Ground Rules

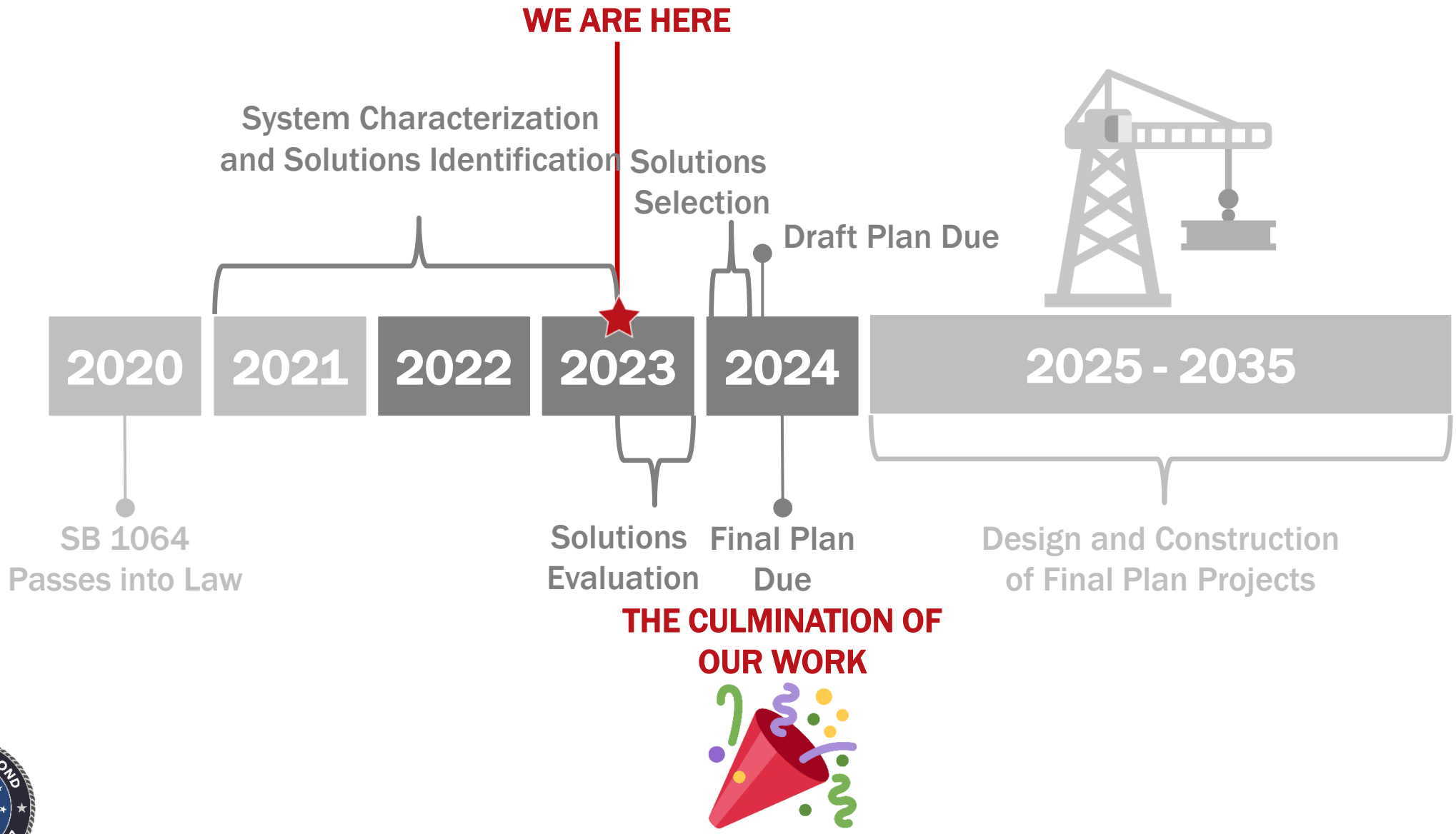
- Remember why you're here:
  - **Review and monitor the development of the Final Plan**
  - **Provide input and insight from your communities**
  - **Share progress with your communities**
- Be respectful of others
- Be present and focused during meetings
- **Be additive, not repetitive, during discussions**
- **Everyone should participate and no one should dominate**
- **Be clear when you're speaking if you're sharing your own thoughts or input provided by those you represent**
- **There are no stupid questions! Ask!**
- Be open to new ideas
- **Don't talk over people or interrupt**
- Moderator will make note of group members who raise their hands to speak; or, wait to speak
- If there are 7 seconds of silence, we can move on from a discussion topic

Today's Agenda: Public Stakeholder Group Meeting #7

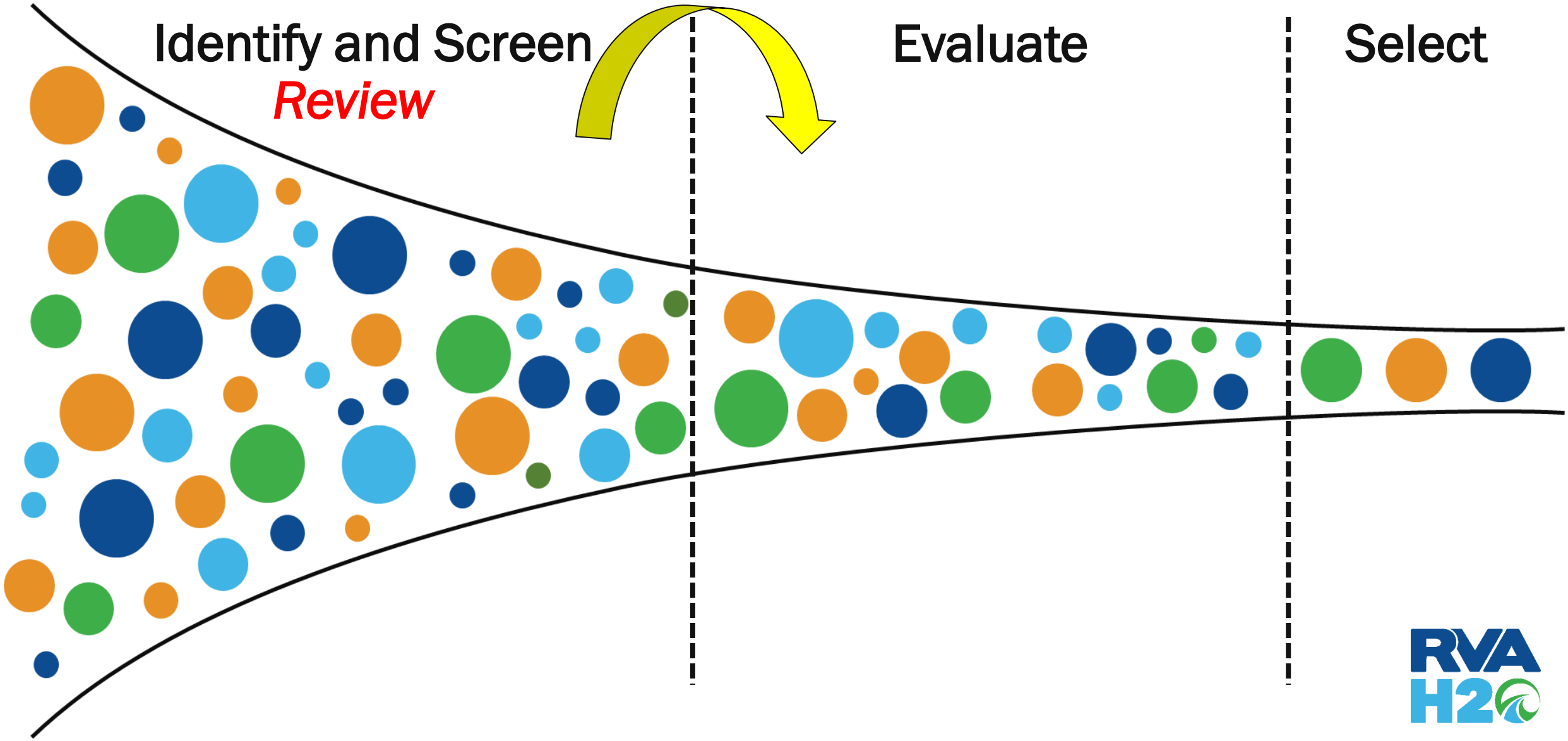
- Solutions Review
- Solution Evaluation Overview
- Next Meetings


Hotel Burlington
WASHINGTON, D.C.
SOUTHERN

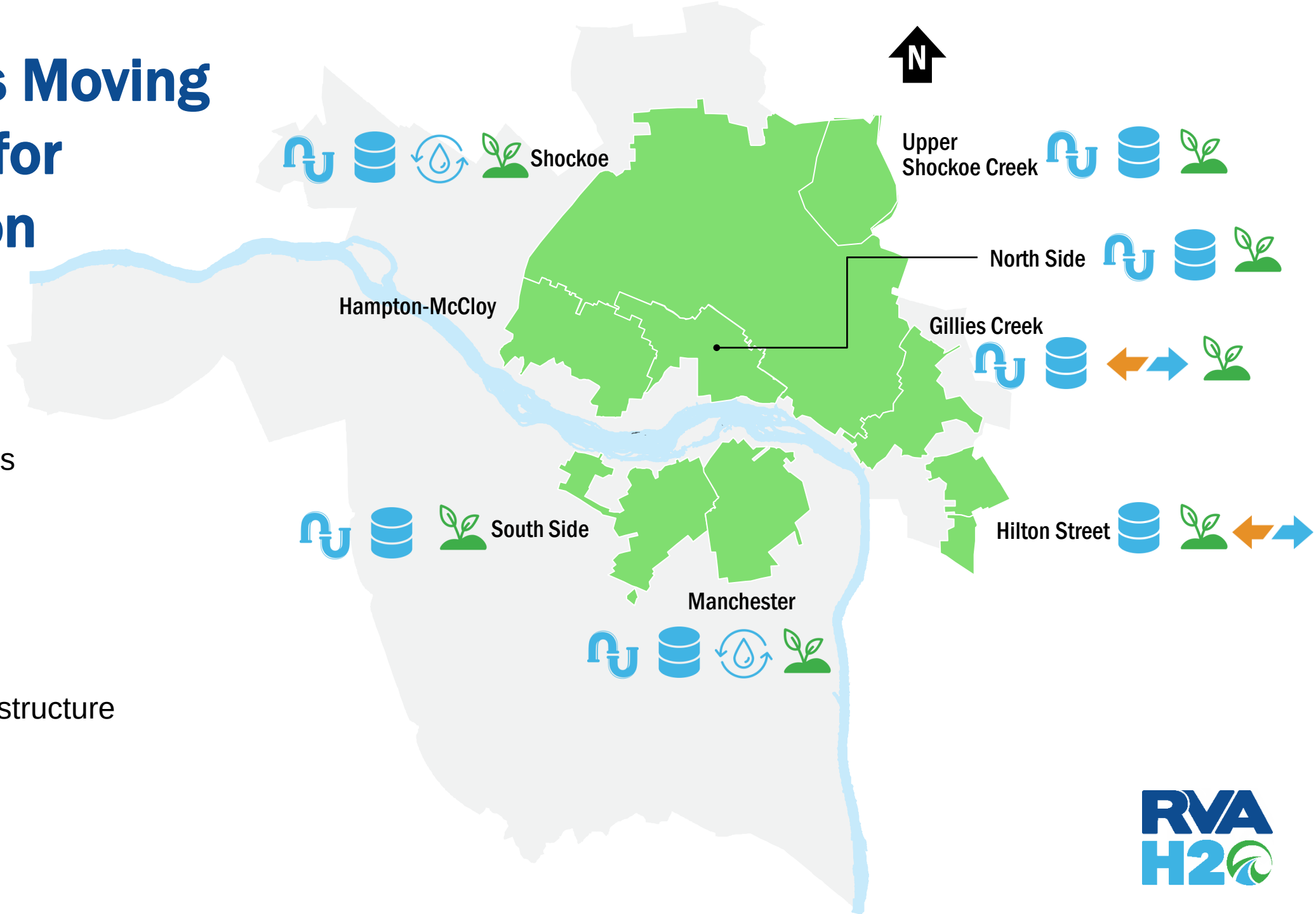
The Process: Developing the Final Plan



Solutions Discussion



Solutions Moving Forward for Evaluation

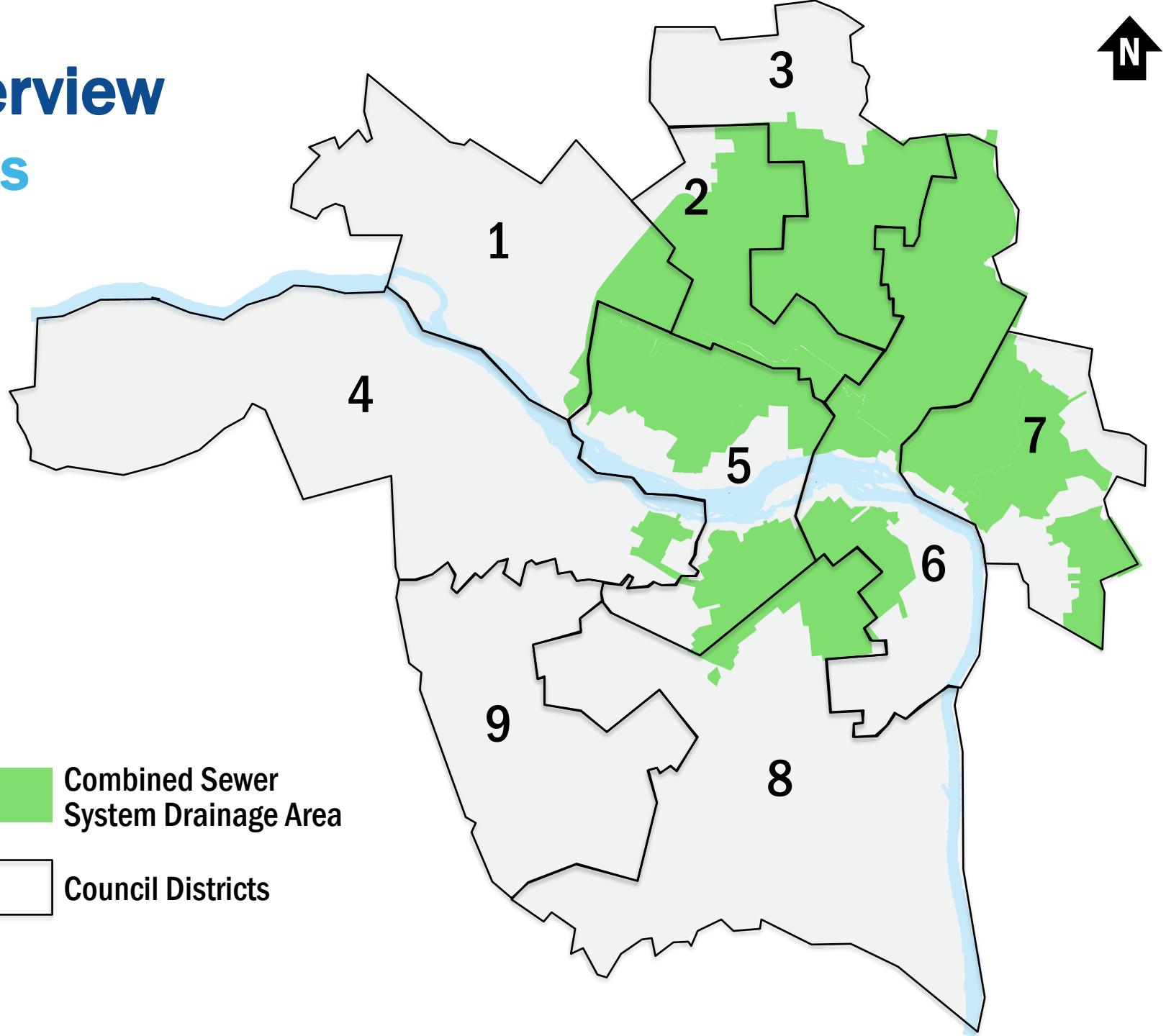


Legend

- Bigger Pipes
- Storage
- Treatment
- Separation
- Green Infrastructure

Solutions Overview

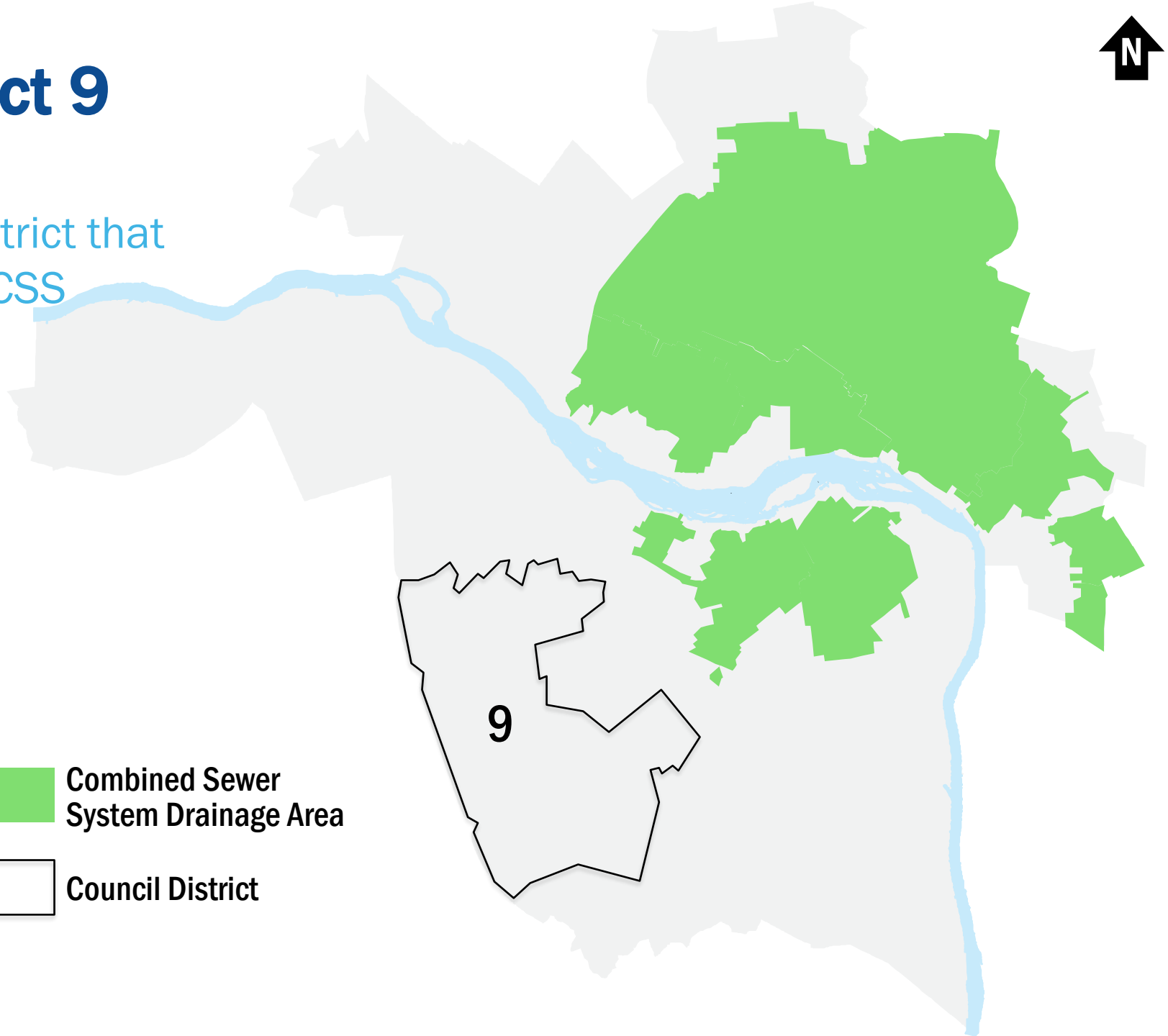
Council Districts



Council District 9

No Projects

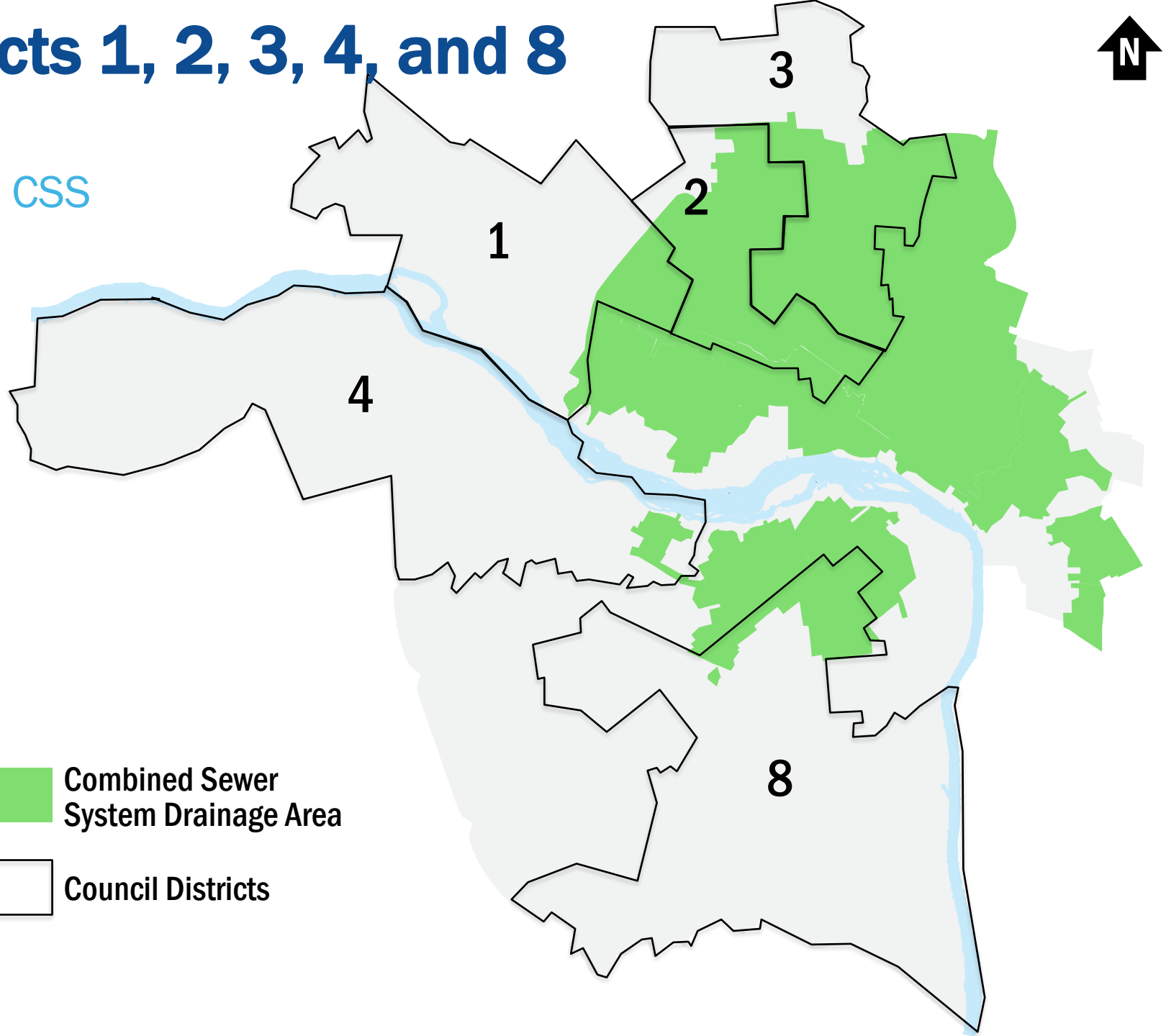
Only City Council District that doesn't include the CSS



Council Districts 1, 2, 3, 4, and 8

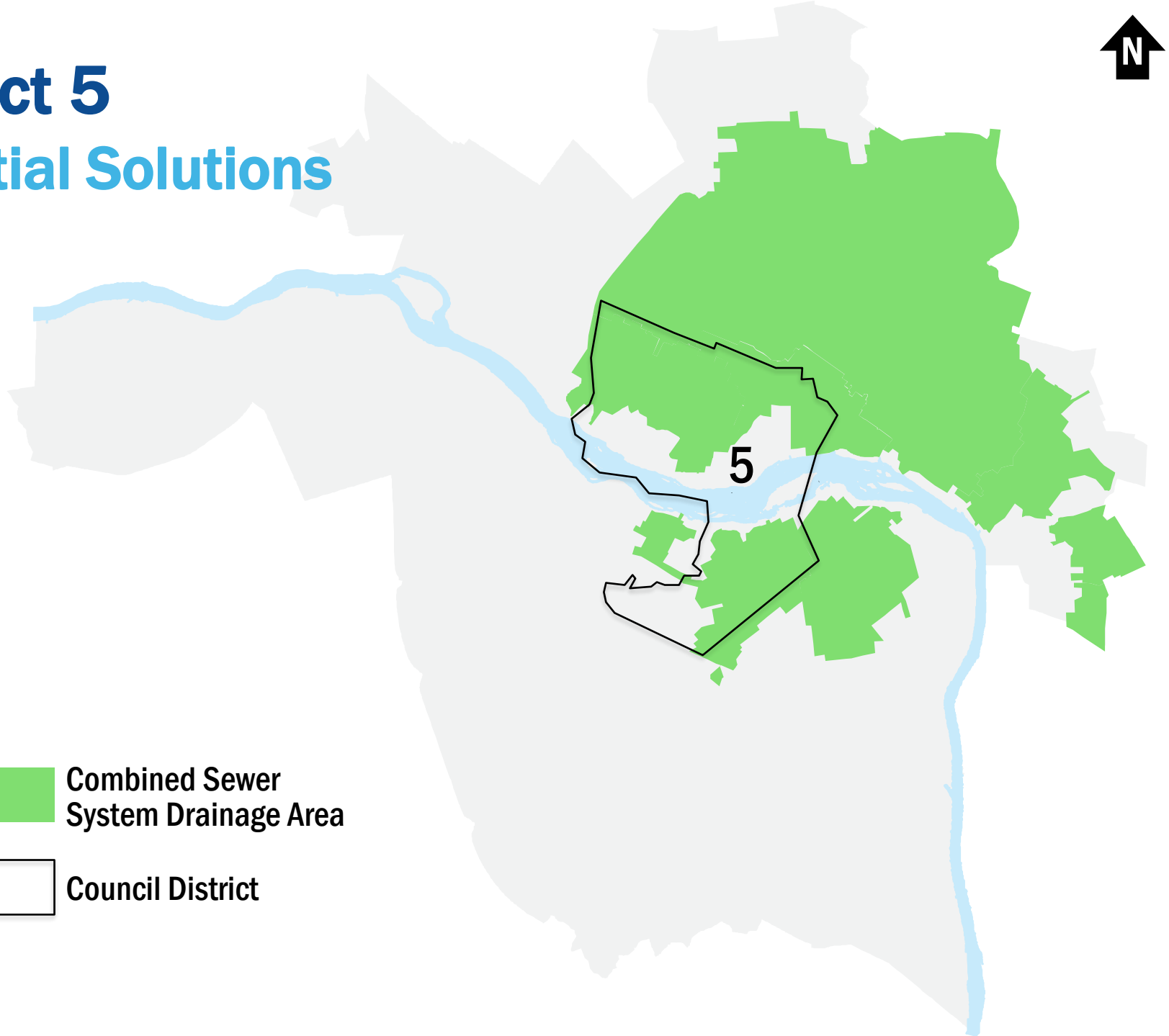
GI Projects

Reduce flow into the CSS



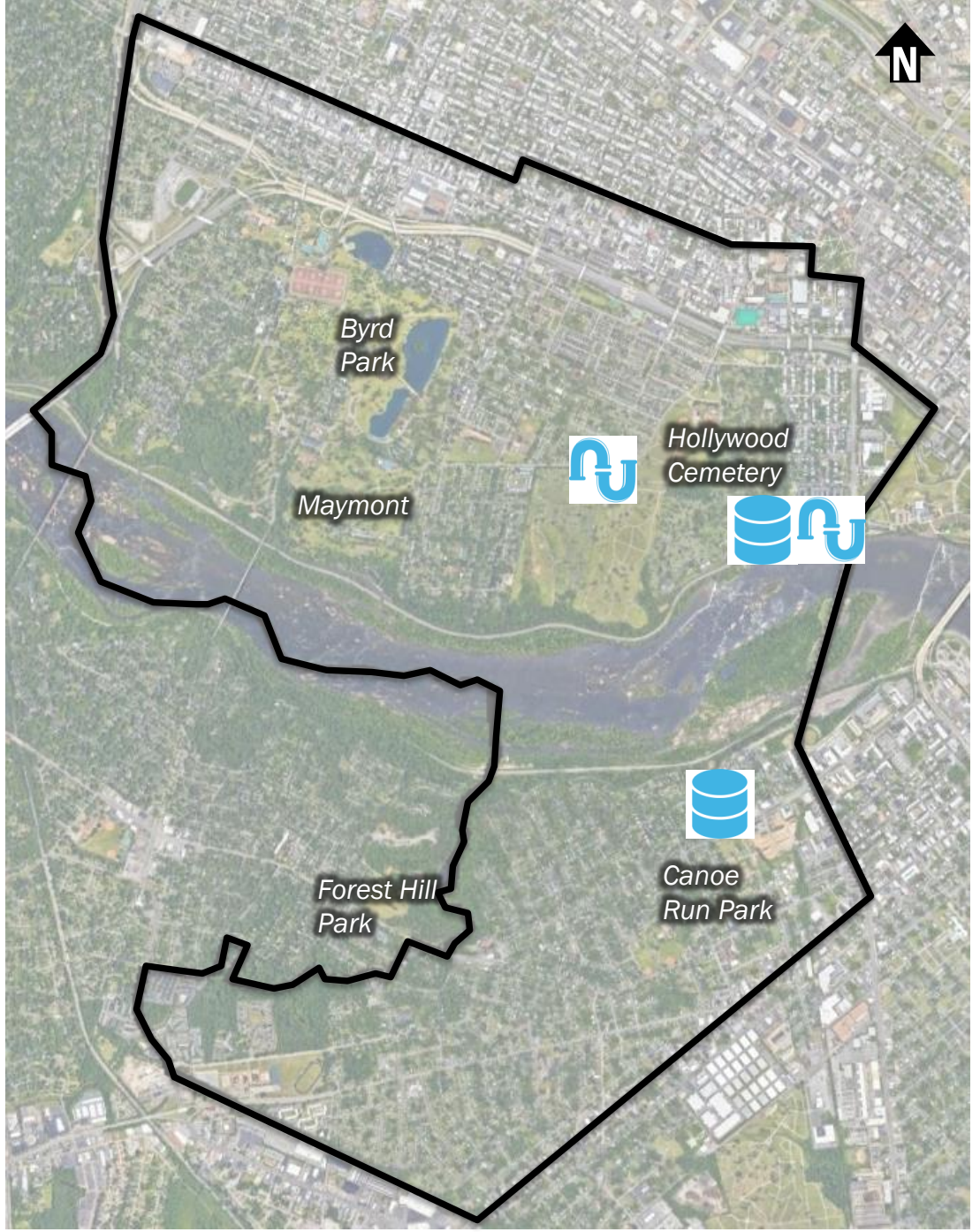
Council District 5

Multiple Potential Solutions



Council District 5

Potential Solutions



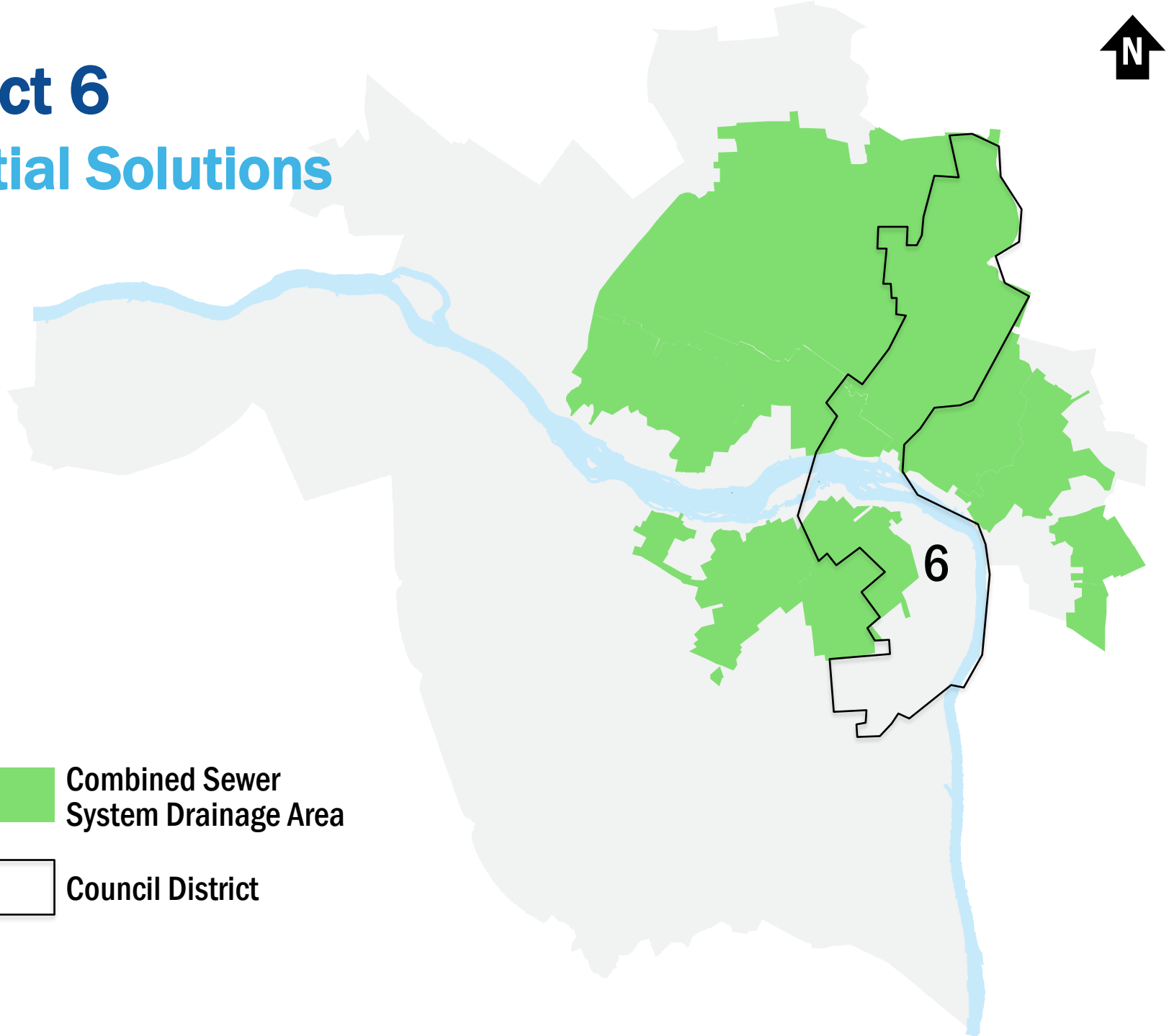
New Pipe

Storage Tank

Green Infrastructure

Council District 6

Multiple Potential Solutions



Council District 6 Potential Solutions

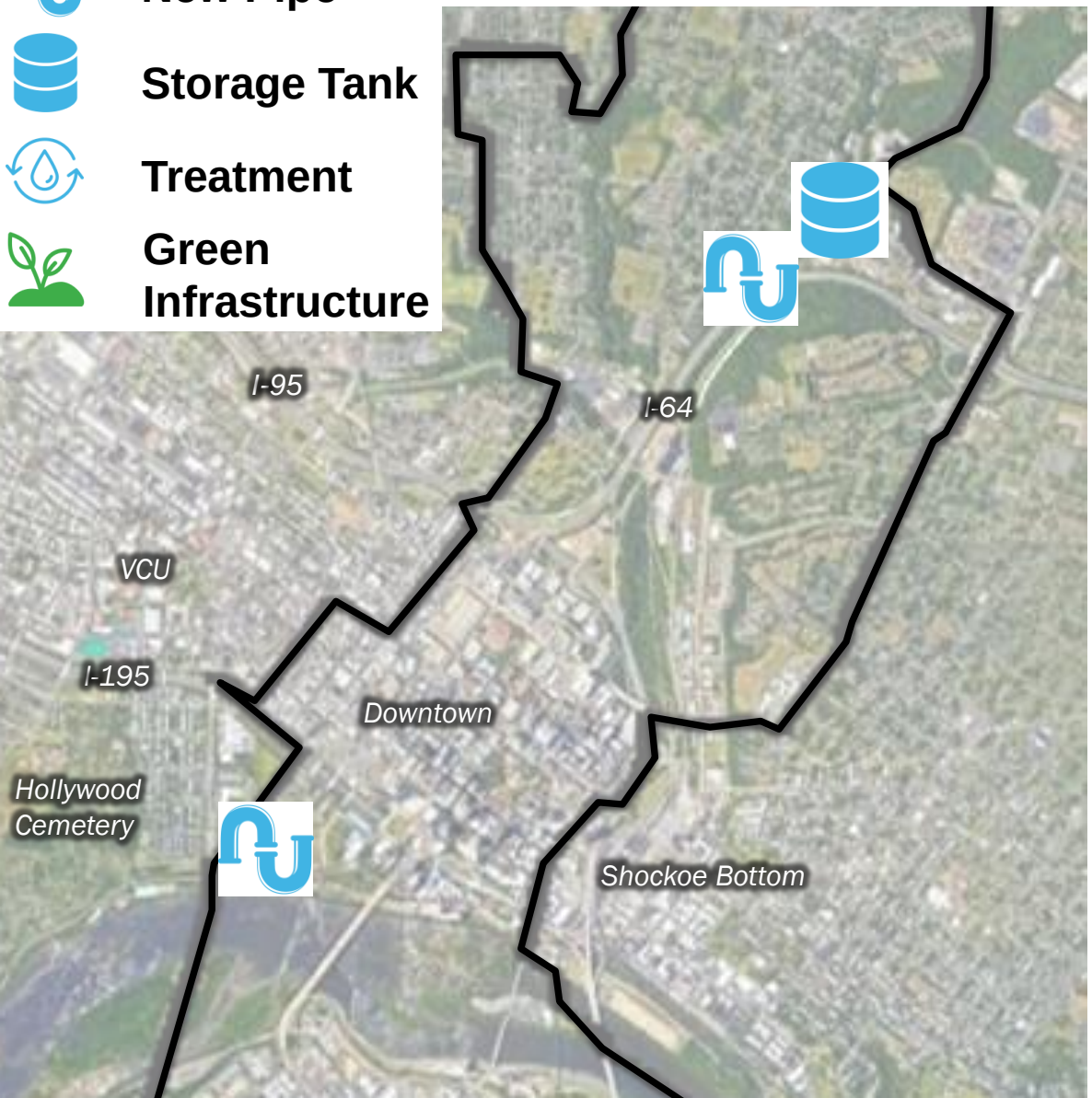
New Pipe

Storage Tank

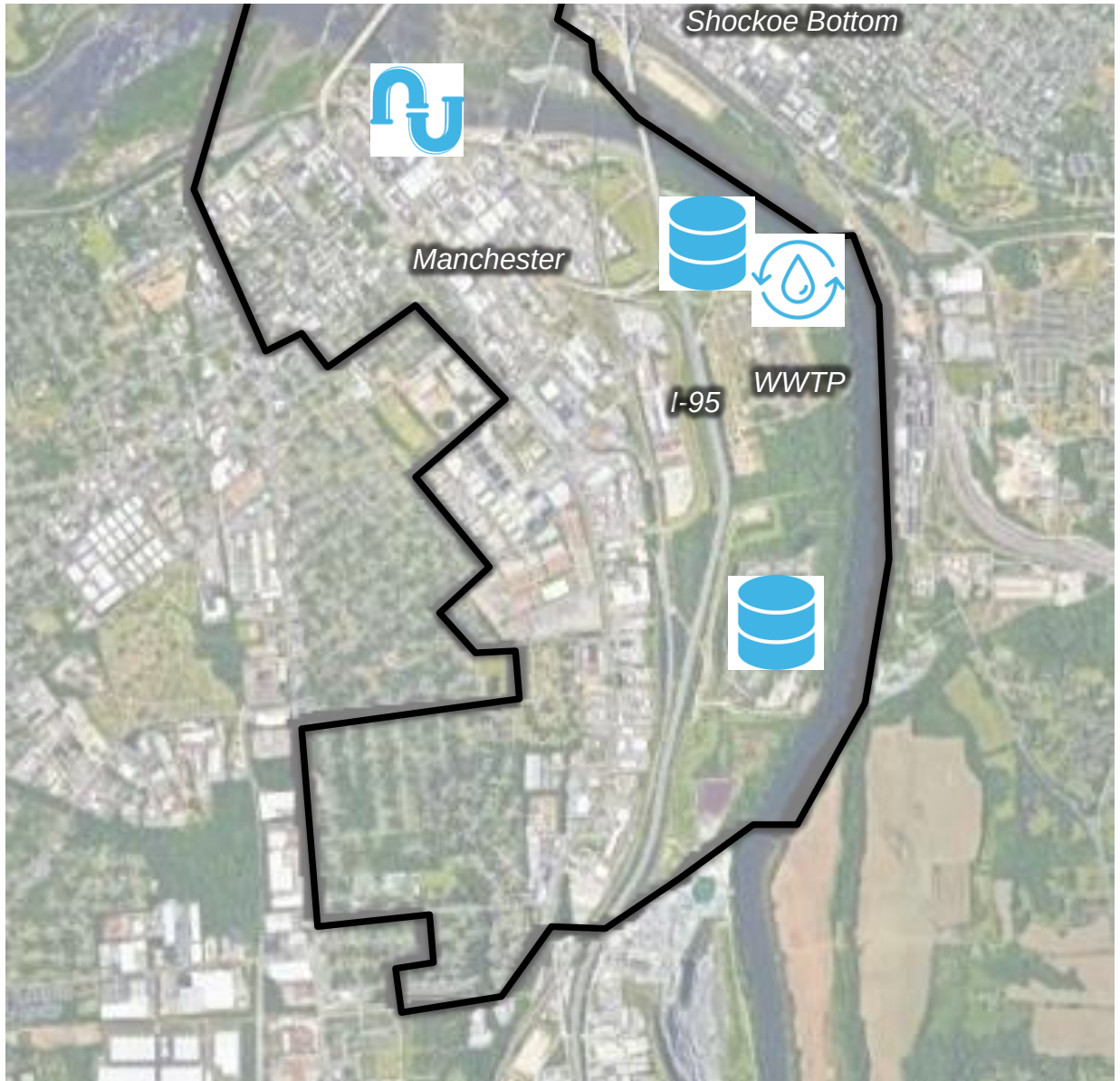
Treatment

Green Infrastructure

North Side

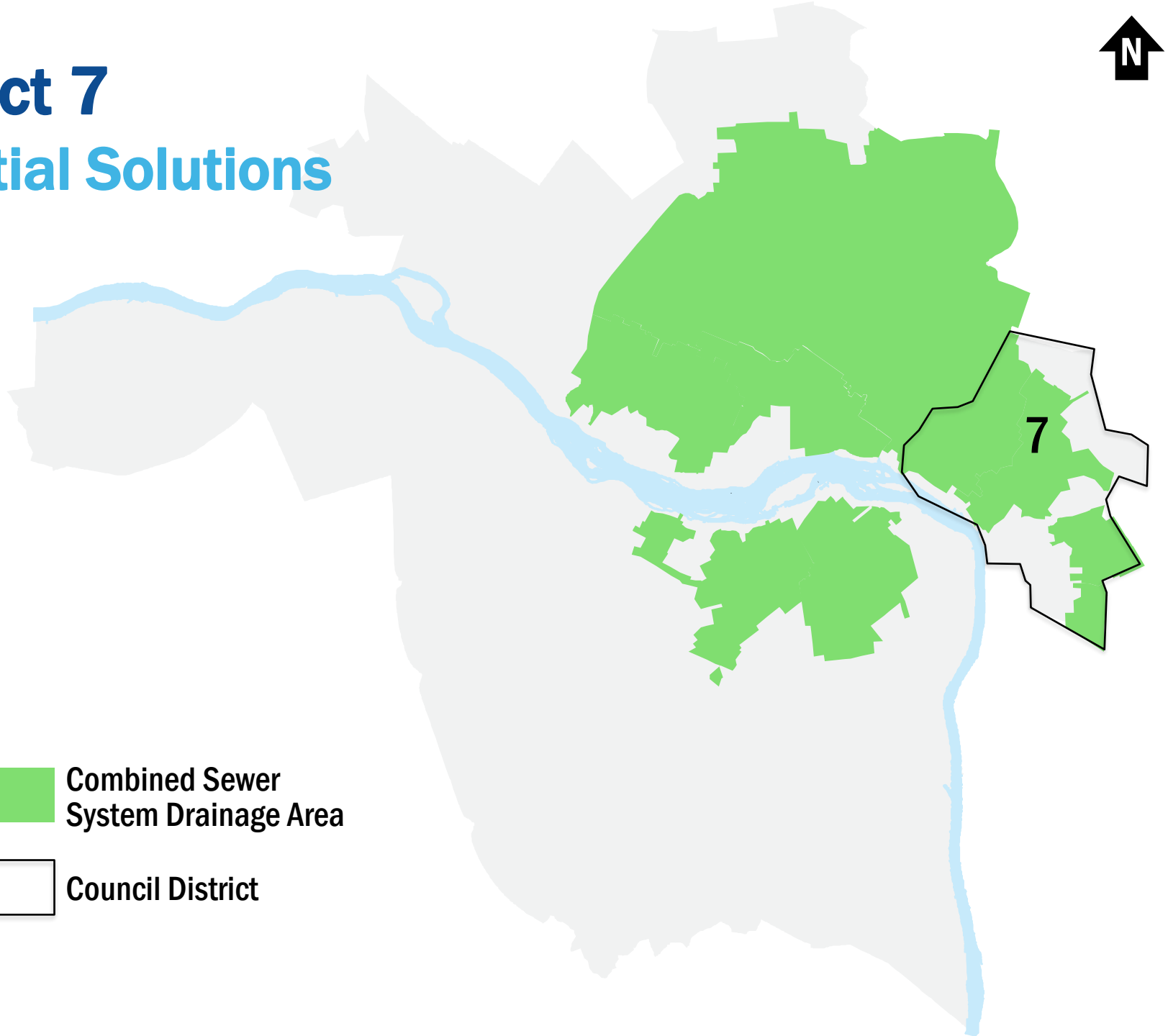


South Side



Council District 7

Multiple Potential Solutions



Council District 7

Potential Solutions

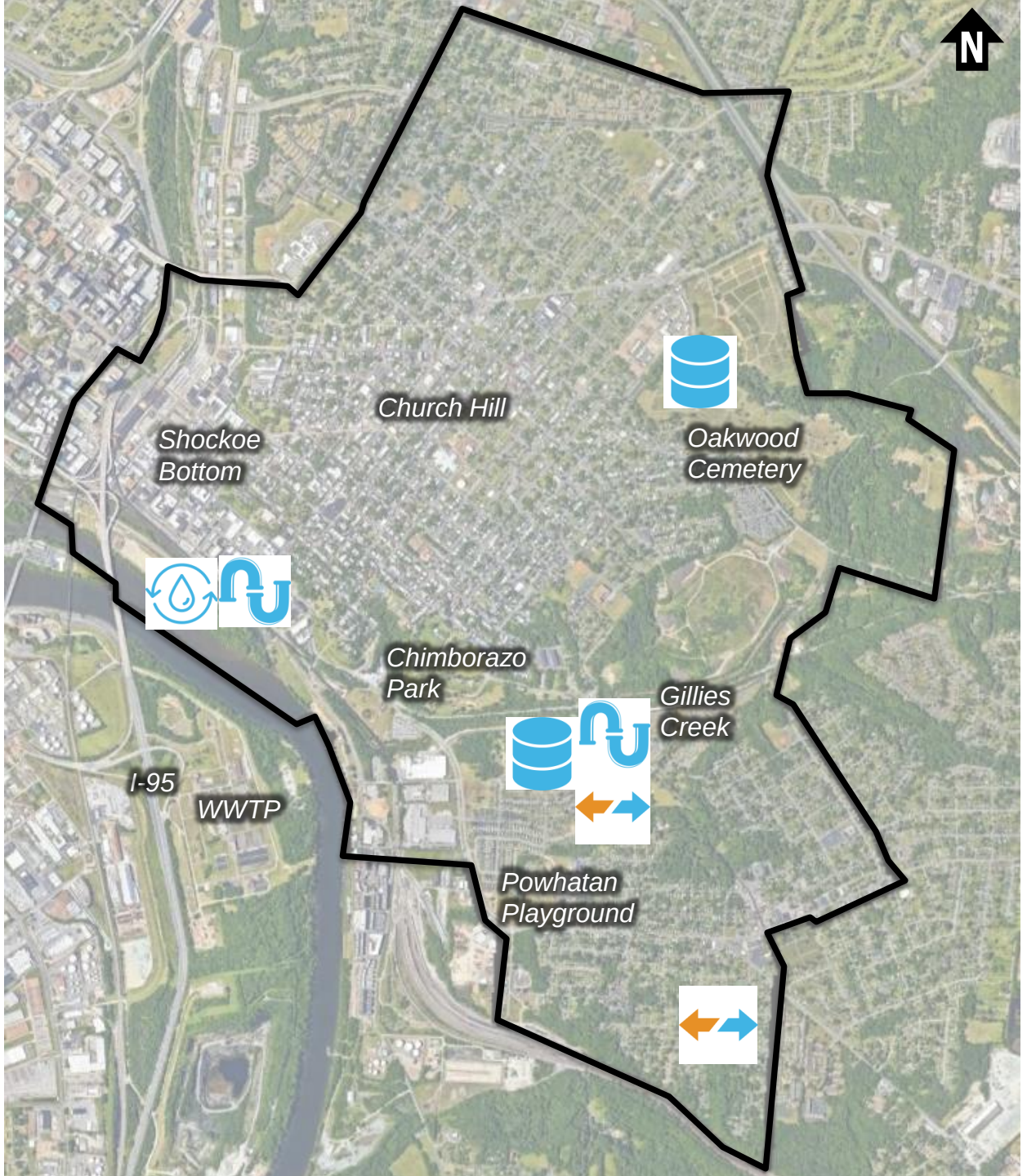
New Pipe

Storage Tank

Treatment

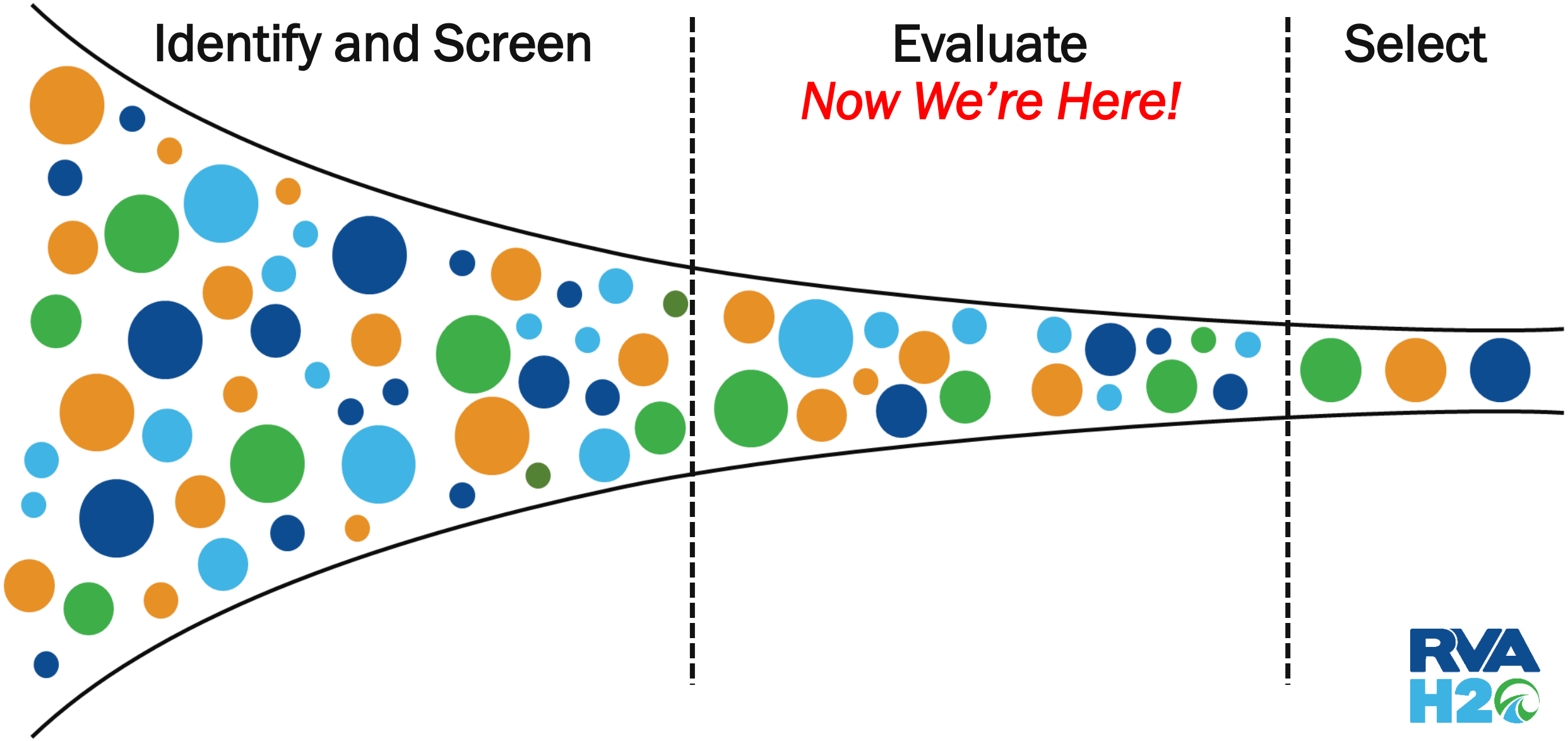
Separation

Green Infrastructure



Solutions Evaluation

Solutions Discussion



Solutions Evaluation Criteria

Performance

Cost

Cost-Effectiveness

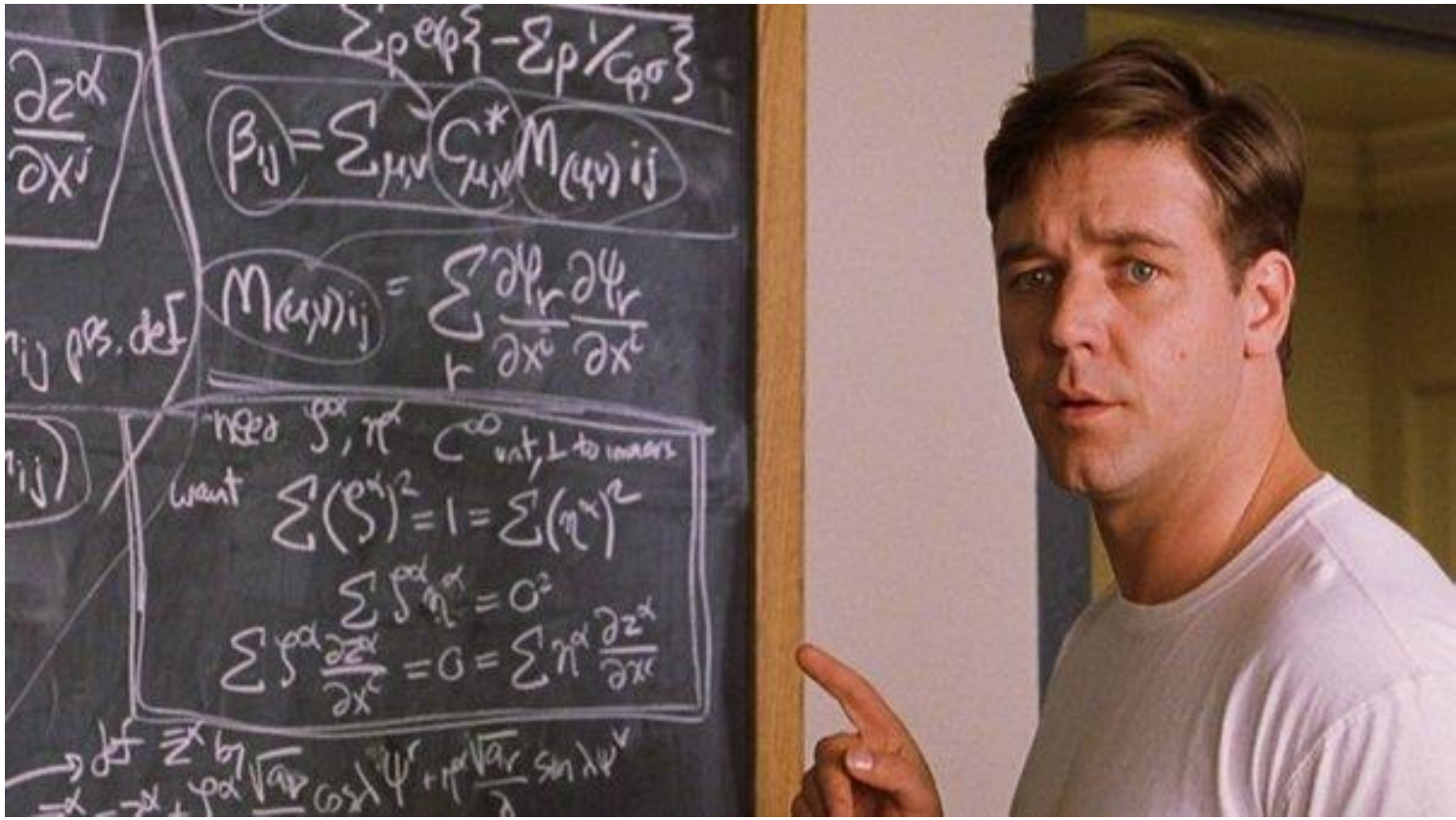
Qualitative

Solutions Evaluation Criteria

Performance

Use models to evaluate reduction in:

- ❑ Overflow Events
- ❑ Overflow Volume
- ❑ Bacteria



Solutions Evaluation Criteria

$ Cost

Develop planning level cost estimates:

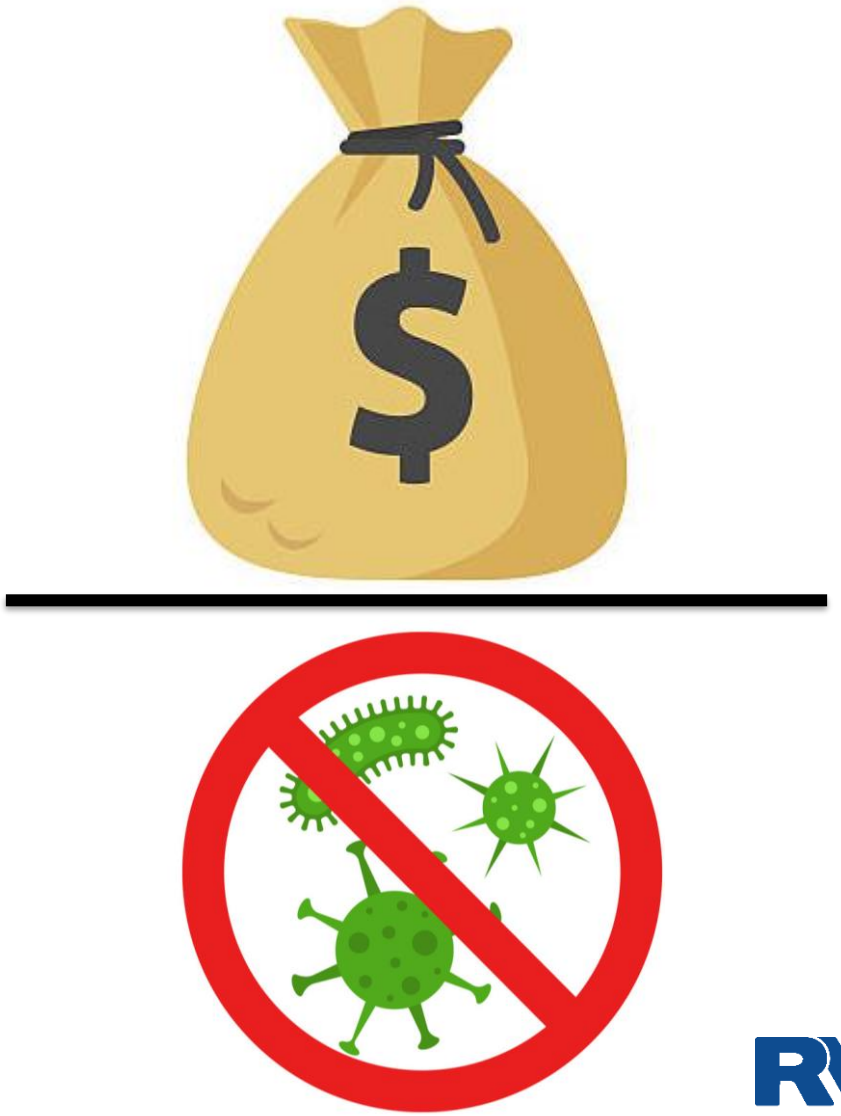
1. Construction
2. Capital
3. Annual Operations and Maintenance
4. Life Cycle

Solutions Evaluation Criteria

Cost-Effectiveness

Identify “best bang for the buck” solutions:

- ❑ $ / Overflow Volume Reduced
- ❑ $ / Overflow Event Reduced
- ❑ $ / Bacteria Reduced



Break!

Qualitative Evaluation Criteria

Solutions Evaluation Criteria

Qualitative Criteria

Evaluate benefits/impacts that are not captured in cost/performance criteria:

1. Constructability
2. Operations and Maintenance
3. Land Use and Permitting
4. Community
5. Adaptability and Resiliency

Solutions Evaluation Criteria

Qualitative Criteria *Example*

Renting a Beach House

Weighted Score = Weight x Score

Topic	Topic Scoring		Weight (1-5)	Score	Weighted Score
# of Bedrooms	2	>3 Bedrooms	5	1	5
	1	2-3 Bedrooms			
	0	1 Bedrooms			
Pool Access	2	Private Pool	3	2	6
	1	Public Pool			
	0	No Pool			
Location	2	On the beach	2	1	2
	1	Less than 2 blocks from the beach			
	0	More than 2 blocks from the beach			

Total Weighted Score = 13

Solutions Evaluation Criteria

Qualitative Criteria *CSS Example*

New Storage Tank at a City-Owned Park

Weighted Score = Weight x Score

Topic	Topic Scoring		Weight (1-5)	Score	Weighted Score
Water Quality Improvements in Environmental Justice Areas	2	Yes	5	2	10
	1	Adjacent			
	0	No			
Impacts to community during construction	2	None	4	0	0
	1	Traffic Detours / Noise			
	0	Road/Park Closures			
Land/Easement Acquisition	2	None	2	2	4
	1	Easements Required			
	0	Land Acquisition Required			

Total Weighted Score = 14

Solutions Evaluation Criteria

Qualitative Criteria – Constructability

Topic	Topic Scoring	
Estimated Project Schedule	2	<2 years with minimal risks for schedule extension
	1	2 - 4 years
	0	>4 years with moderate to severe risks for schedule extension
Utility Conflicts	2	None/Minor
	1	Moderate, resolvable through relocations and/or reconstruction
	0	Major, requiring significant disruption and/or significant relocations
Overlap with Capital Improvement Projects	2	Planned within next 5 years
	1	Planned in 5 - 10 years
	0	Planned longer than 10 years
Land Acquisition or Construction Easements	2	None required
	1	Permanent easements required
	0	Land acquisition required
Deep Excavation	**2**	No deep excavation (<20-ft)
	1	Moderate deep excavation (20-40-ft)
	0	Tunneling or deep excavation (>40-ft deep)

Deep excavations and tunneling can present construction risks

Solutions Evaluation Criteria

Qualitative Criteria – Operations and Maintenance

Topic	Topic Scoring	
Opportunity to Reduce Current Street Flooding	2	Reduce flooding
	1	Reduce surcharging
	0	No improvement
Risk of Street Flooding caused by Equipment Failure	2	None
	1	Causes surcharging
	0	Causes street flooding
New Facility/Equipment Maintenance Requirements	2	Quarterly
	1	Monthly
	0	Weekly
City Staff Familiarity with New Facilities/Equipment	2	Yes
	0	No
Additional Staff Required for Operations and Maintenance	2	None
	1	1-2
	0	>2

Solutions Evaluation Criteria

Qualitative Criteria – Adaptability and Resiliency

Topic	Topic Scoring	
Ability to adapt with future projects	2	Project supports future improvements
	1	Additional modifications needed to support future improvements
	0	Project will be obsolete after future improvements
Resiliency to potential climate change impacts	2	1-2 additional overflow events in projected climate change scenarios
	1	2-4 additional overflow events in projected climate change scenarios
	0	>4 additional overflow events in projected climate change scenarios
Impact of River Flooding	2	100-year flood
	1	25-year flood
	0	<25-year flood

Solutions Evaluation Criteria

Qualitative Criteria – Land Use and Permitting

Topic	Topic Scoring	
Opportunities to Partner with Future Land Use Plans	2	<10 years
	1	>10 years
	0	None
Required Federal, State, 3rd Party Permits	2	No
	0	Yes
Project located in Environmentally sensitive areas	2	Outside Resource Management Area (RMA)
	1	In RMA
	0	In Resource Protection Area (RPA)
Required VPDES permitting modifications	2	No
	0	Yes

Solutions Evaluation Criteria

Qualitative Criteria – Community

Topic	Topic Scoring	
Opportunities for Water Quality Improvements in Environmental Justice Areas	2	Yes
	1	Adjacent
	0	No
Opportunity to provide public space improvements	2	Yes
	1	Adjacent
	0	No
Impacts to community during construction	2	None
	1	Traffic detours and/or noise in residential areas
	0	Road/Park closures
Tree Removal/Mitigation	**2**	<0.2 acres
	1	0.2-1 acres
	0	>1 acres

Solutions Evaluation Criteria

Qualitative Criteria – Weight Questionnaire

Final Plan Qualitative Criteria

Please Rate each of the following Topics by Importance

	Not Important at All	Somewhat Important	Important	Very Important	Extremely Important
Opportunities for Water Quality Improvements in Social Vulnerability Areas	○	○	○	○	○
Opportunity to provide public space improvements	○	○	○	○	○
Impacts to community during construction	○	○	○	○	○
Tree Removal / Mitigation	○	○	○	○	○
Opportunities to partner with Future Land Use Plans	○	○	○	○	○

What's Coming Next

Purpose	Meeting Date	Key Topics
Qualitative Evaluation Criteria	Email/Online July 2023	Take survey to “score” criteria
Evaluation	August 2023	Evaluation: Cost/Performance/Qualitative
Selection	October 2023	Ranking Criteria Ranking of Solutions
	December 2023	Feedback from Community Solution Selection
	February 2024	Implementation Schedule Financial Impacts Solution Benefits (water quality + community)
Review	March 2024	Review Final Plan

Next Meeting: August 2023

Grace.LeRose@rva.gov

CSO Outfall 003 Pipeline & Canal Walk Construction