Lexington and Payne CSO Basin

Conceptual Design Meeting

Girl Scouts of Kentuckiana

04.26.2016

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What We Will Talk About Tonight

1. Why We Are Here
2. Public Outreach Process
3. Getting to Know You
4. Lexington and Payne CSO Basin Project
5. Next Steps
6. Feedback

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1. Why We Are Here

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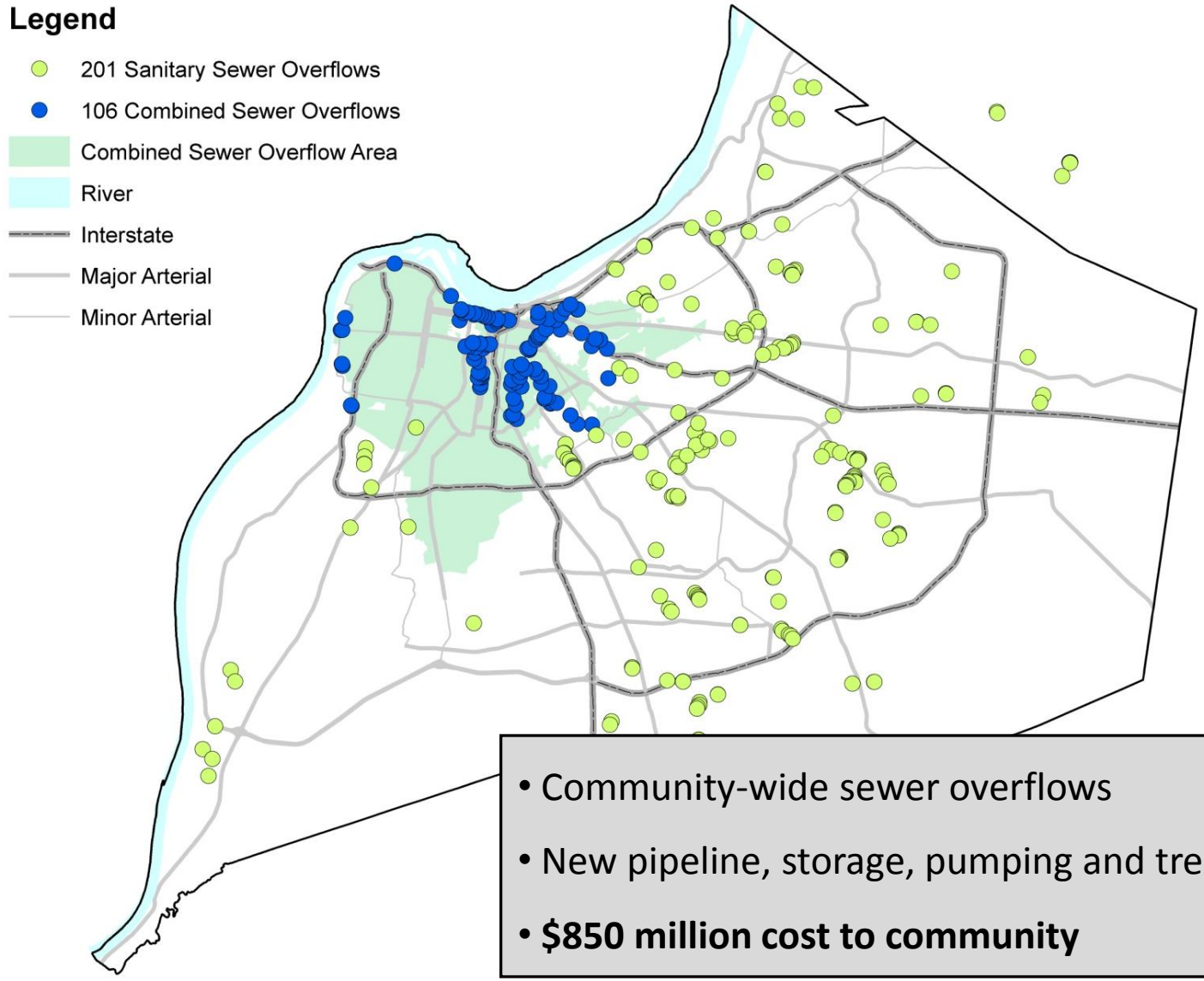
Sewer Overflow Locations (2008)

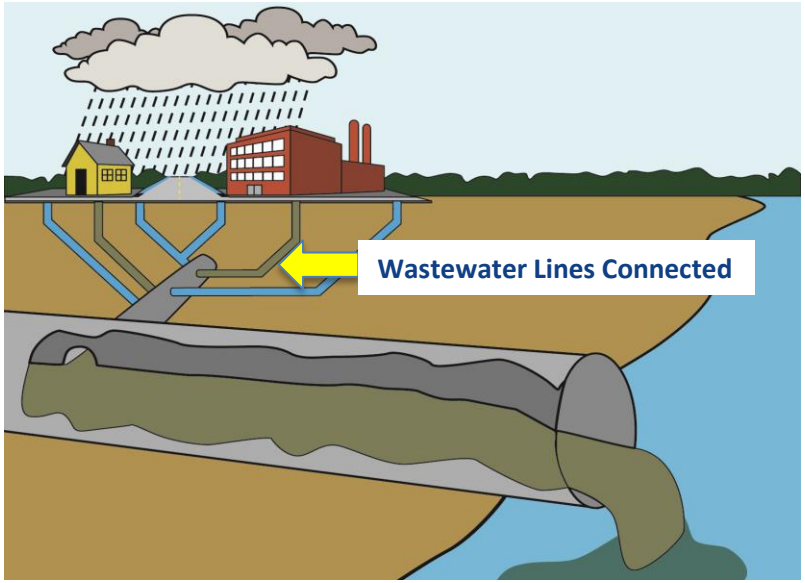


- Community-wide sewer overflows
- New pipeline, storage, pumping and treatment
- **$850 million cost to community**

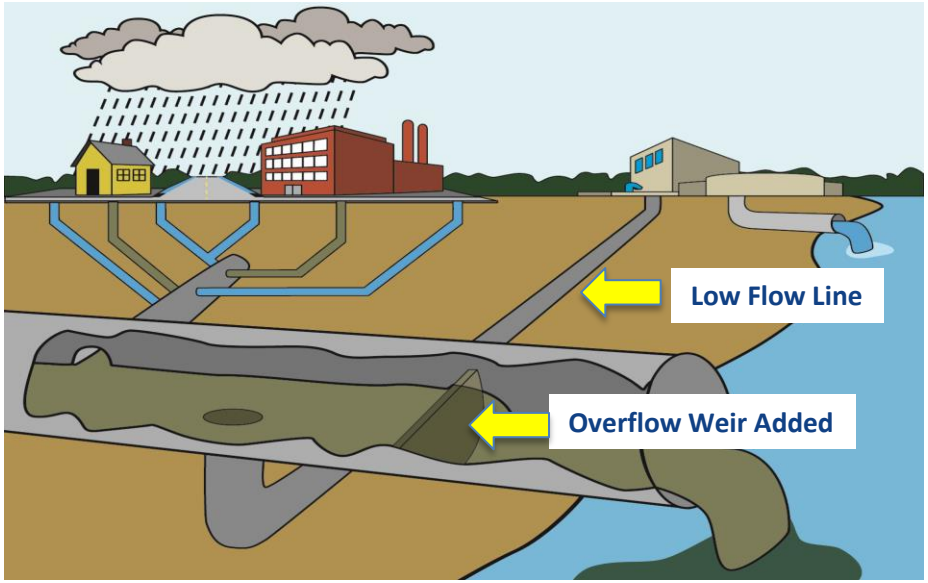
What is a Combined Sewer?

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.

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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**

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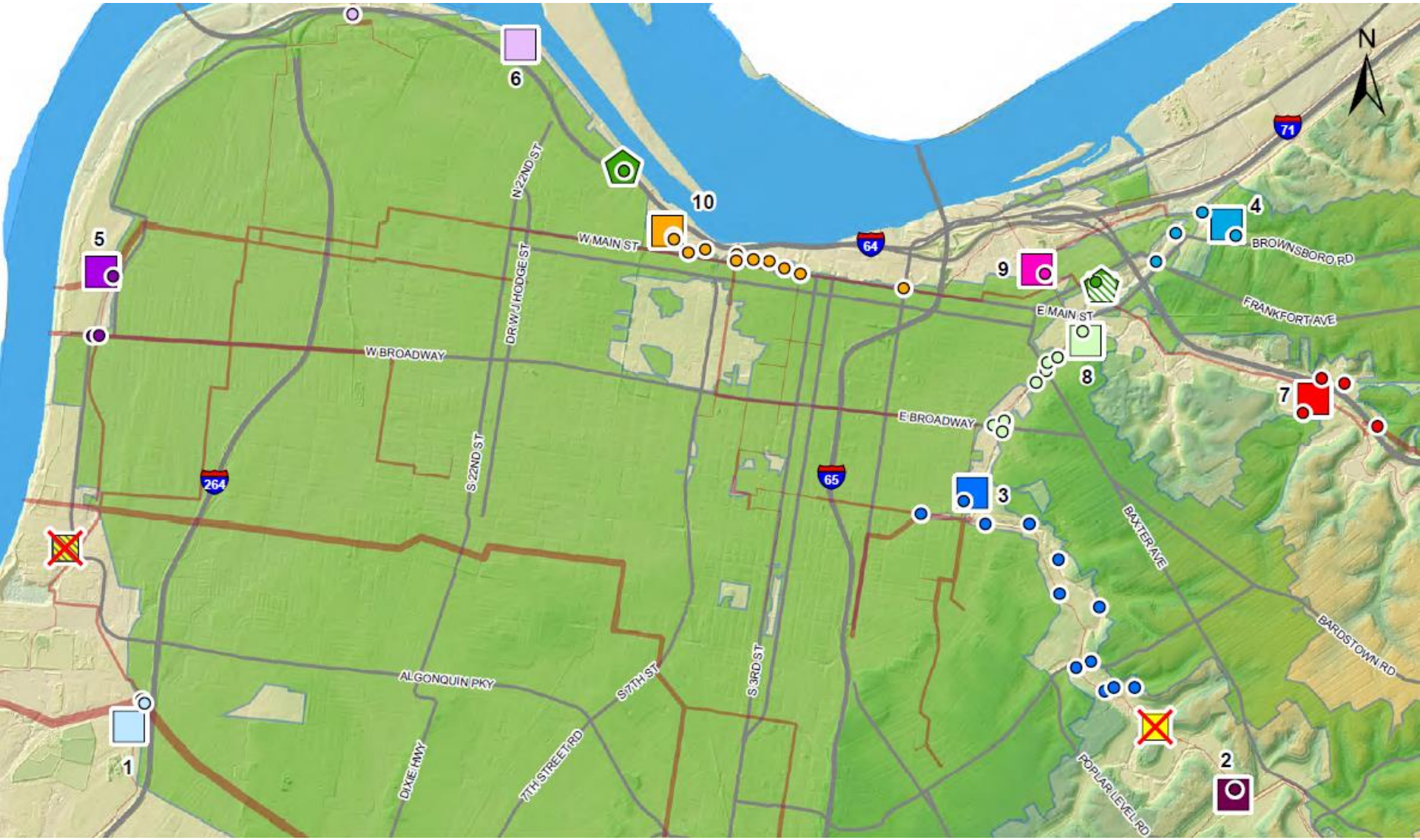
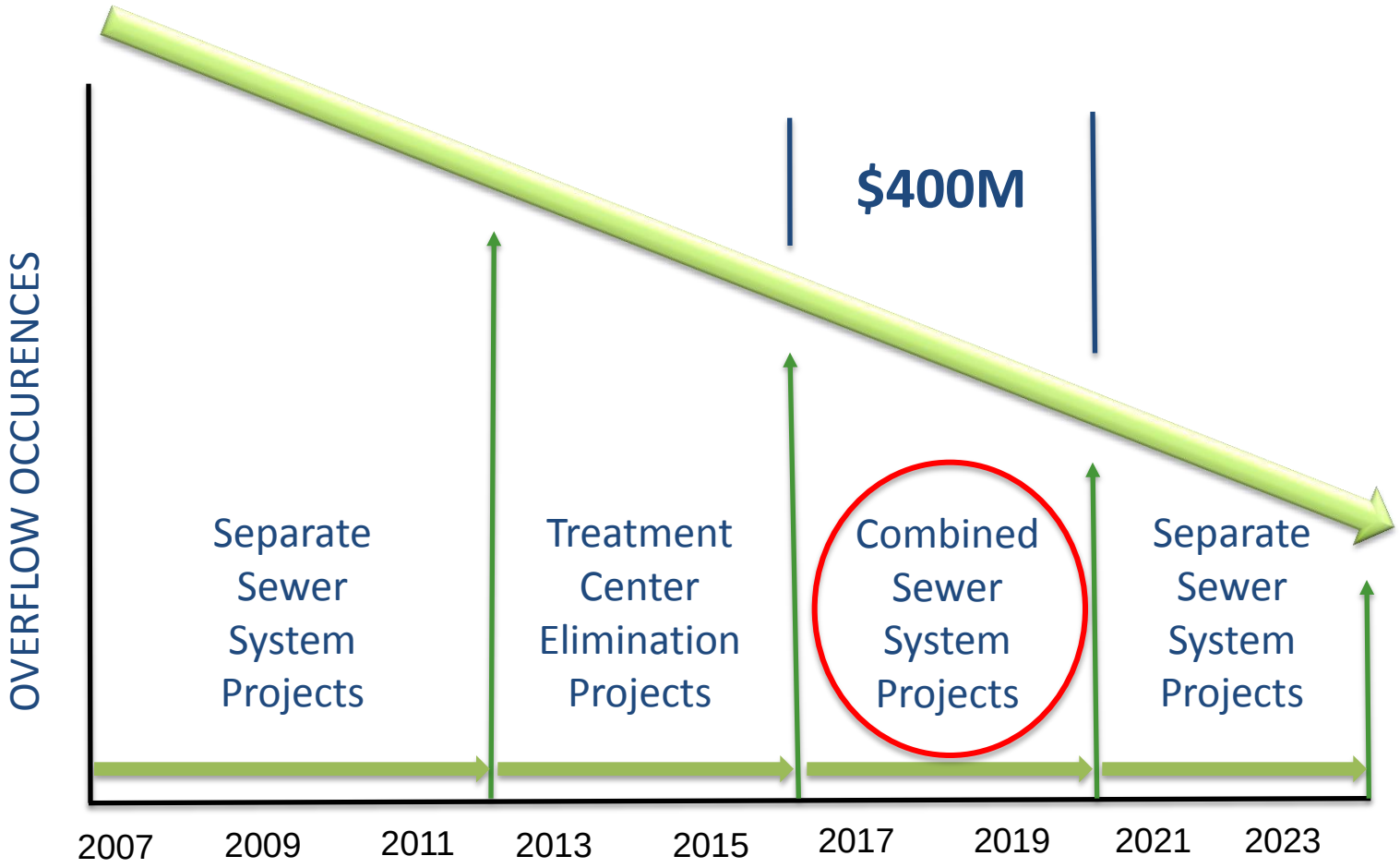
CSO Storage Basins per Consent Decree



Program Status



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2. Public Outreach Process

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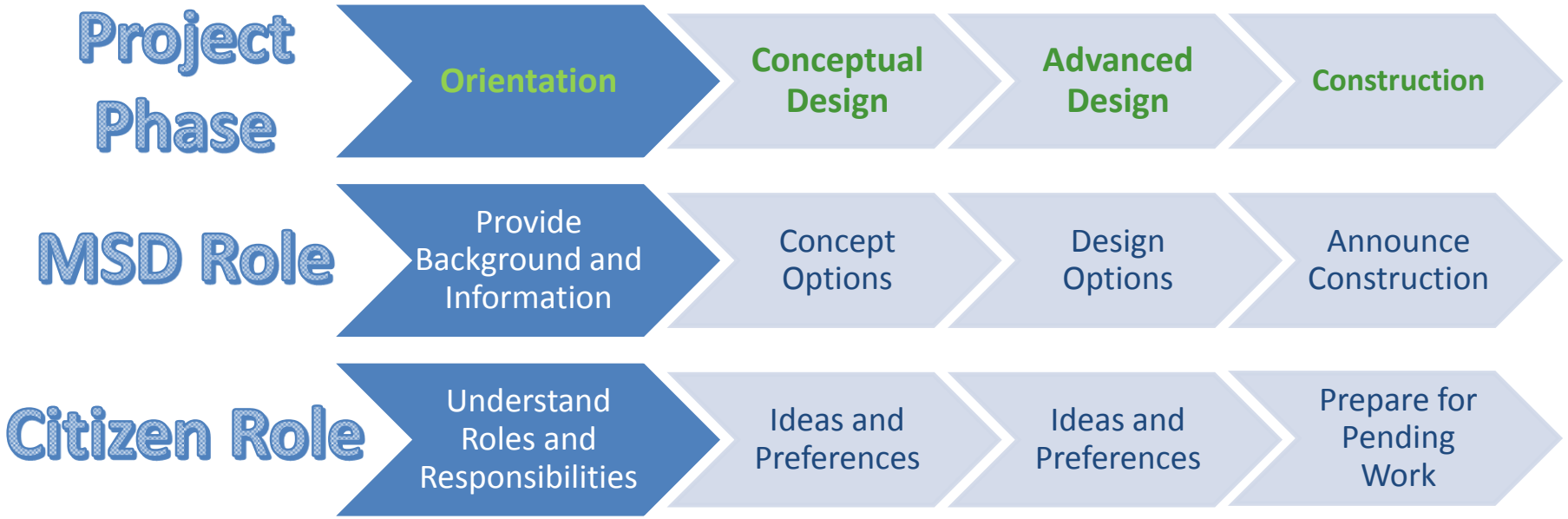
Project Phases and Roles



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Project Phases and Roles

- Orientation Meeting was held at Girl Scouts of Kentuckiana on January 19, 2016
  - The presentation and video are available on the ProjectWIN website
- We're back to talk with you about the Conceptual Design

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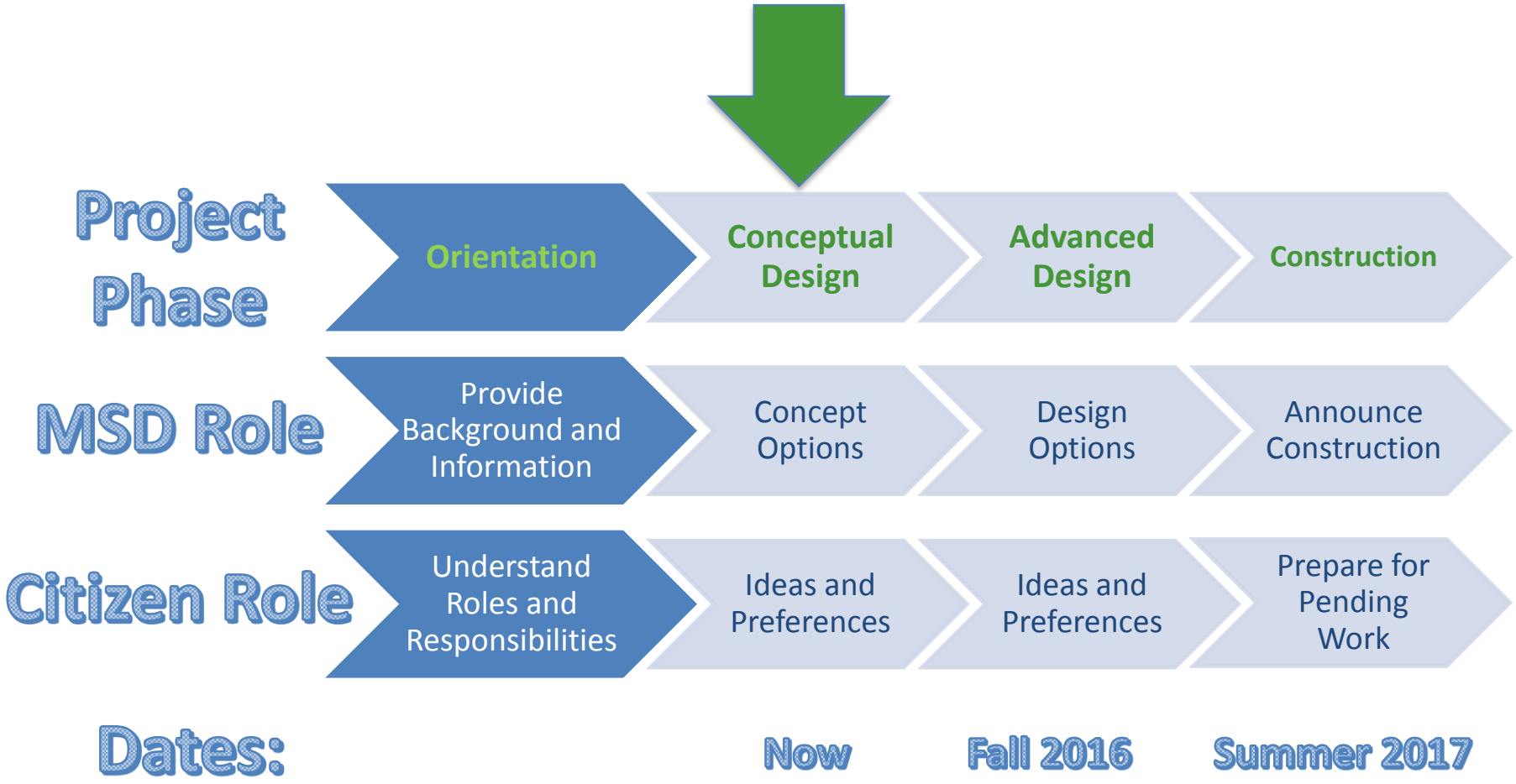
Project Phases and Roles



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3. Getting to Know You

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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

tinyurl.com/MSDLexingtonPayne2

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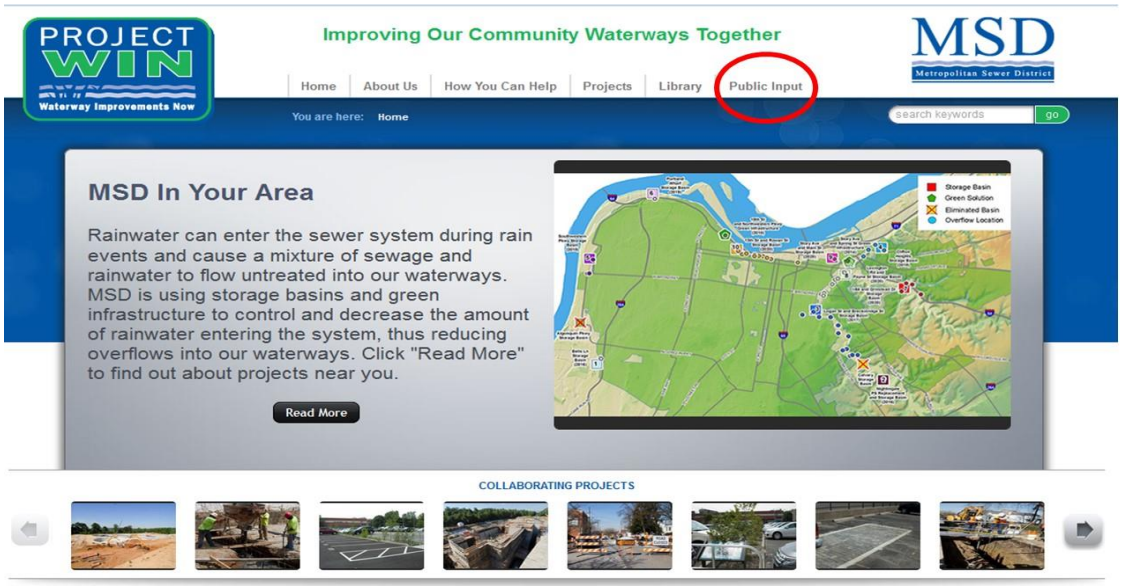
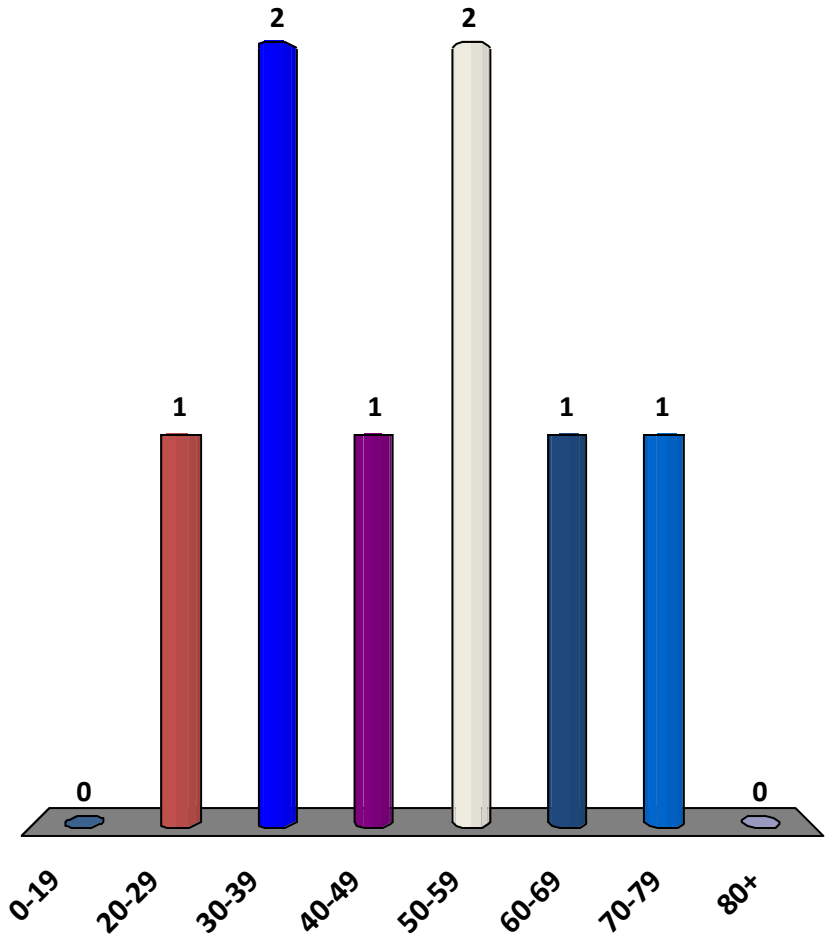


How Young Are You?

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



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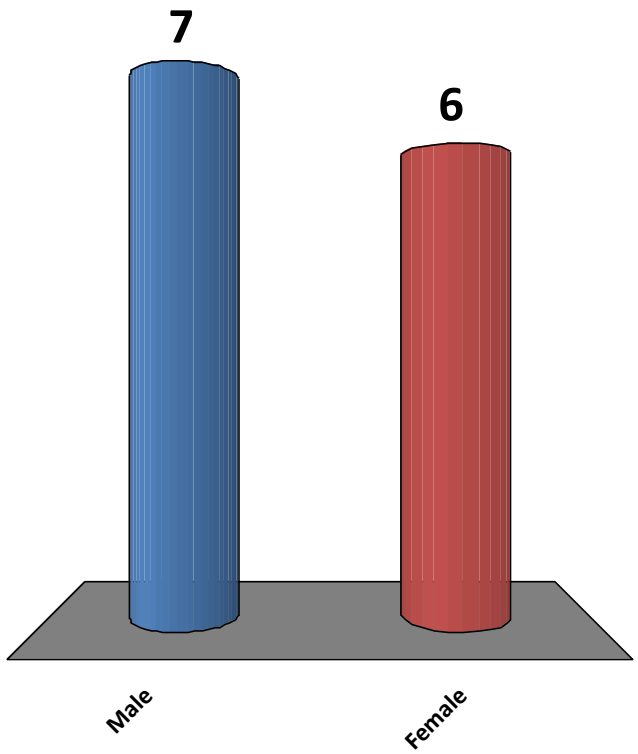
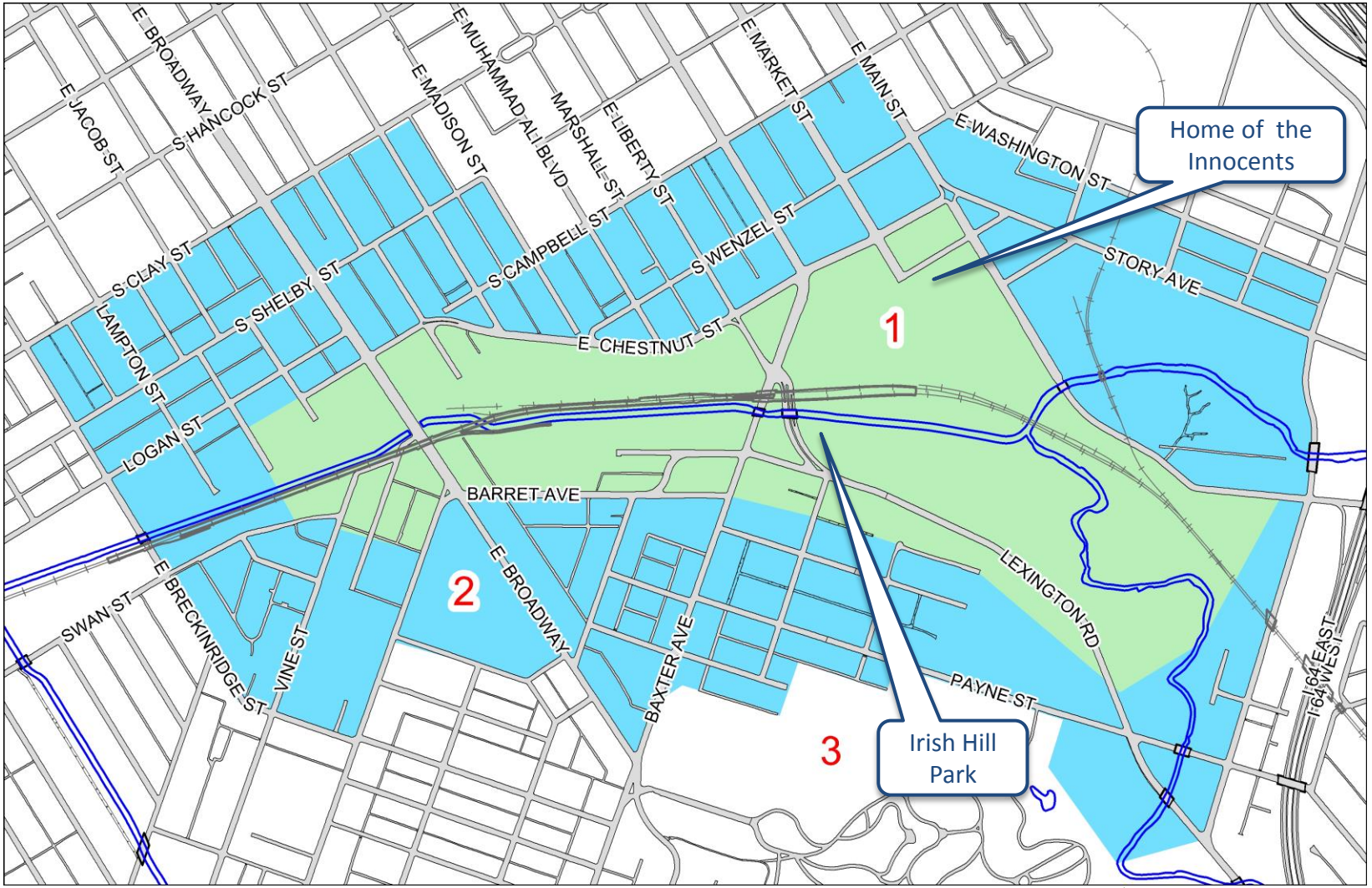
Gender?

1. Male
2. Female



Where Do You Live, Work and Spend Your Days?



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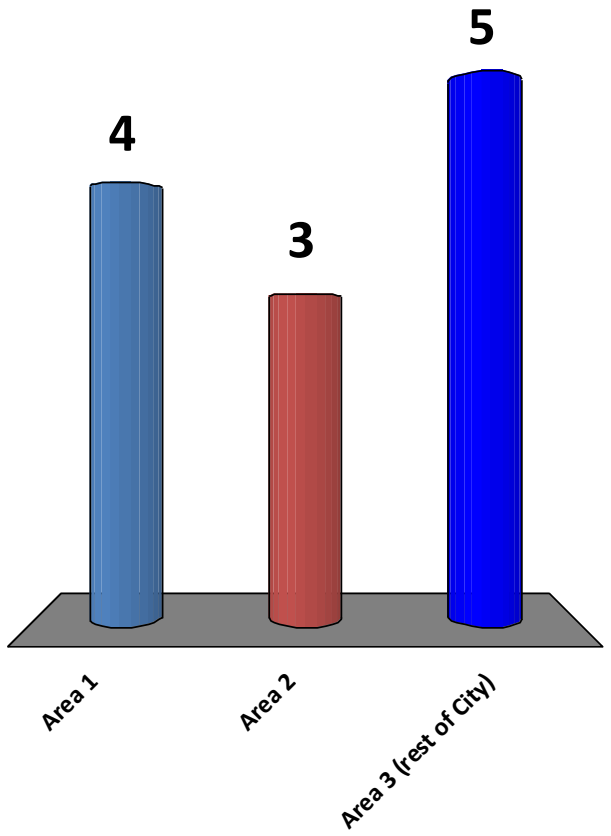
Where Do You Live?

1. Area 1
2. Area 2
3. Area 3 (rest of City)



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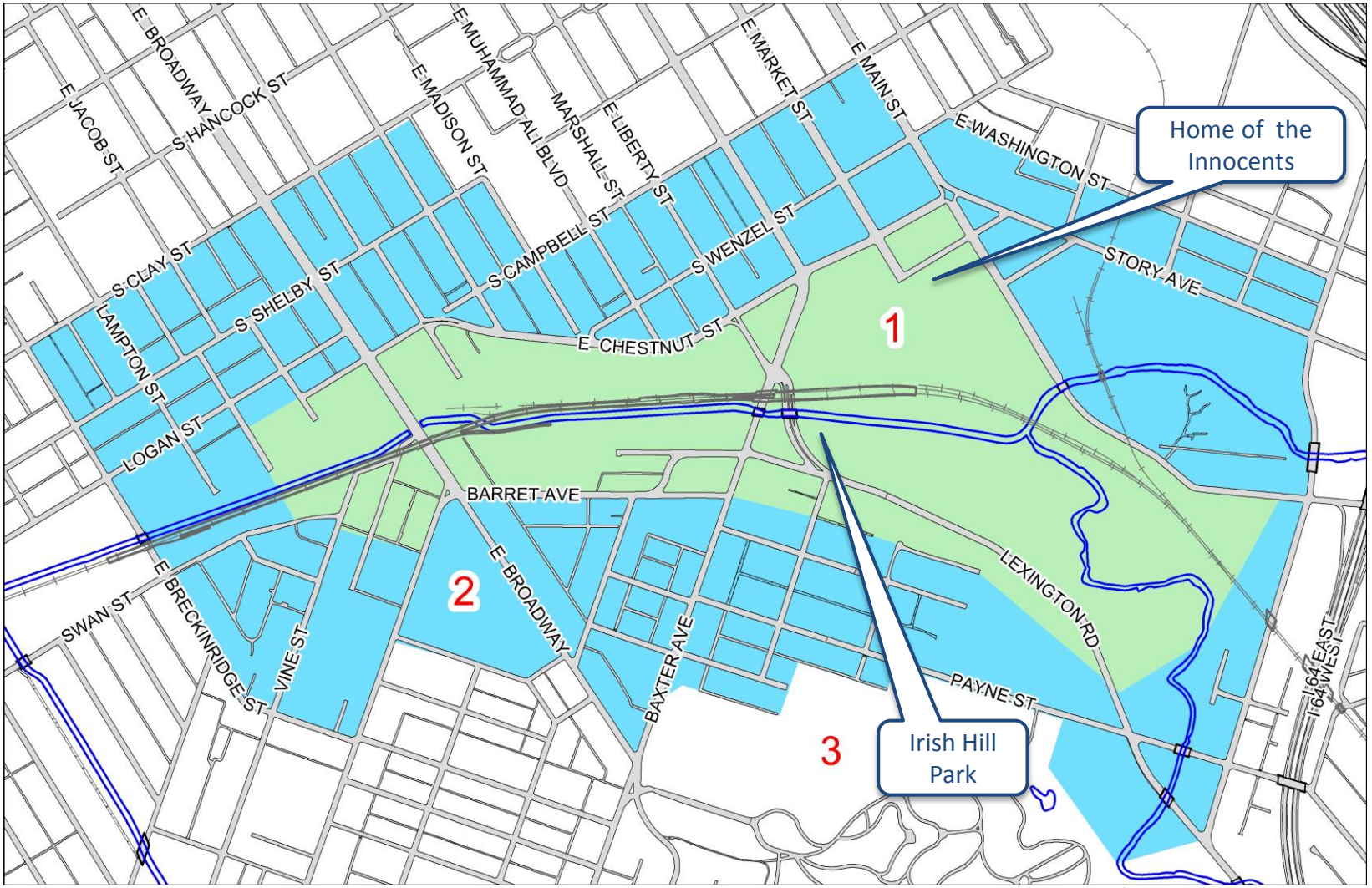
Where Do You Operate a Business?



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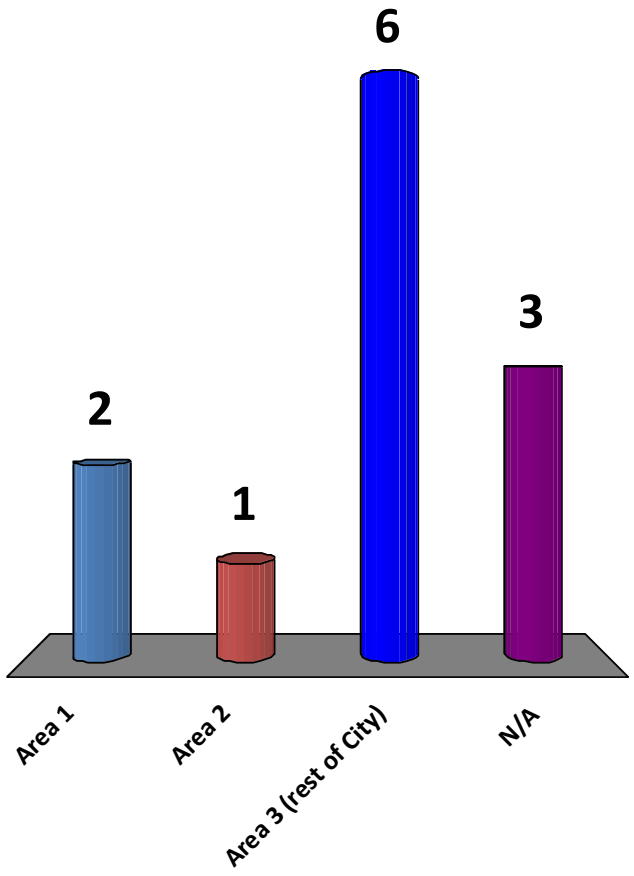
Where Do You Operate a Business?

1. Area 1
2. Area 2
3. Area 3 (rest of City)
4. N/A



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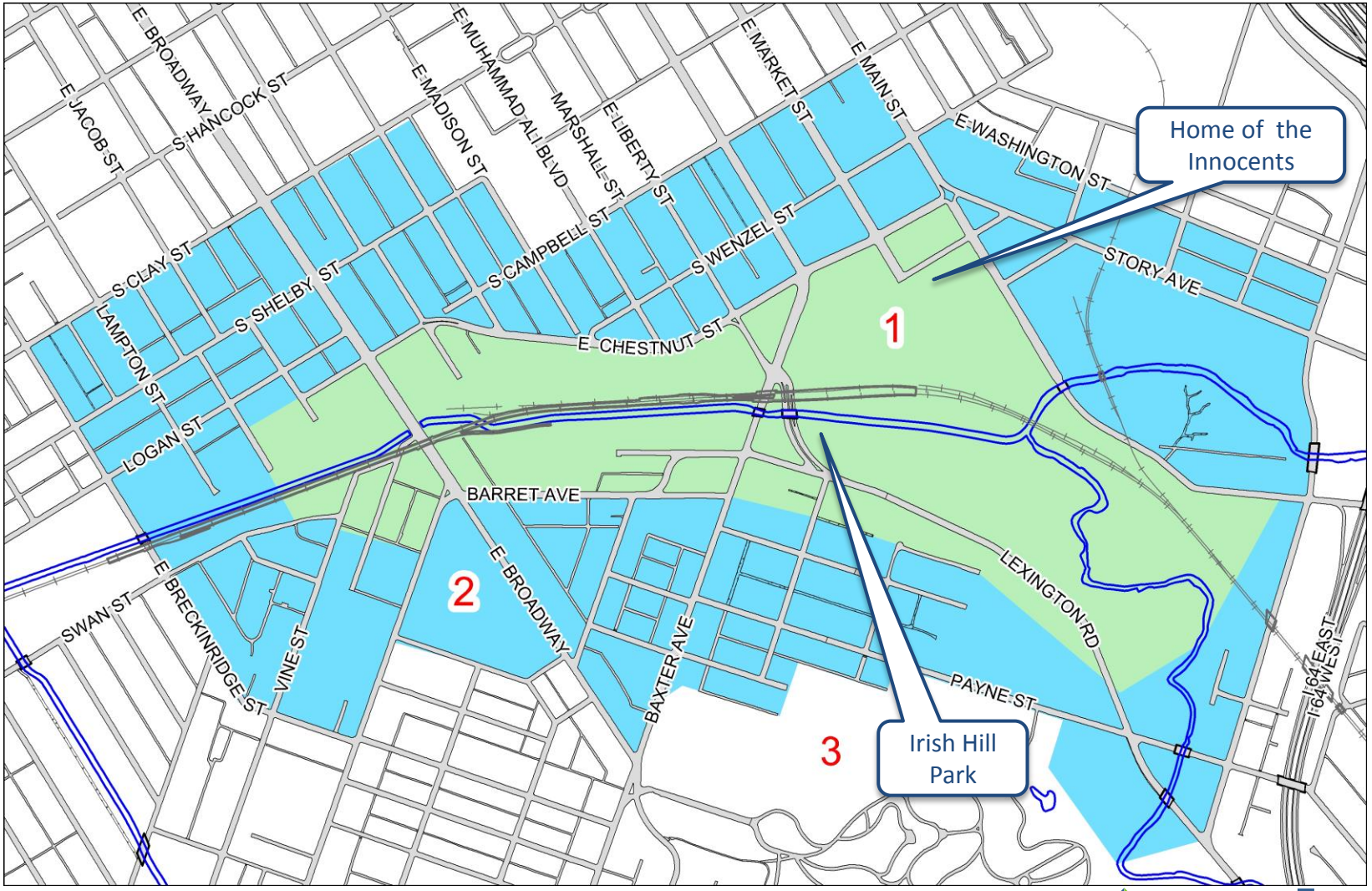
Where Do You Spend Your Days?

(i.e. work, school, volunteer, etc.)



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Where Do You Spend Your Days?

1. Area 1
2. Area 2
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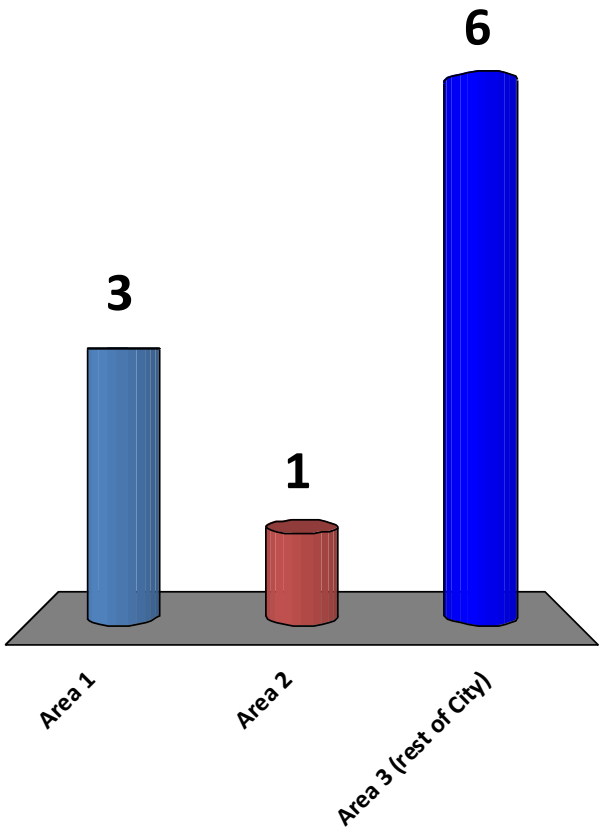

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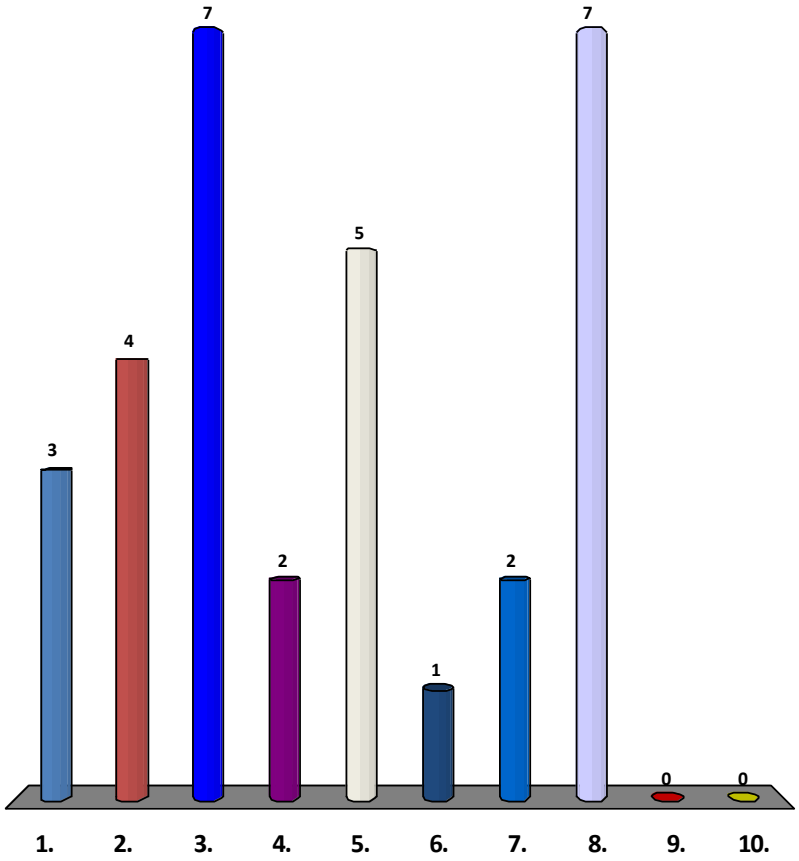
How Did You Hear About this Meeting? (4)

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 e-mail
9. @LouisvilleMSD (Twitter)
10. Other



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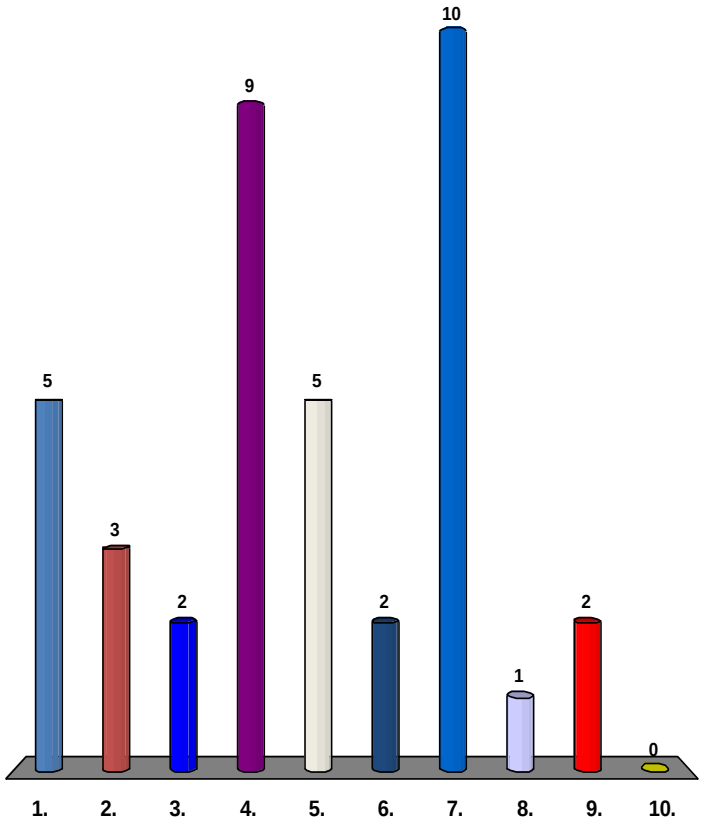
How Would You Like to Learn About MSD's Projects? (4)

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. Post Card
10. MSD Streamline Newsletter



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4. Lexington and Payne CSO Basin Project

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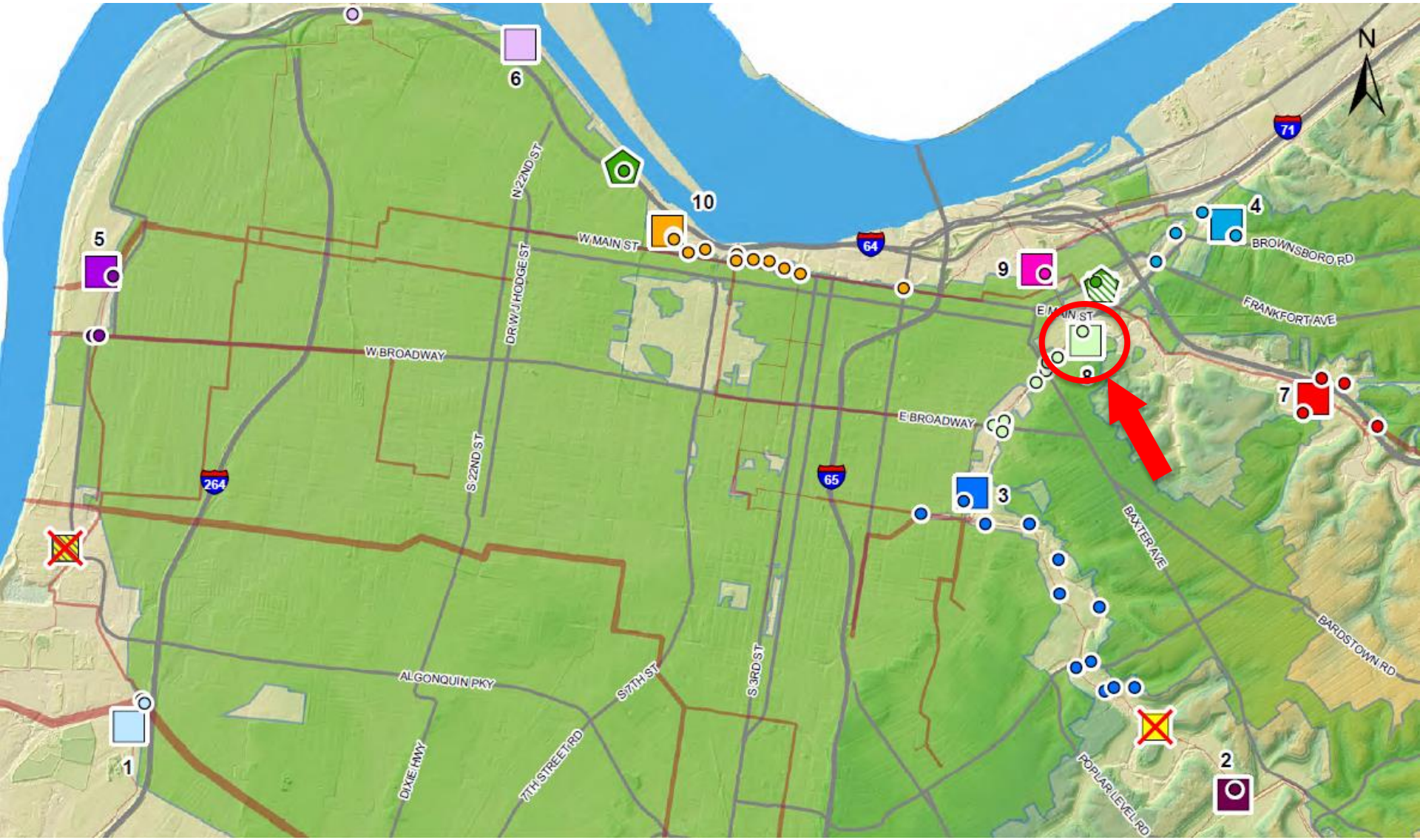
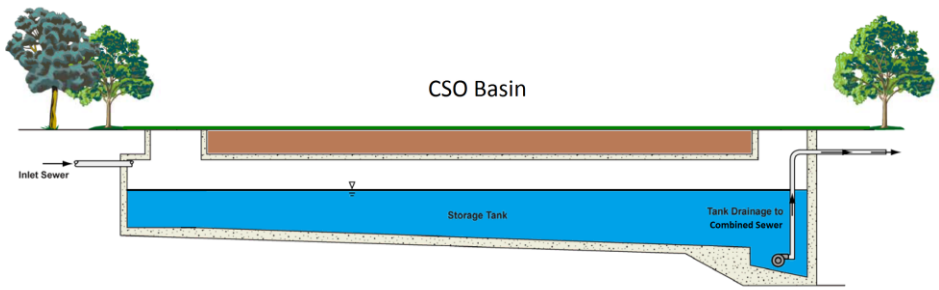
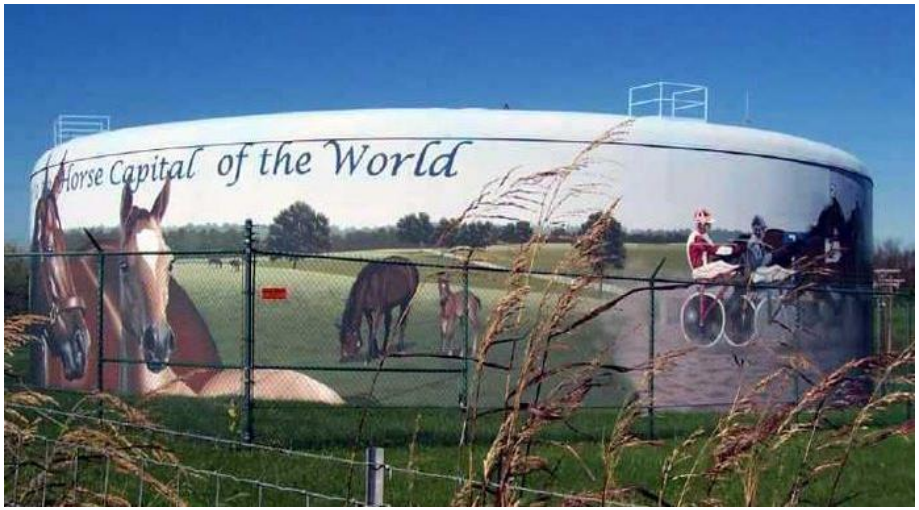
CSO Storage Basins per Consent Decree



What is a CSO Basin?

- A 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





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Frequently Asked Questions

- Will it create potential for back-ups?
  - No, the high-water elevation will be below basement elevations
  - Also will not eliminate the potential of back-ups
- What happens when the basin is full?
  - The system will function as it does today with the overflows being discharged to South Fork Beargrass Creek
- Will this project reduce flooding?
  - The basin will increase capacity of the combined sewer system during wet weather events
- Will the basin be visible?
  - No; underground, covered facility
  - There will be a control building and a screened generator
  - Access points/hatches may be visible

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Frequently Asked Questions

- What about odor?
  - Highly diluted flow (mostly storm water)
  - Basin is underground and covered
  - Basin will be equipped with flushing equipment
  - Typically, odor control is 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

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Project Development

	2012	2014
Basin Size (MG)	8.18	13.7
Level of Control	0	0

Note: Level of Control is the number of anticipated overflows during the Typical Year

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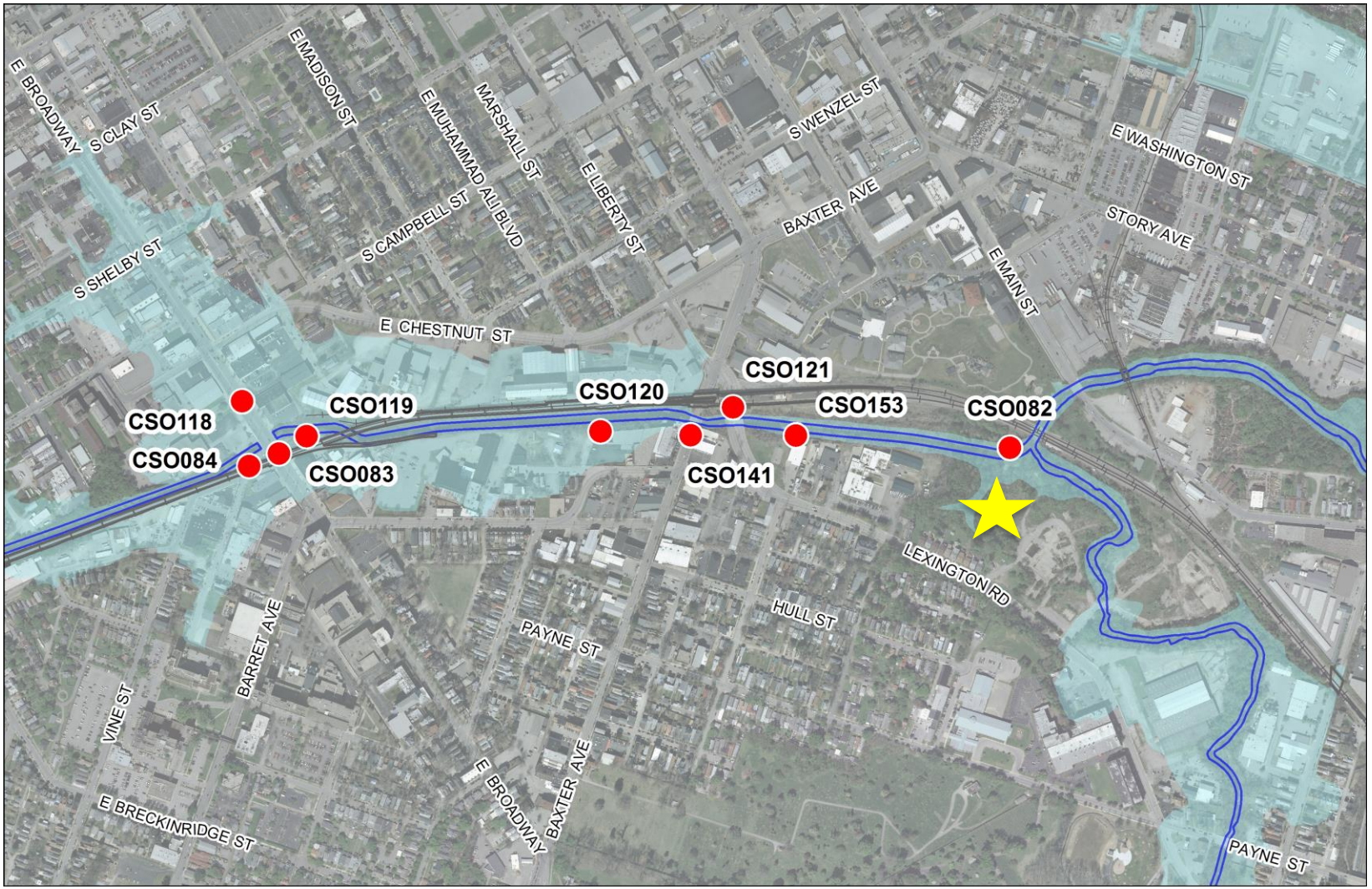
CSO Locations



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Project Design Parameters

- Basin storage volume is 13.7 Million Gallons
- Basin will be underground and covered
- Addresses nine (9) CSO locations
- Level of Control (per Typical Year):
  - Zero overflows per Typical Year

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2015 Example

CSO	Drainage Area (Acres)	# of Overflows	Overflow Volume (Million Gallons)
083	30.5	7	0.47
084	146.3	46	19.25
118	339.1	60	117.52
119	4.5	53	10.30
120	15.4	52	7.46
121	101.6	23	5.53
141	8.8	20	0.66
153	41.2	71	18.73
082	12.9	50	19.16
		382	**199.07**

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Lexington and Payne CSO Interceptor

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Lexington and Payne CSO Interceptor

- Captures overflows and conveys them to the basin
- Interceptor will be below the concrete channel of South Fork Beargrass Creek
- Approximately 4,400 LF in length
  - From near the intersection of E Broadway and Brent St to near the confluence of South Fork and Middle Fork Beargrass Creek
  - Pipe size ranging from 36” to 102”
- There will be a below ground diversion structure located near each of the existing CSOs

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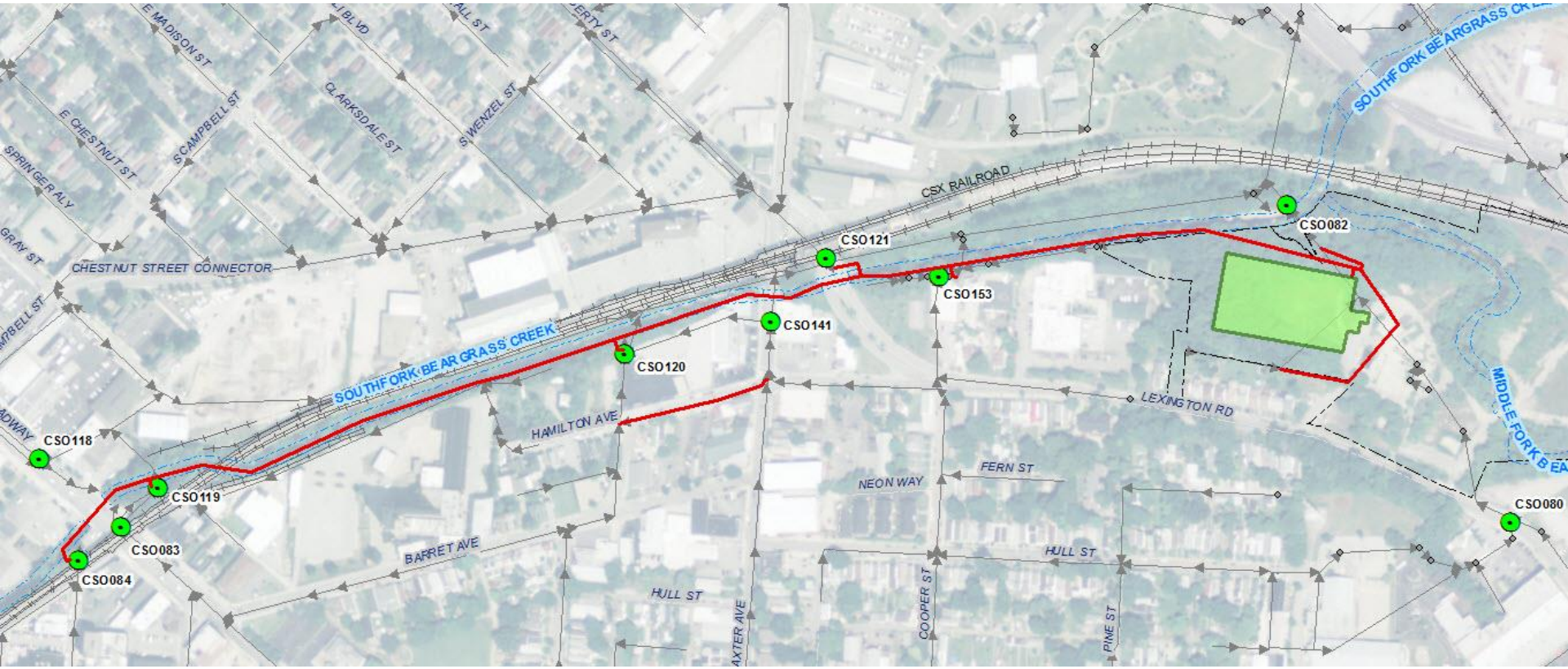
Lexington and Payne CSO Interceptor



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Basin Site

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Considerations for Site Selection

- General site requirements
  - Hydraulically connected to CSOs 083, 084, 118, 119, 120, 121, 141, 153 and 082
  - Large enough to accommodate basin footprint

- The River Metals Recycling property was identified in the original IOAP

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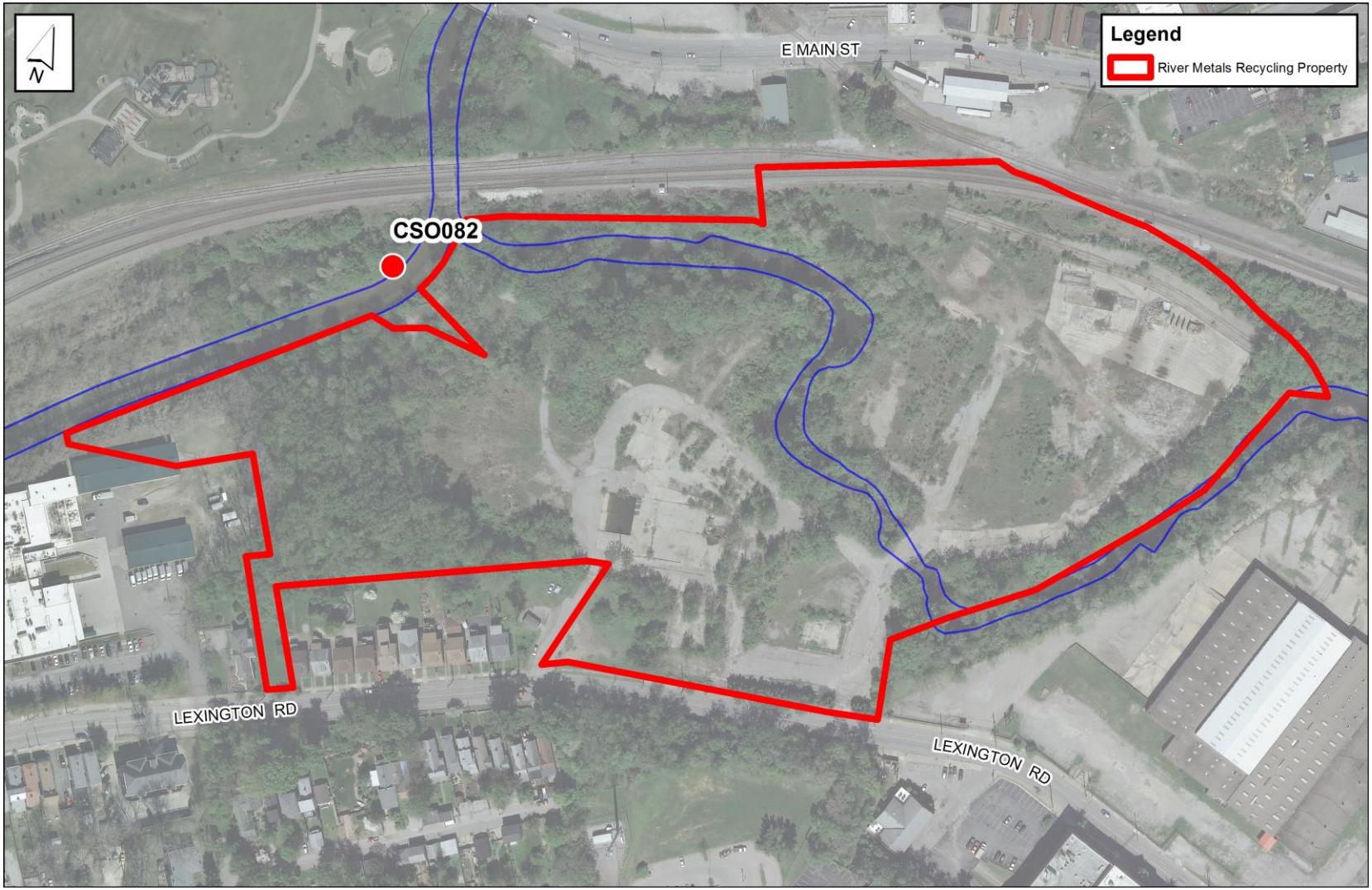
River Metals Recycling Property



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Environmental Mitigation

- A Site and Stream Bank Contaminant Characterization Report identified the site including the stream banks are contaminated with heavy metals
- MSD will be required to submit a Property Management Plan to KYDEP
- MSD will be required to minimize public exposure by either:
    1. Prohibiting public access to the site, or
    2. Covering the site with a soil cap to allow public access

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Existing Site Conditions
River Metals Recycling Property

Existing Site Conditions
River Metals Recycling Property

Existing Site Conditions
River Metals Recycling Property

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Basin Configuration Alternatives

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Comparing the Alternatives:
Project Considerations' Importance to Public

- Orientation Public meeting held on January 19, 2016
  - Twenty-five (25) attendees
  - Twenty-four (24) provided feedback
- Online survey was active from January 22, 2016 through March 18, 2016
  - Five (5) participants
  - Five (5) provided feedback
- Relative importance of **general project considerations** was gathered from participants.
- **Other issues and opportunities** were identified and rated by the participants.

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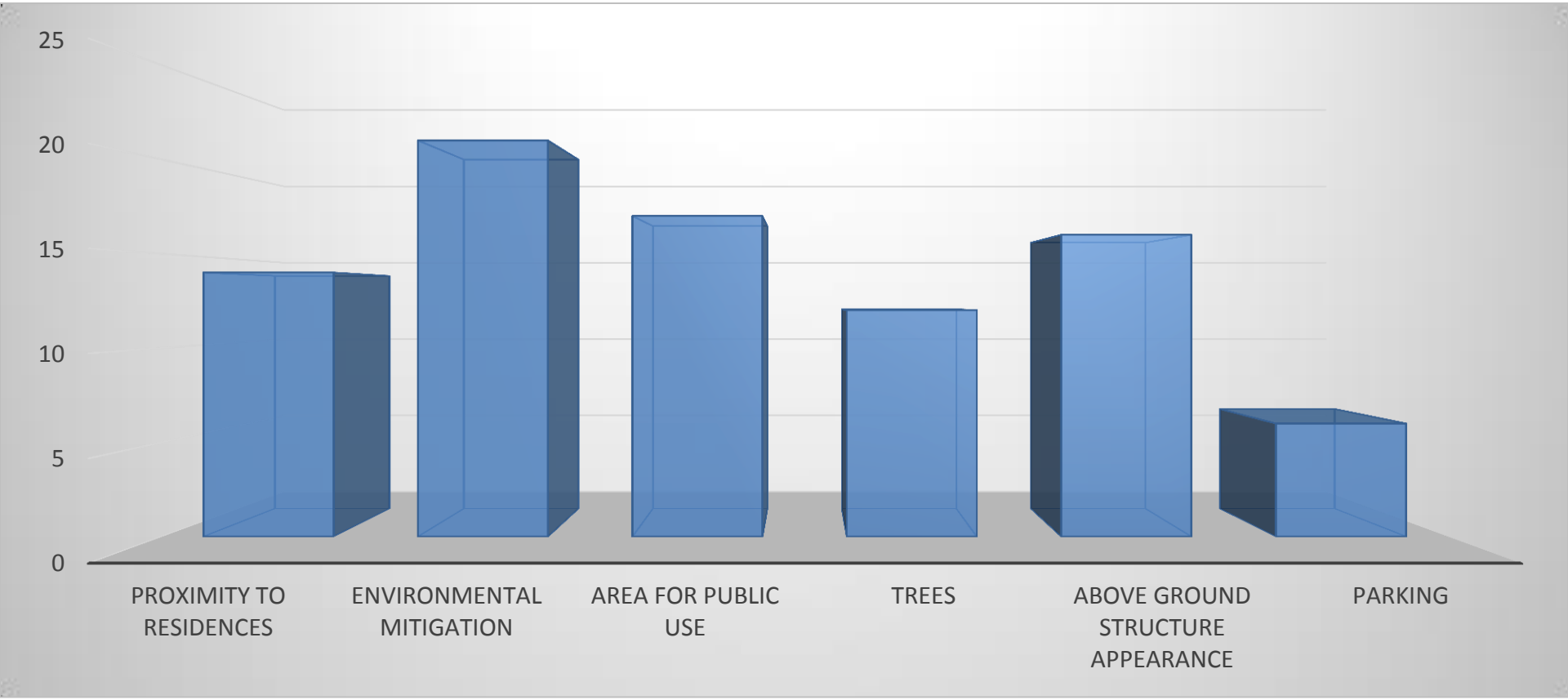
Summary of Previous Polling Results
Importance of General Project Considerations



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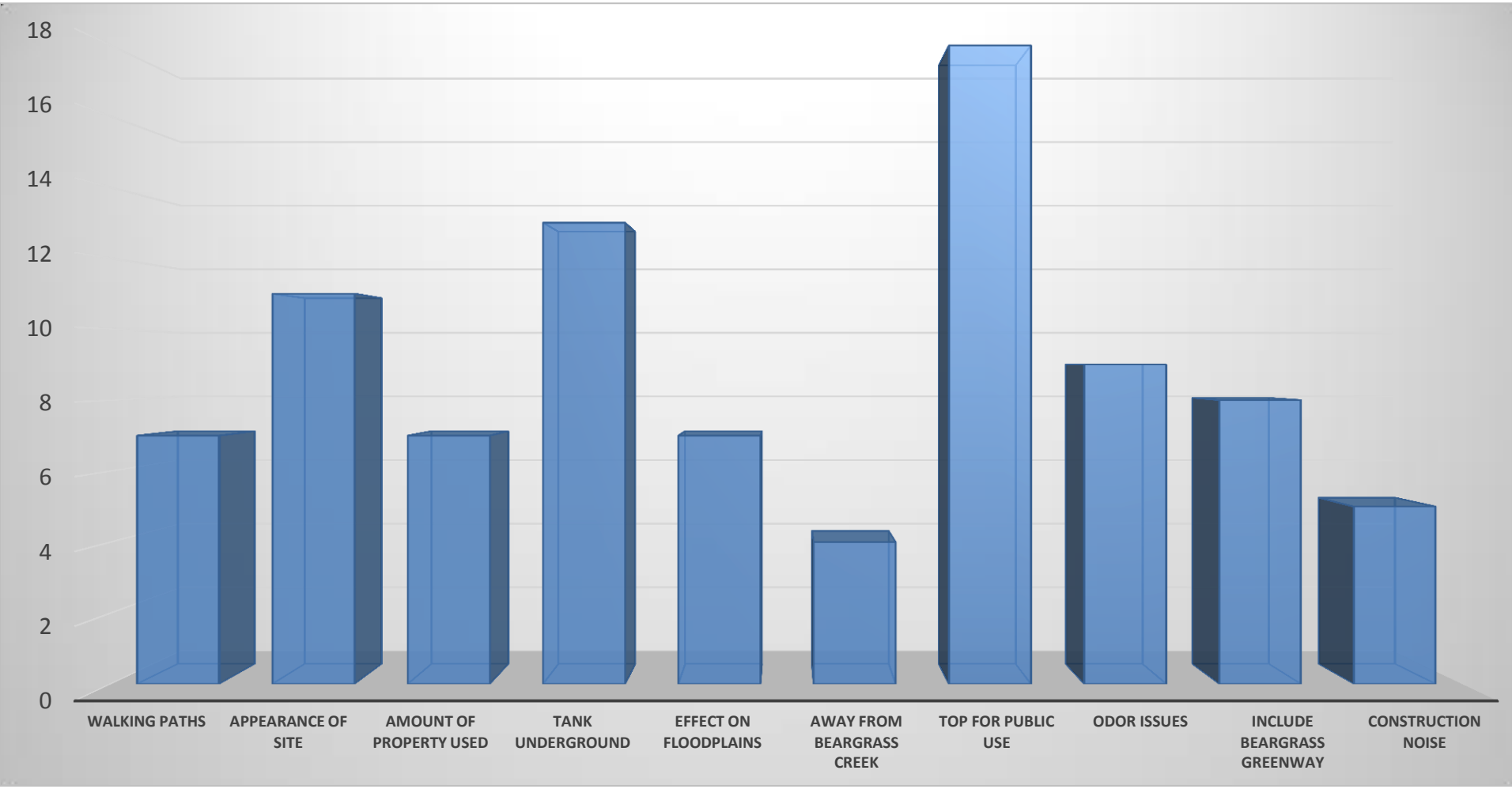
Summary of Polling Results

Other Issues or Opportunities



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Basin Configuration Alternatives

Three basin configuration alternatives will be presented and evaluated:

- Alternative 1: Soil Cap, Most Potential Public Use Area
- Alternative 2: No Soil Cap, No Public Use Area
- Alternative 3: Soil Cap, Less Potential Public Use Area

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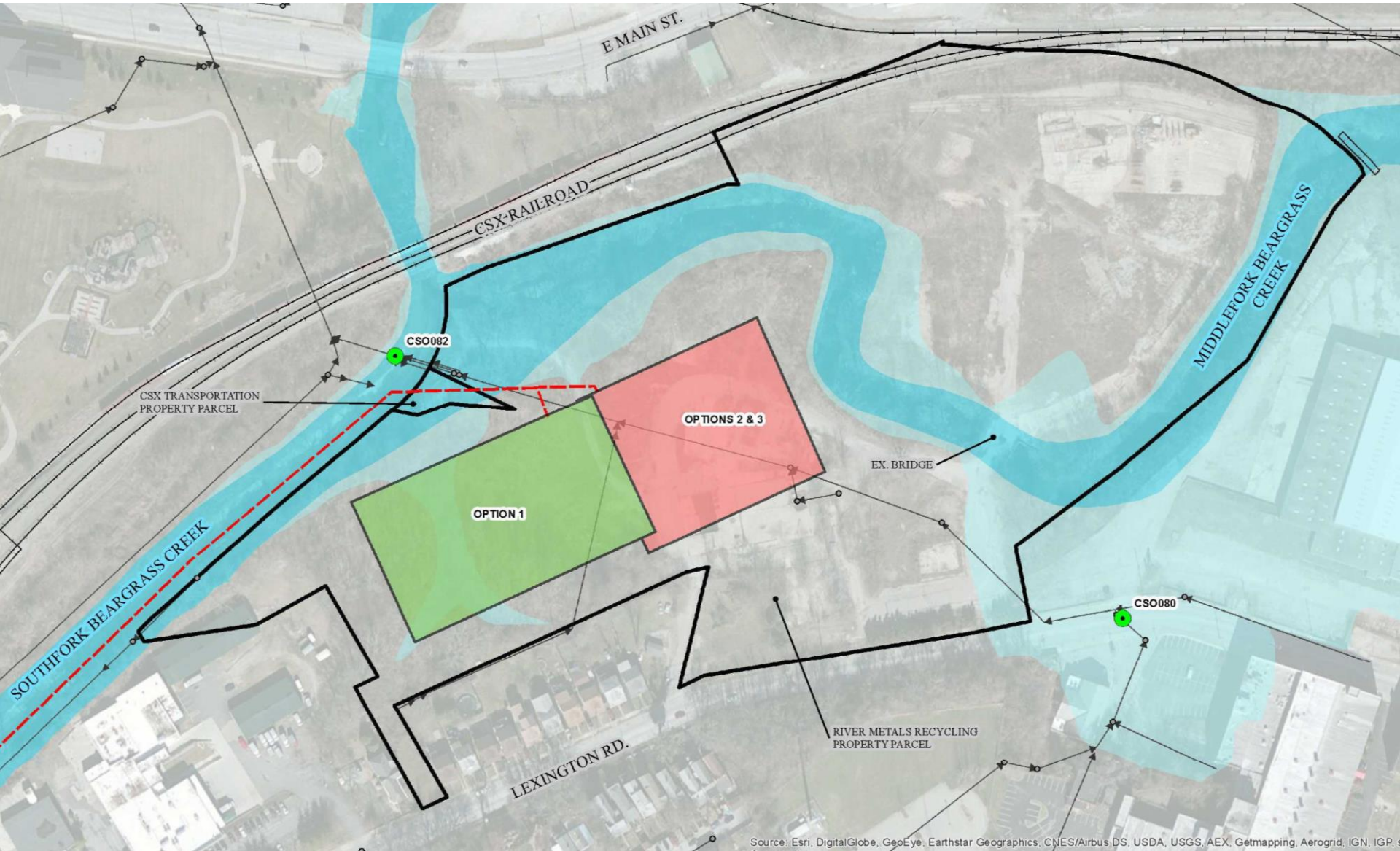
Basin Configuration Alternatives



Alternative 1: Soil Cap, Most Potential Public Use Area

Alternative 1: Soil Cap, Most Potential Public Use Area

Alternative 1: Soil Cap, Most Potential Public Use Area

Alternative 2: No Soil Cap, No Public Use Area

Alternative 2: No Soil Cap, No Public Use Area

Alternative 2: No Soil Cap, No Public Use Area

Alternative 3: Soil Cap, Less Potential Public Use Area

Alternative 3: Soil Cap, Less Potential Public Use Area

Alternative 3: Soil Cap, Less Potential Public Use Area

Basin Configuration Alternatives Feedback

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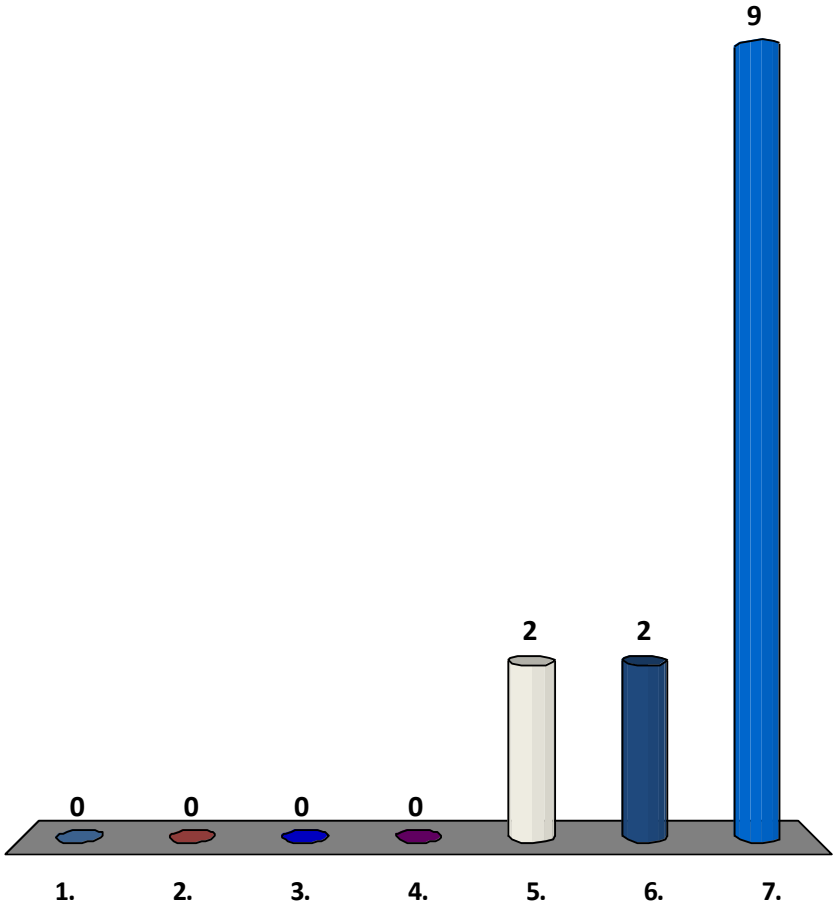
Alternative 1: Soil Cap, More Potential Public Use Area

- Western basin location
- Existing vegetation and fencing removed
- Remediated with a soil cap
- Allows public access

How Preferable is Alternative 1: Soil Cap, More Potential Public Use Area?

1. Very Unpreferable
2. Unpreferable
3. Somewhat Unpreferable
4. Neutral
5. Somewhat Preferable
6. Preferable
7. Very Preferable



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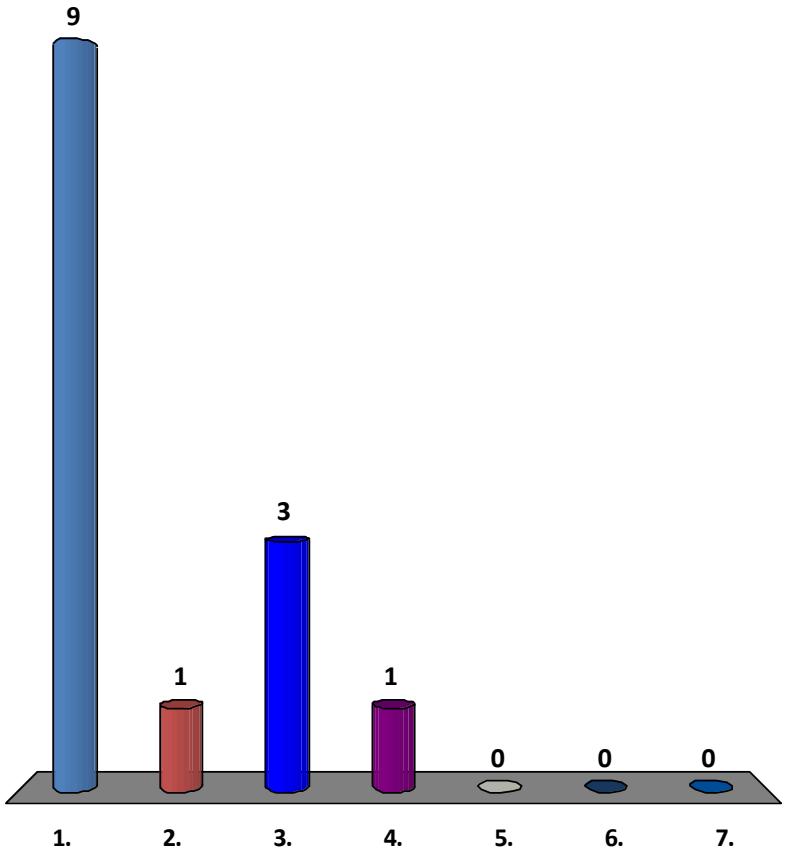
Alternative 2: No Soil Cap, No Public Use Area

- Eastern basin location
- Some existing vegetation retained
- New perimeter fence installed
- Does not allow public access

How Preferable is Alternative 2: No Soil Cap, No Public Use Area?

1. Very Unpreferable
2. Unpreferable
3. Somewhat Unpreferable
4. Neutral
5. Somewhat Preferable
6. Preferable
7. Very Preferable



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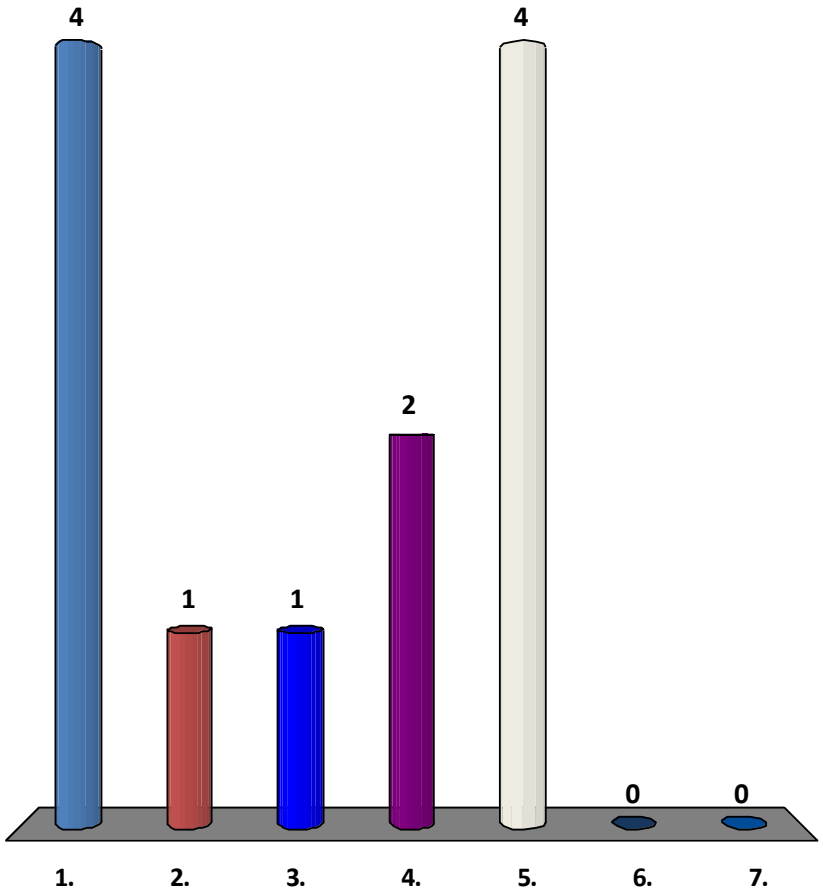
Alternative 3: Soil Cap, Less Potential Public Use Area

- Eastern basin location
- Existing vegetation and fencing removed
- Remediated with a soil cap
- Allows public access

How Preferable is Alternative 3: Soil Cap, Less Potential Public Use Area?

1. Very Unpreferable
2. Unpreferable
3. Somewhat Unpreferable
4. Neutral
5. Somewhat Preferable
6. Preferable
7. Very Preferable



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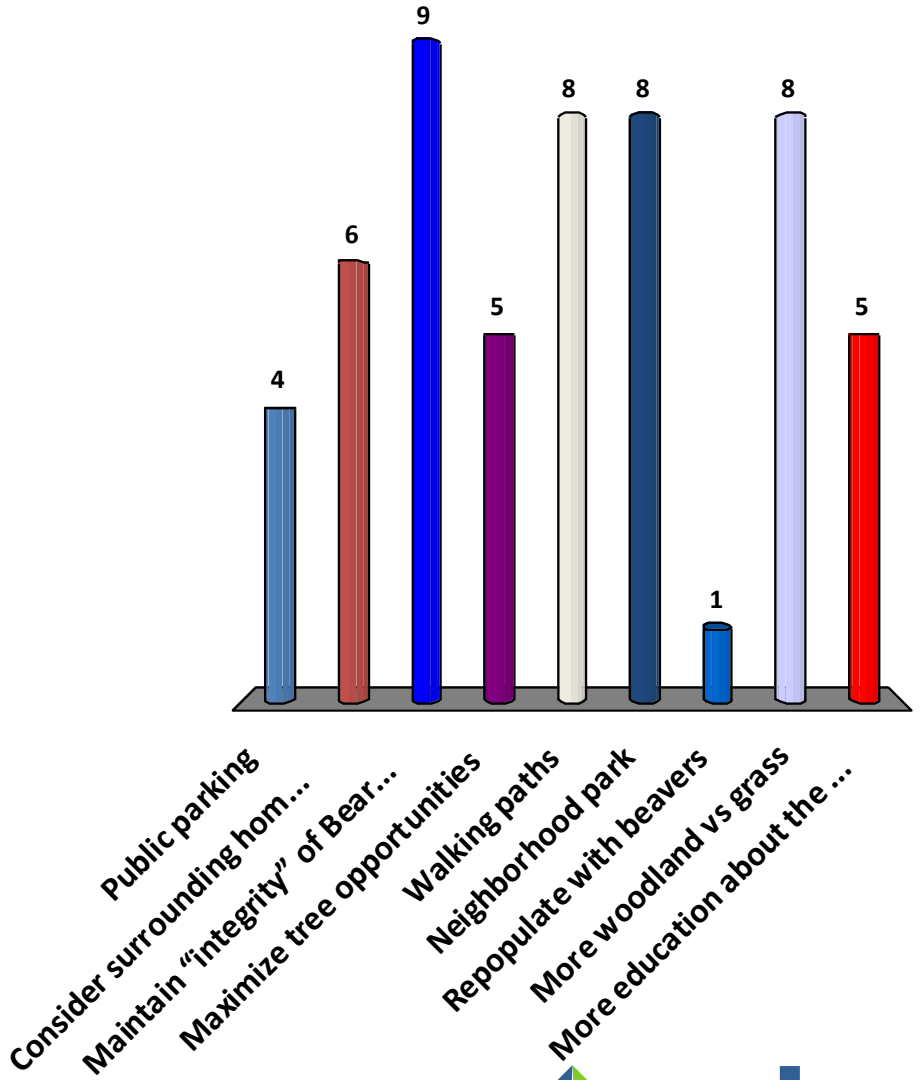
Other Project or Site Considerations?

1. Public parking
2. Consider surrounding homeowners opinion
3. Maintain “integrity” of Beargrass creek
4. Maximize tree opportunities
5. Walking paths
6. Neighborhood park
7. Repopulate with beavers
8. More woodland vs grass
9. More education about the inventory



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5. Next Steps

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Next Steps

- Begin Advanced Project Design
- Continue Coordination with Agency Stakeholders
- Future Public Outreach:
  - Advanced Design Public Input Meeting — Fall 2016
  - Pardon our Dust Meeting — Summer 2017
- Construction Start — Summer 2017
- Construction Completion — Spring 2020
- Consent Decree Deadline — December 31, 2020

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

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6. Feedback

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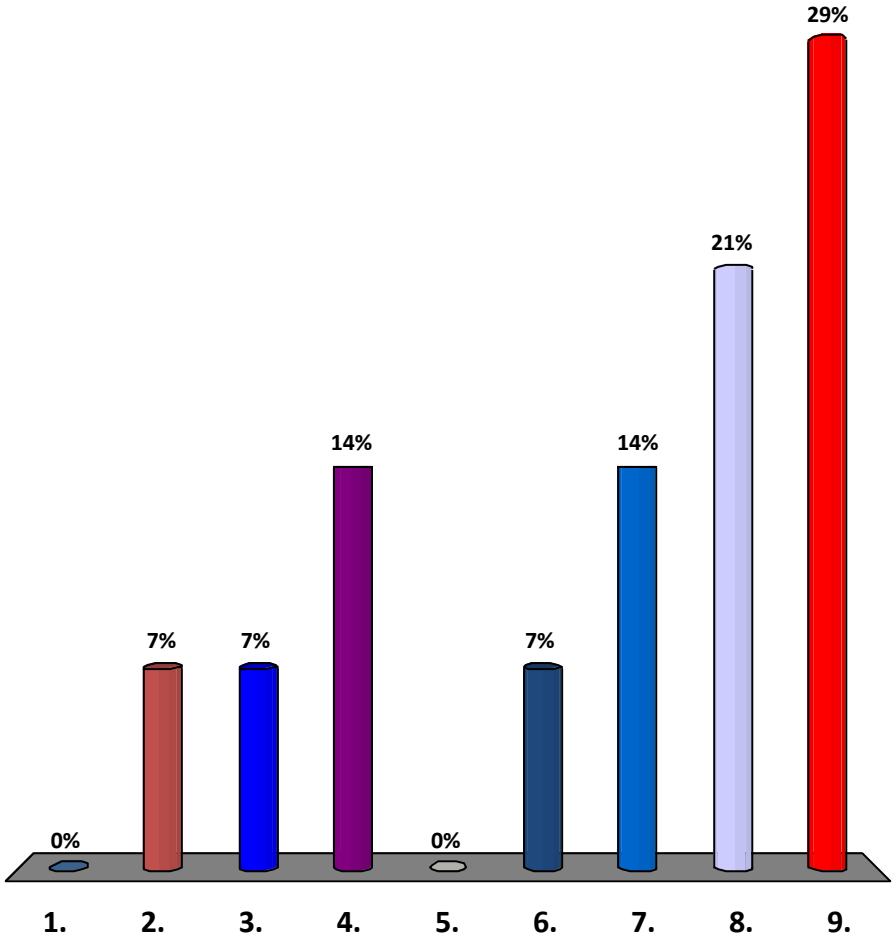
How satisfied are you with this feedback method?

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



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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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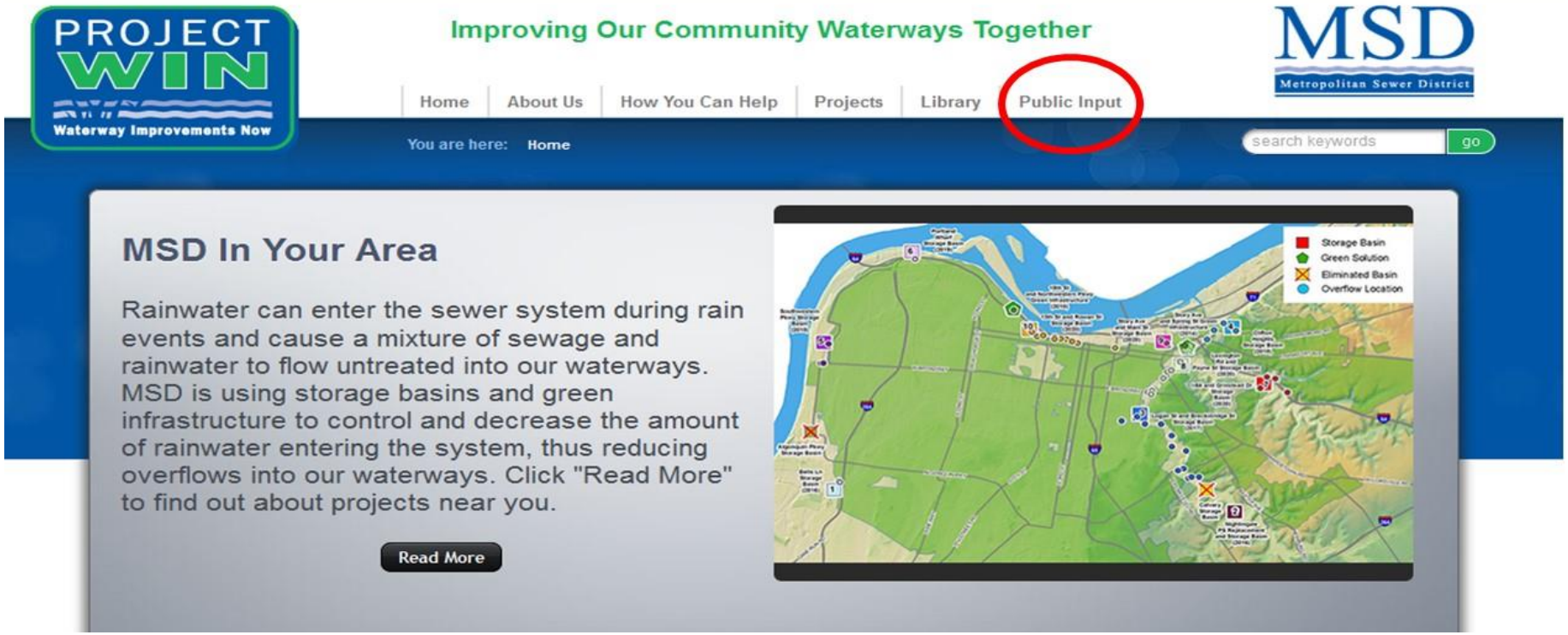
Find Out More

msdprojectwin.org



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

tinyurl.com/MSDLexingtonPayne2

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How Can I Learn More About Public Meetings?

- Through ***Eventbrite***:
  - Pre-register individuals and groups
  - Register individuals at the door
  - MSD will create an email data base for future information
  - https://msd-lex-payne.eventbrite.com
- Register for free "tickets" with these options:
  - Attendee
  - Maybe Attending
  - Not Attending, but I want more info
- Register to receive notifications about Lexington & Payne CSO Basin Public Meetings
- If you are ***unable to attend a meeting***, register as "Not Attending, but I want more info" to receive a link to the public input survey

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THANK YOU FOR YOUR PARTICIPATION

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