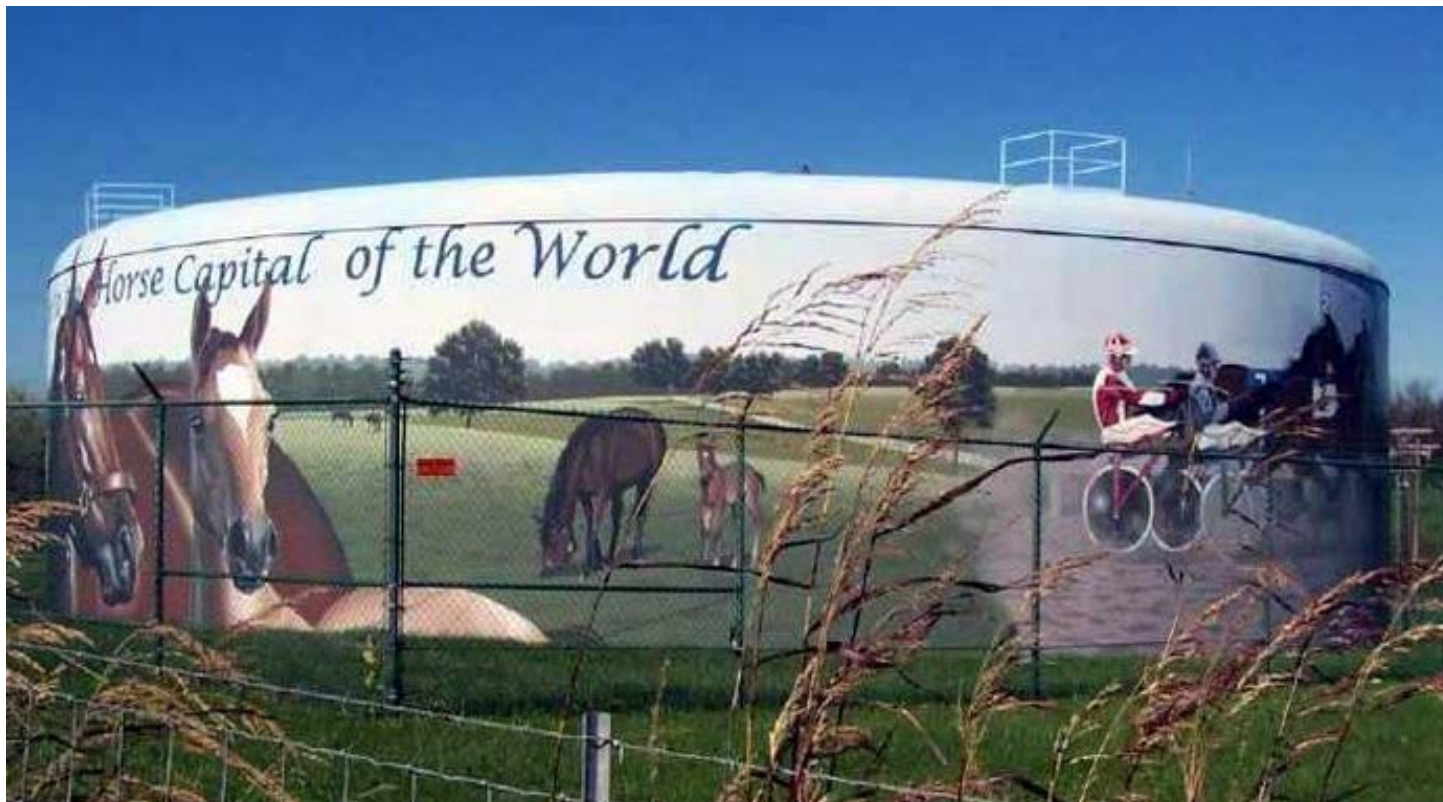
MSD Starkey
Pump Station

Franklin Street



Examples of Above Grade Structures

- Water System Infrastructure
- Wastewater Process Infrastructure



Lexington Wet Weather Facilities

Lower Cane Run Road Wet Weather Storage Basin



Lexington Wet Weather Facilities

Lower Cane Run Road Wet Weather Storage Basin



Example: Decorative Concrete



Example: Decorative Concrete and Emblem



Example: Veneer and Decorative Concrete



Example: Veneer and Painted Concrete



Example: Emblem



Example: Brick Veneer and Paint



Example: Brick Veneer



Example: Decorative Concrete



Example: Painted Theme

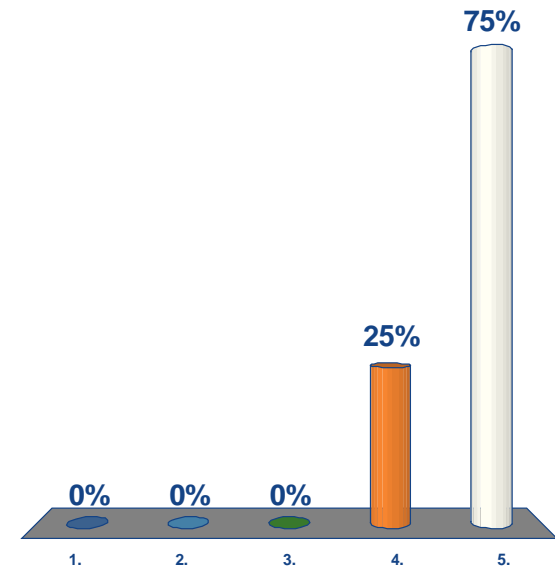


Example: Painted Theme



How Important is the Appearance of the Basin?

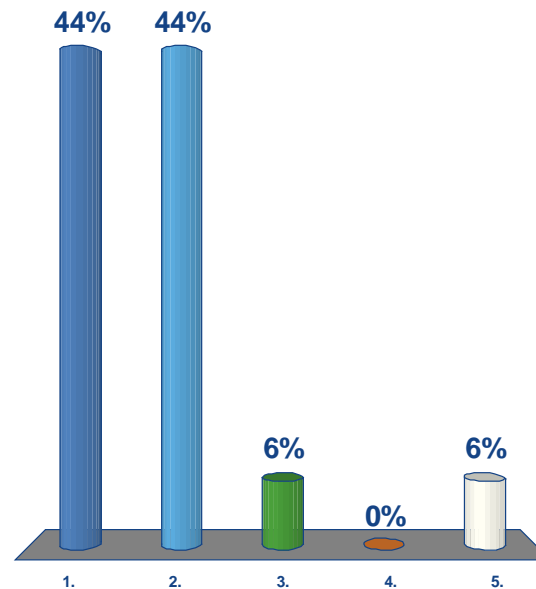
1. Unimportant
2. Somewhat Unimportant
3. Neutral
4. Somewhat Important
5. Important



Mean = 4.75

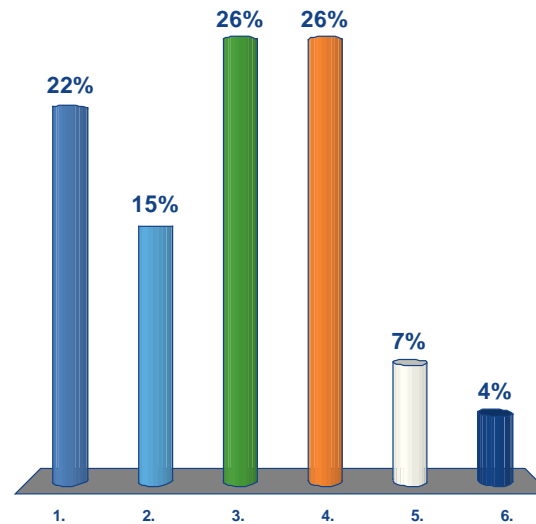
What are your preferences on the exterior of the basin?

1. Brick Veneer
2. Decorative Concrete
3. Emblem/Logo
4. Painted Design
5. Other Idea?



Other Project Considerations MSD Should be Mindful Of?

1. Partially below ground basin
2. Public Access
3. Extra Parking
4. Add Green Space
5. Add Billboards to advertise neighborhood
6. Solar panels to operate pumps



6. Next steps

Next Steps

- Future public outreach:
 - Advanced Design Public Input Meeting Summer 2016
 - Pardon our Dust Meeting Spring 2017
- Construction Start Spring 2017
- Construction Completion Spring 2019
- **Consent Decree Deadline December 31, 2020**

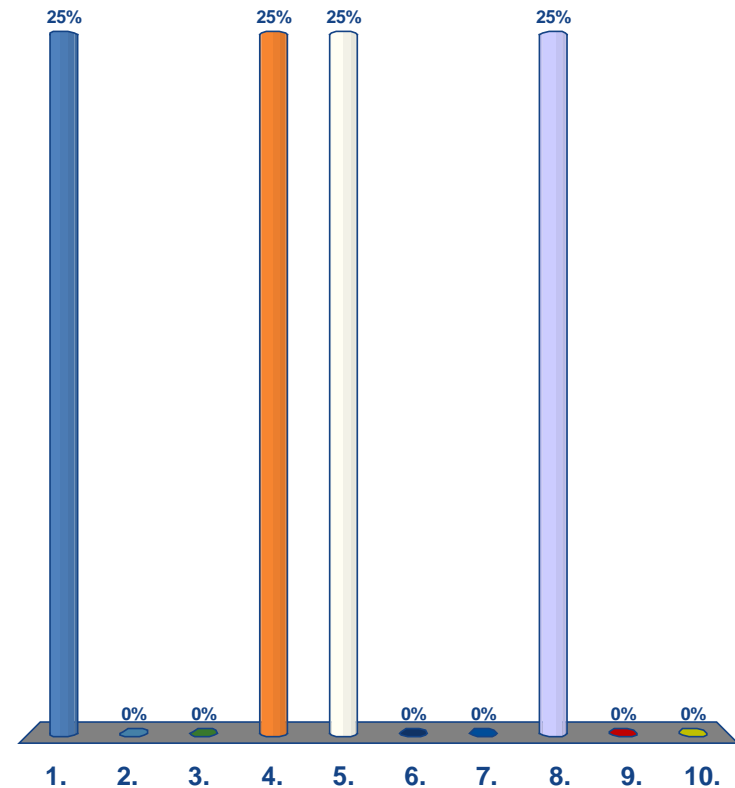
For more information and to give input for this project please attend our Advanced Design Meeting in the Summer of 2016.



7. Feedback

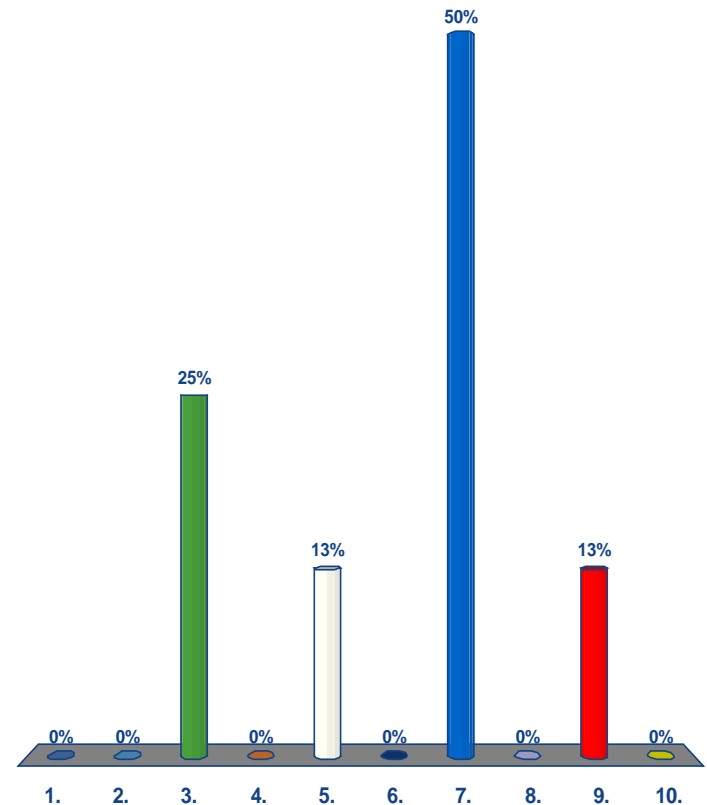
How Did You Hear About this Meeting? (Up to 3)

1. Received a Post Card
2. Courier Journal
3. Metro Council District Newsletter
4. Neighborhood Association
5. Word of Mouth
6. Flyer
7. Project WIN website
8. MSD email
9. @LouisvilleMSD (Twitter)
10. Other



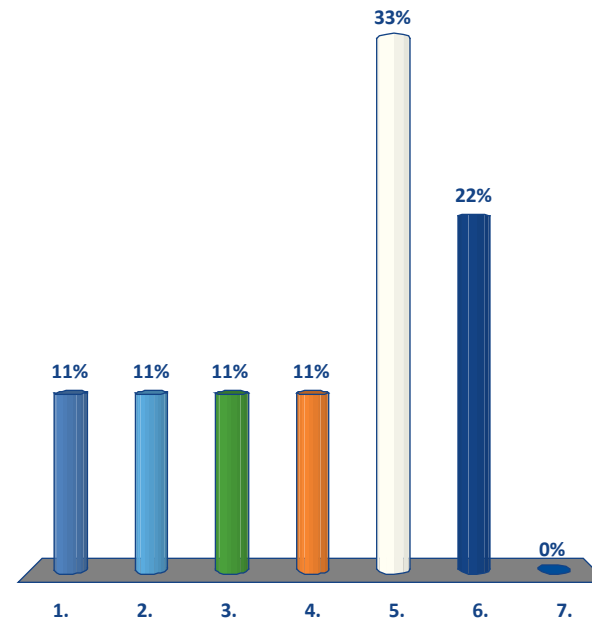
How Would You Like to Learn About MSD's Projects? (Up to 3)

1. Public Meetings
2. Metro TV Videos
3. Local Mainstream Print or Broadcast Media
4. Metro Council District Newsletter
5. Neighborhood Association
6. Project WIN website
7. MSD email
8. @LouisvilleMSD (Twitter)
9. Bill Inserts
10. MSD Streamline Newsletter



How satisfied are you with this feedback method?

1. Very Unsatisfied
2. Unsatisfied
3. Somewhat Unsatisfied
4. Neutral
5. Somewhat Satisfied
6. Satisfied
7. Very Satisfied



Mean = 4.11

For *general information or emergencies*
regarding the MSD system, call:

502-587-0603

Your Call Will be Answered

- By an MSD Staff Member
- Around the Clock
- Every Day of the Year



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go

MSD In Your Area

Rainwater can enter the sewer system during rain events and cause a mixture of sewage and rainwater to flow untreated into our waterways. MSD is using storage basins and green infrastructure to control and decrease the amount of rainwater entering the system, thus reducing overflows into our waterways. Click "Read More" to find out about projects near you.

[Read More](#)



Please Tell Your Friends and Neighbors to Take the Survey Online!



THANK YOU FOR YOUR
PARTICIPATION!

