

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 #8

- Final Plan Requirements Review
- Solutions Performance, Cost and Cost-Effectiveness
- Next Meetings



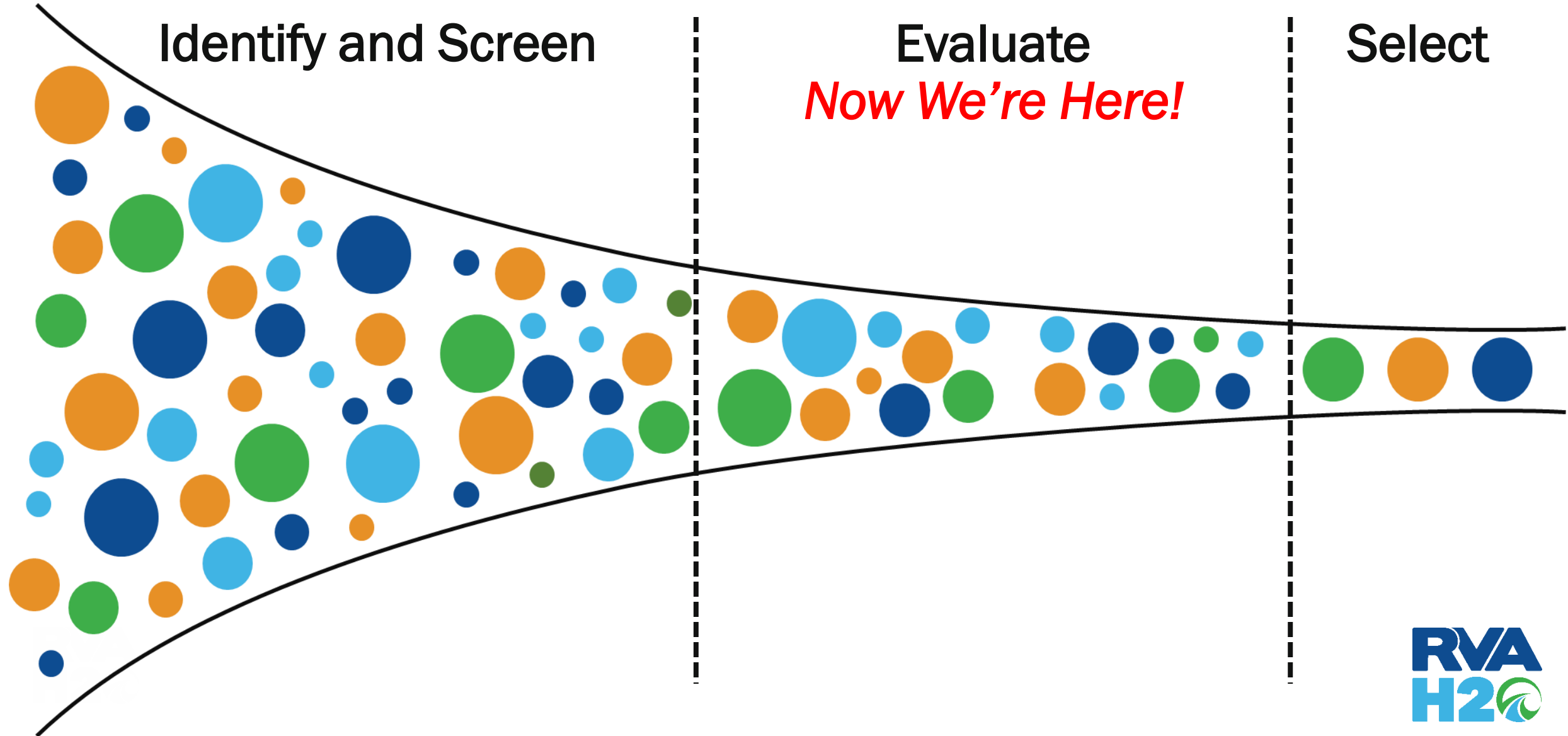
The Process: Developing the Final Plan



**THE CULMINATION OF
OUR WORK**

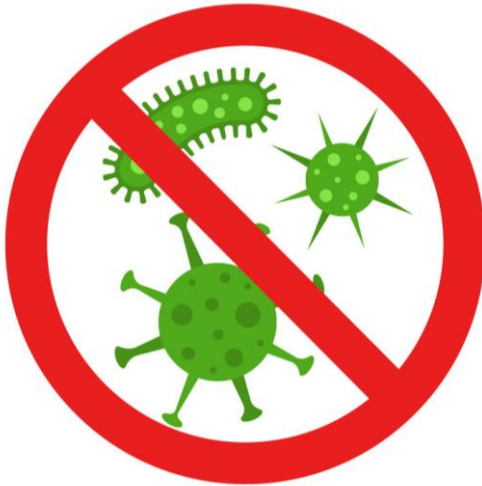


Solutions Discussion



Final Plan – Purpose Reminder

- Reduce bacteria sent to waterbodies




Performance Requirements

Consent Order (2005)

1. Bacteria Reduction Requirements

- James River (meet by 7/1/35)

RECEIVED
FEB 09 2005
PRO


COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

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Secretary of Natural Resources

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Director

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Piedmont Regional Director

**STATE WATER CONTROL BOARD ENFORCEMENT ACTION
SPECIAL ORDER BY CONSENT
ISSUED TO
THE CITY OF RICHMOND
Permit No. VA0063177**

James River Total Maximum Daily Load (2010)

1. Bacteria Reduction Requirements

- James River (same as Consent Order)
- Gillies Creek (meet by 12/31/36)
- Almond Creek (meet by 12/31/36)

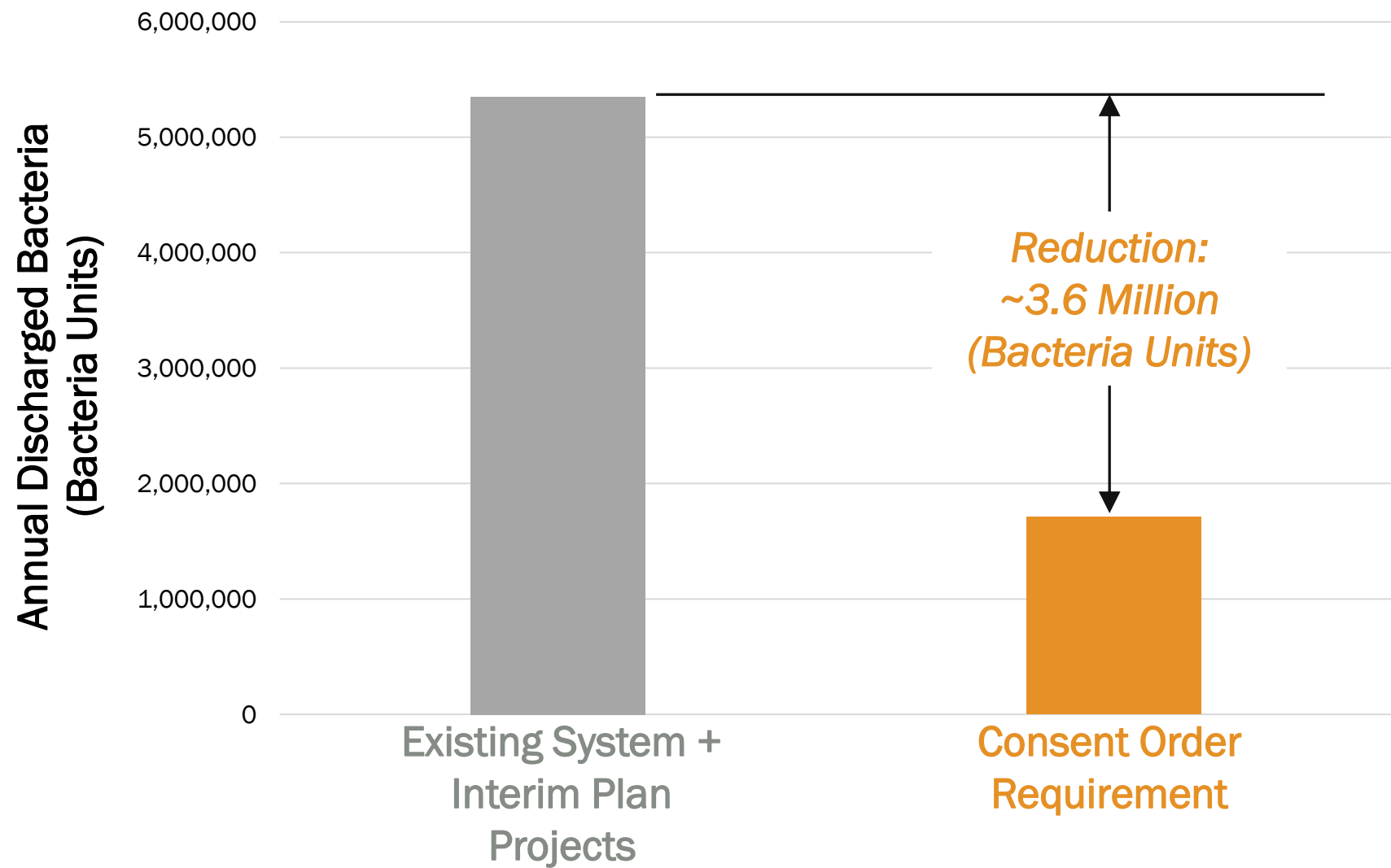
Bacterial Total Maximum Daily Load Development for the James River and Tributaries – City of Richmond



November 2010

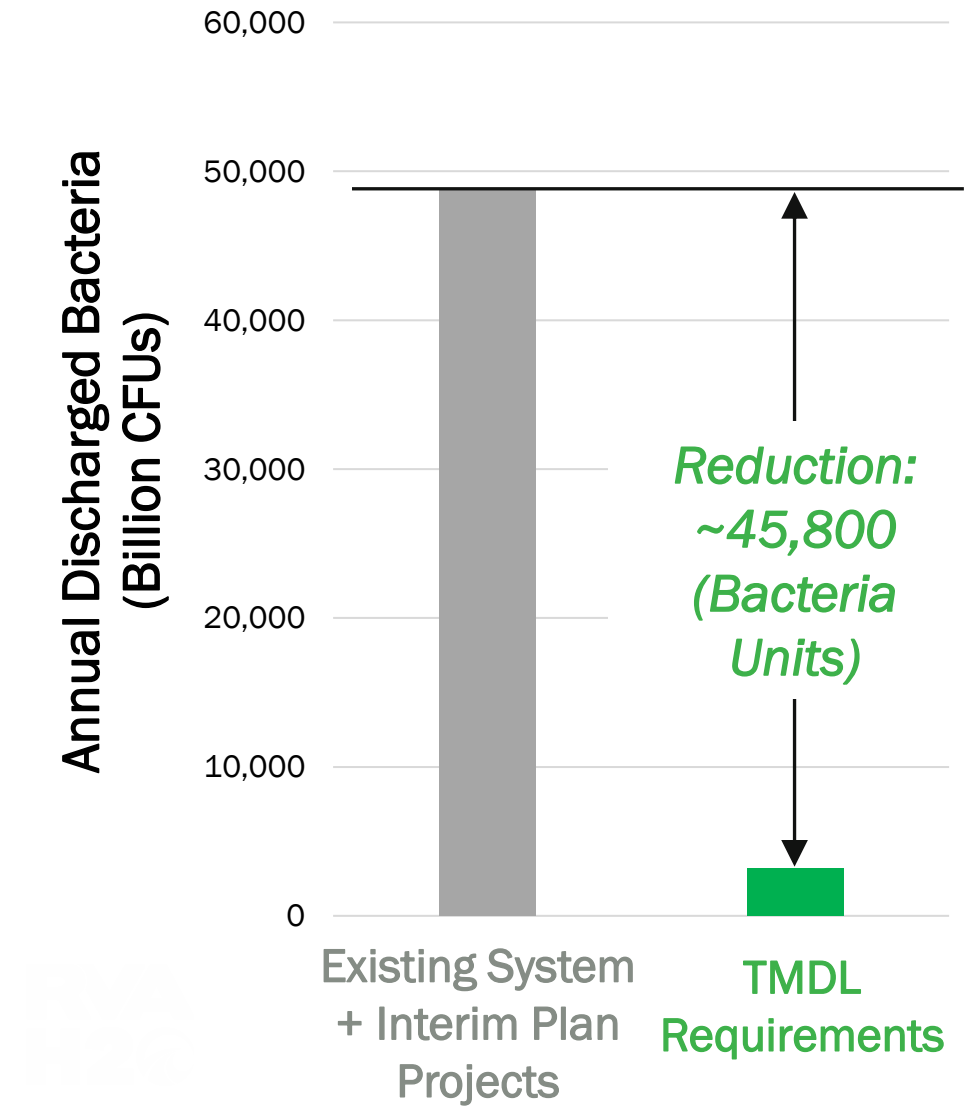
Bacteria Reduction Requirements

James River



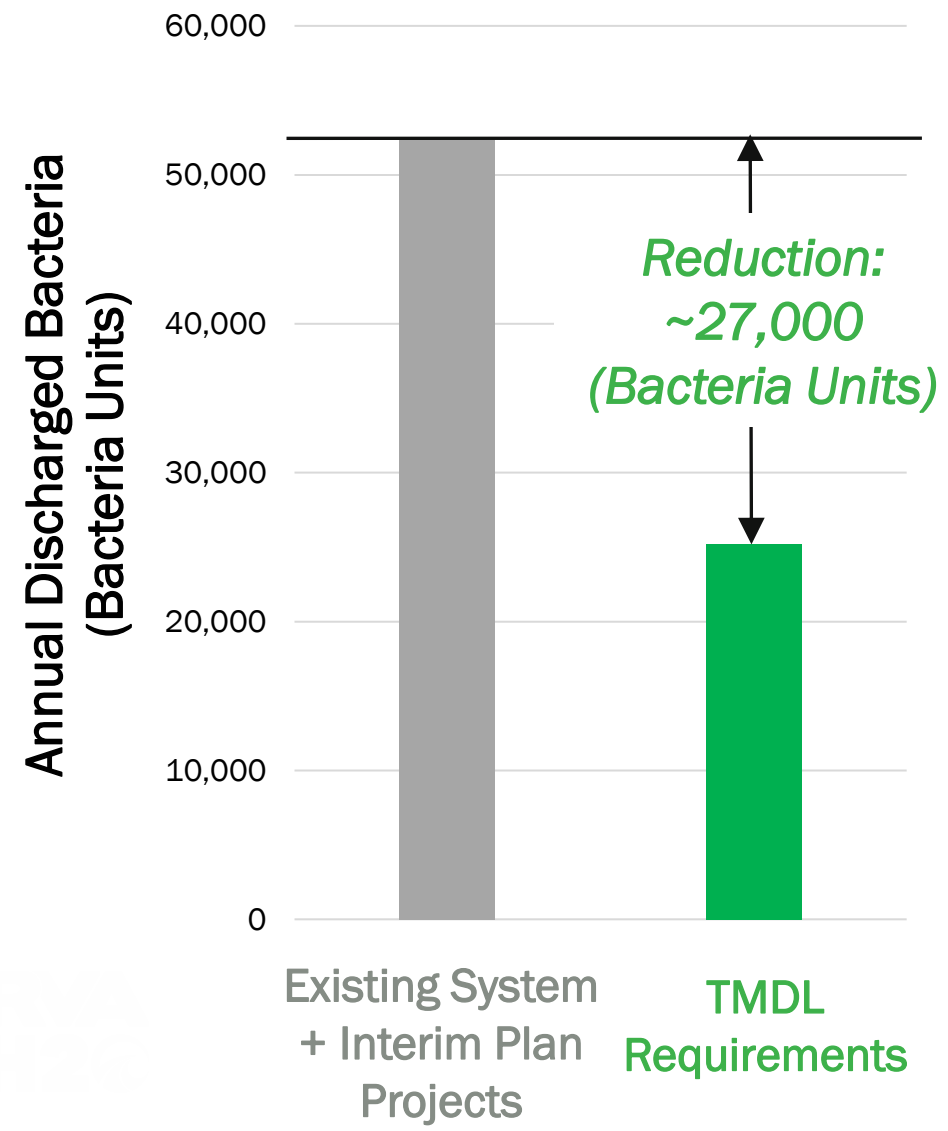
Bacteria Reduction Requirements

Bacteria TMDL – Gillies Creek

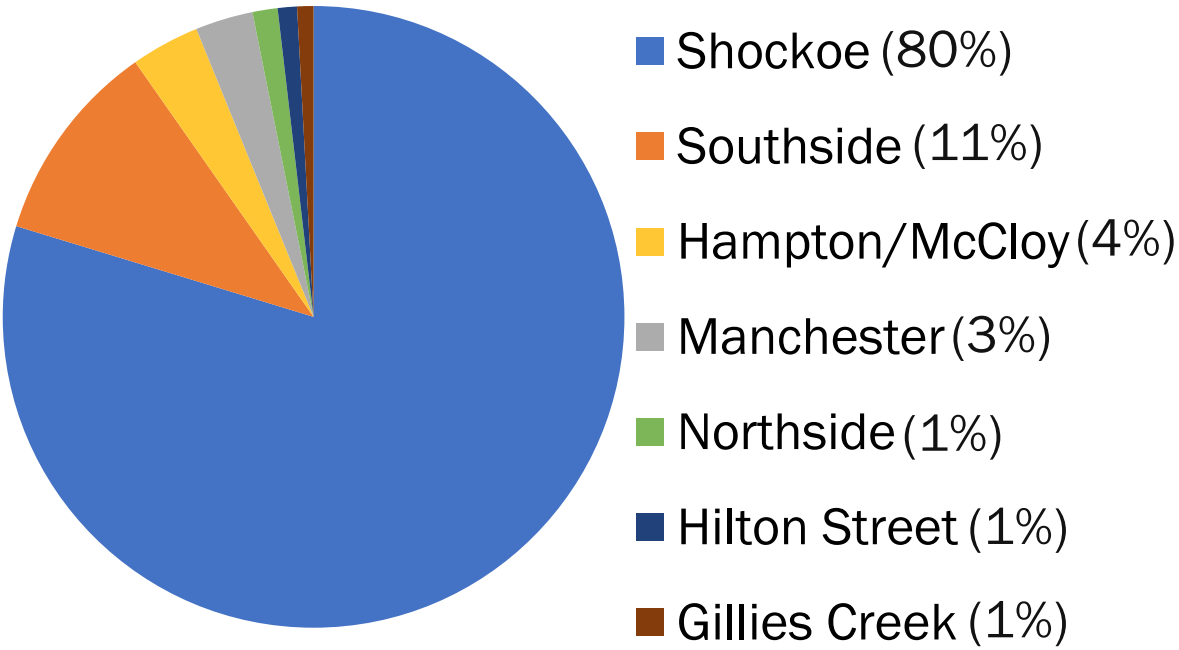
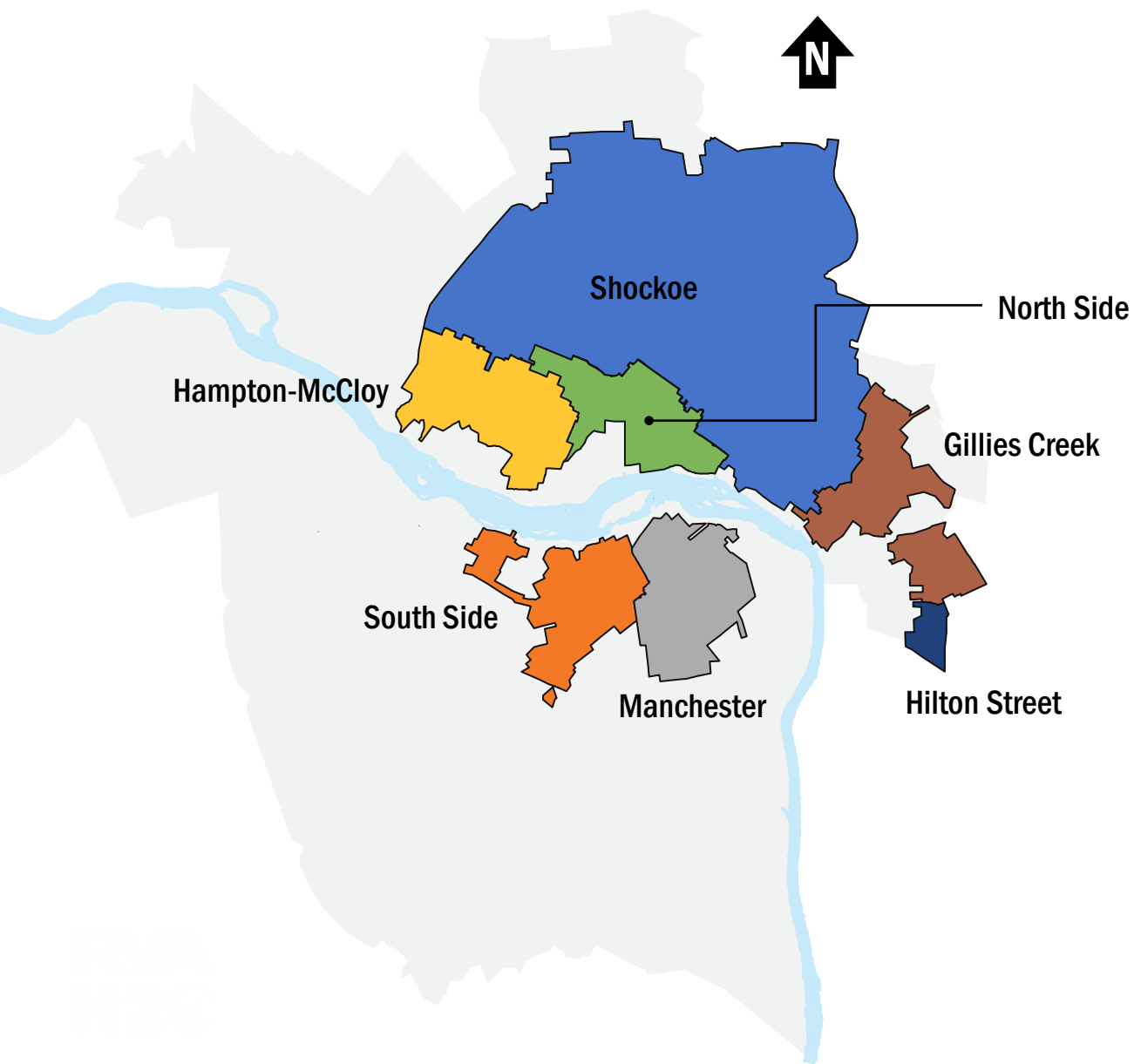


Bacteria Reduction Requirements

Bacteria TMDL – Almond Creek

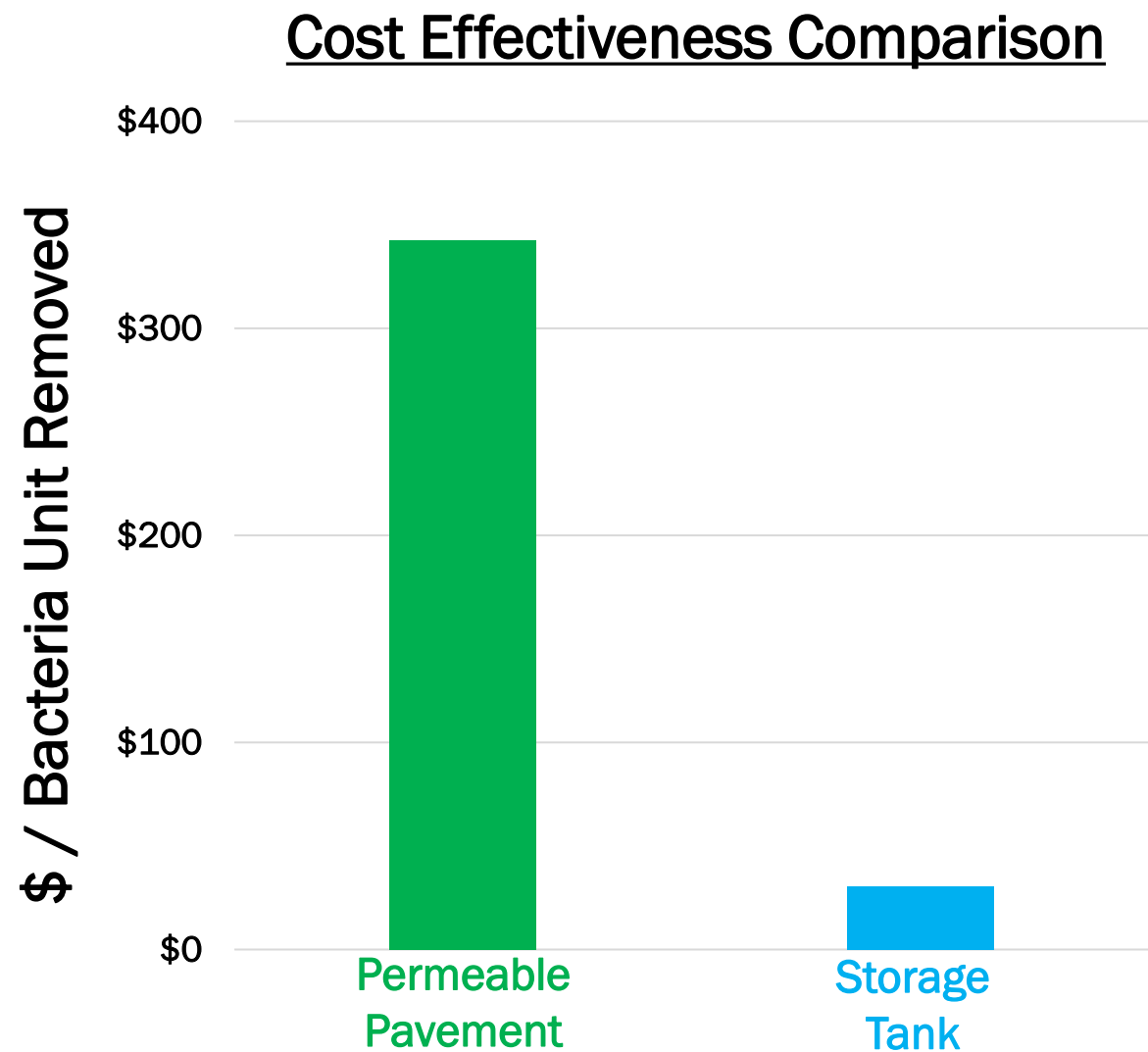


Bacteria Contributions from CSS



Role of Green Infrastructure

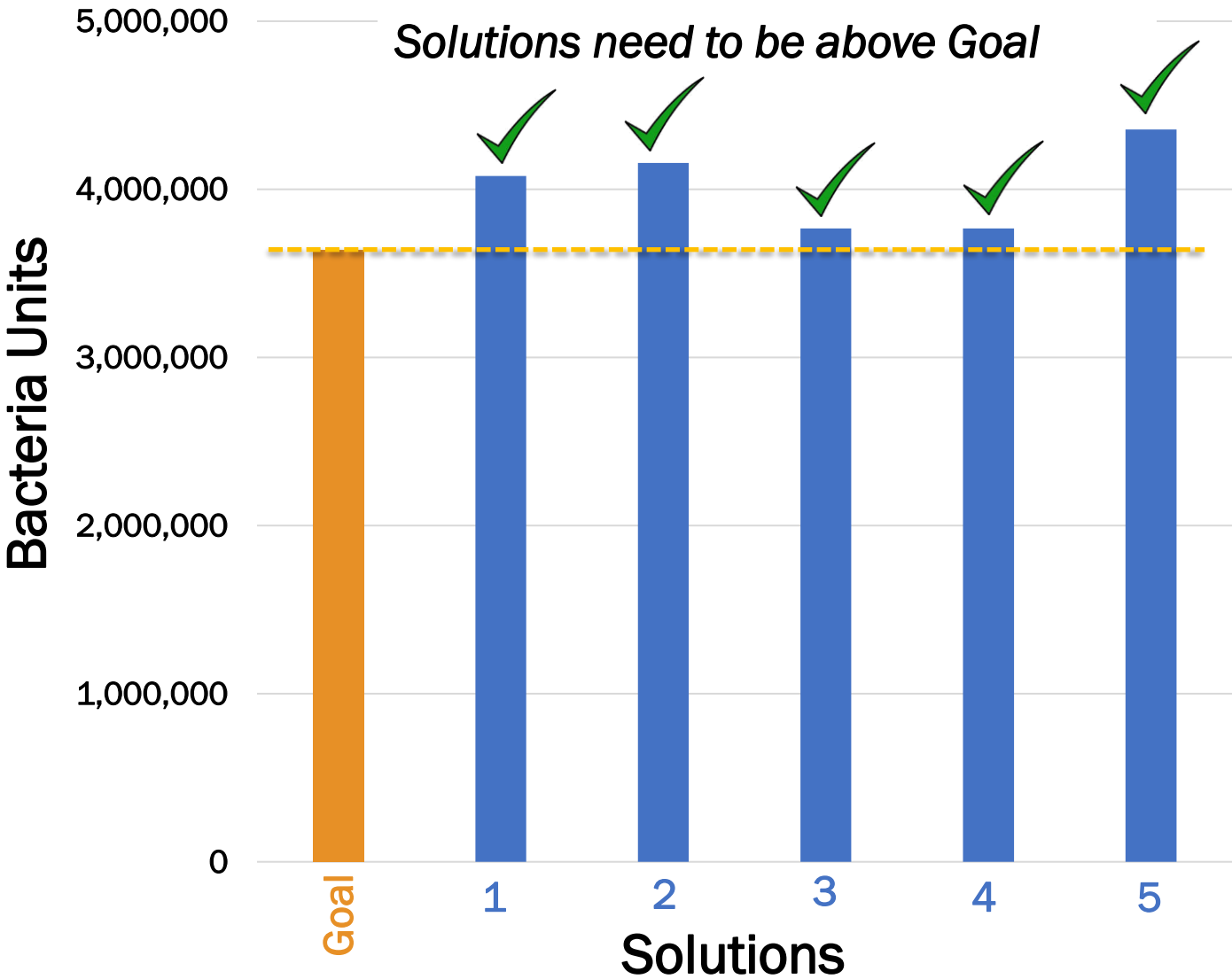
- ☐ Not cost-effective to remove bacteria
- ☐ Implement GI in select locations for bacteria removal AND social benefits



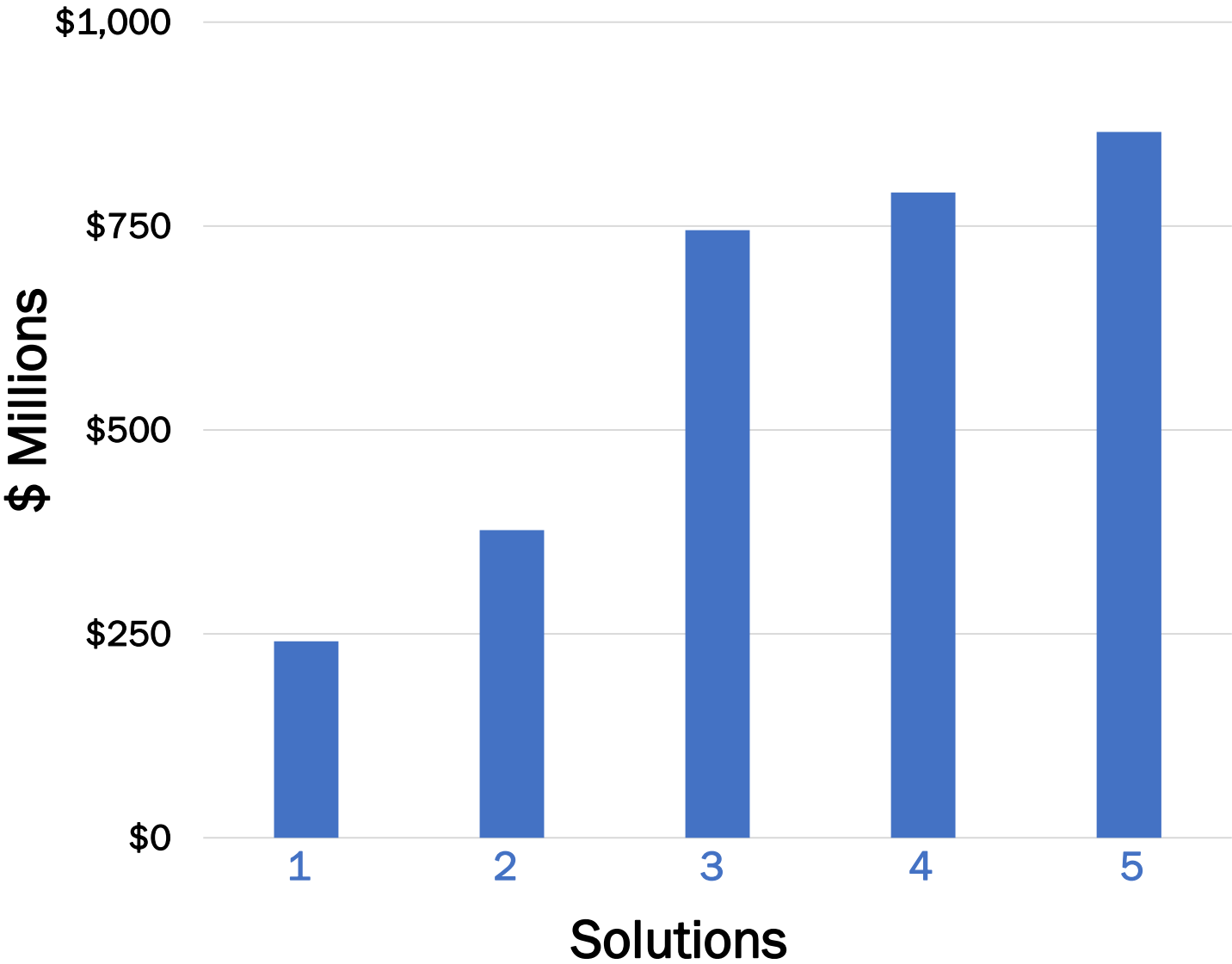
The background is a solid dark blue. On the left side, there are several concentric circles in a lighter shade of blue, creating a ripple effect that fades into the background.

Shockoe

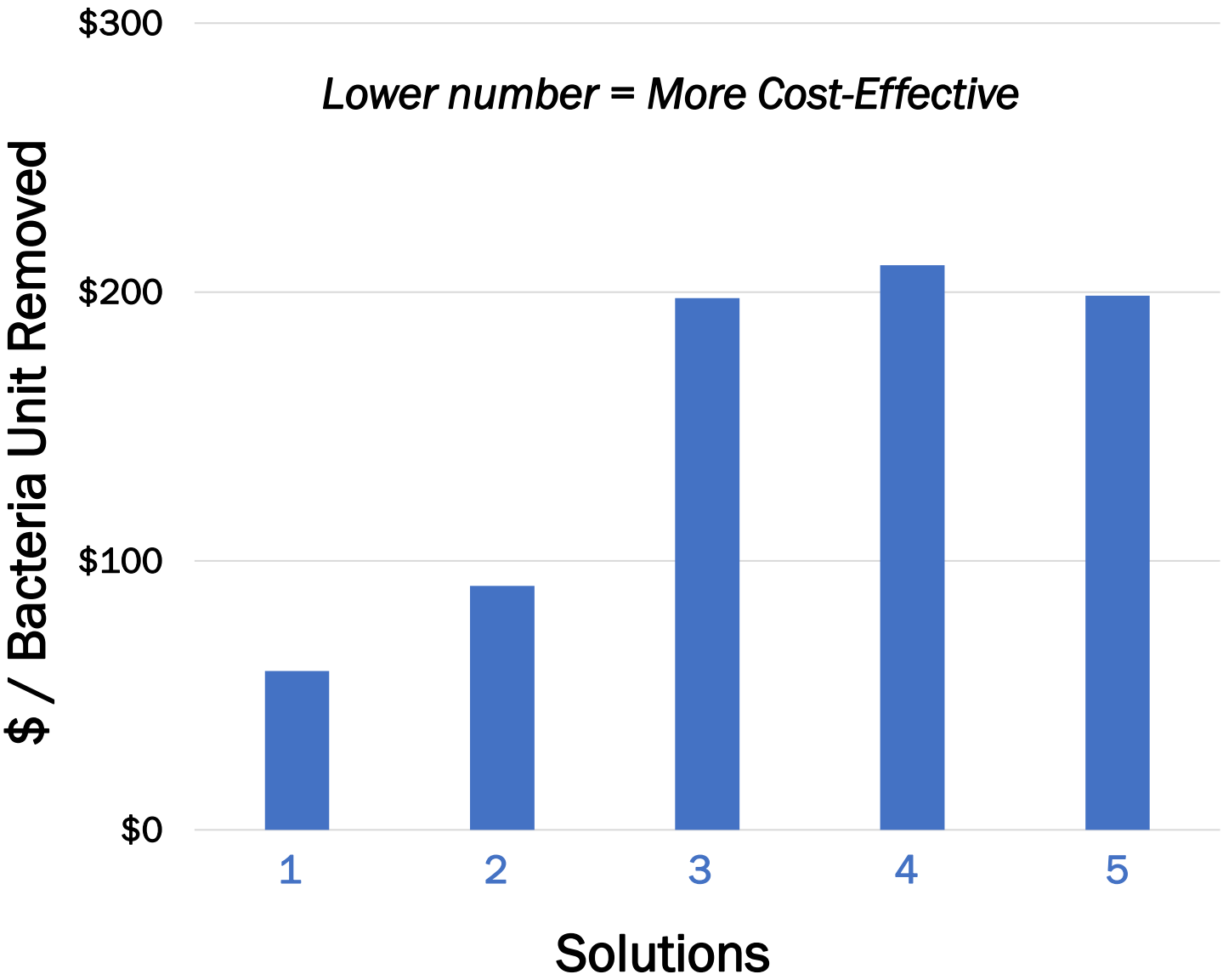
Shockoe Solutions - Annual Bacteria Reduced



Shockoe Solutions - Capital Cost



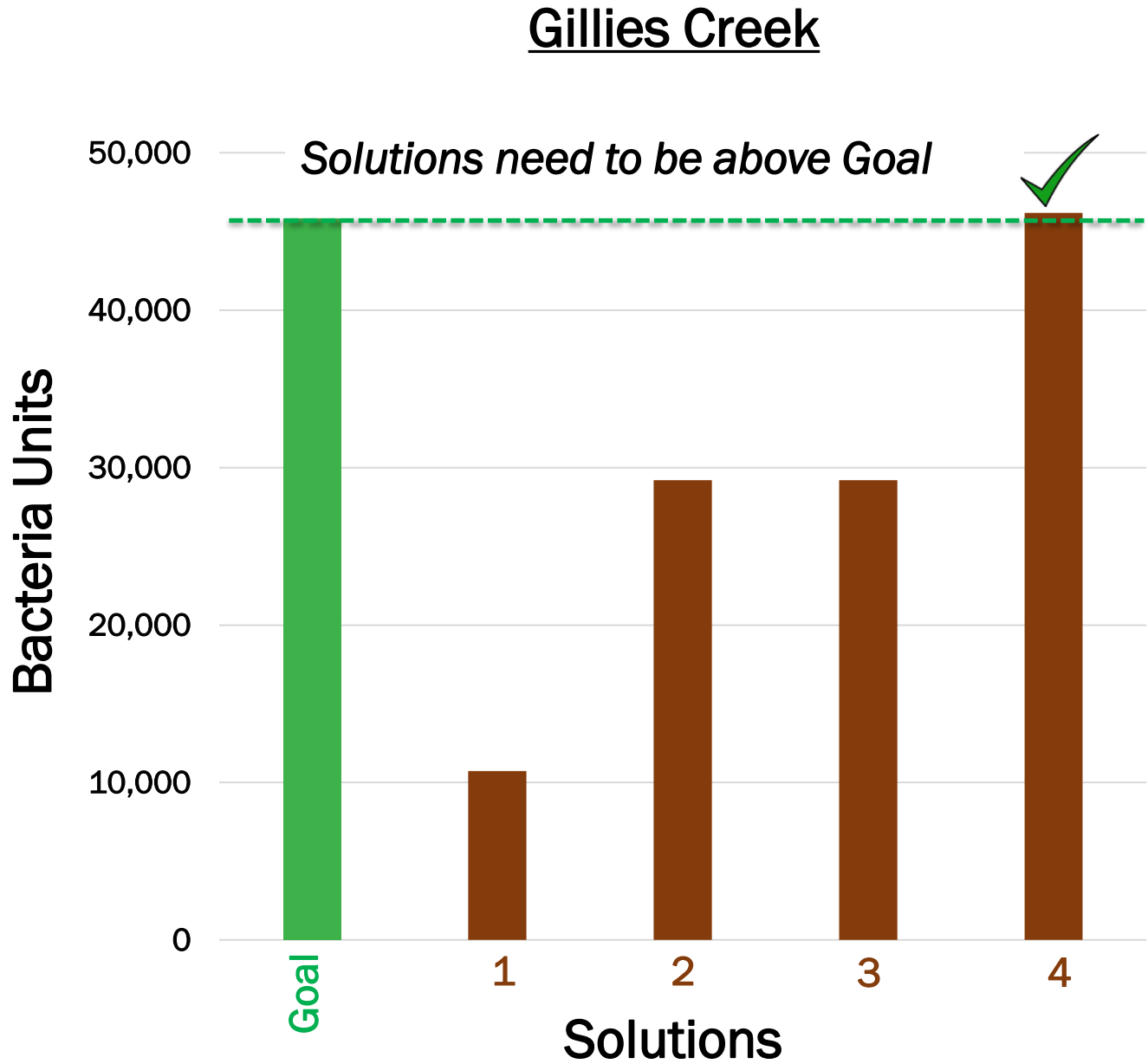
Shockoe Solutions Cost-Effectiveness



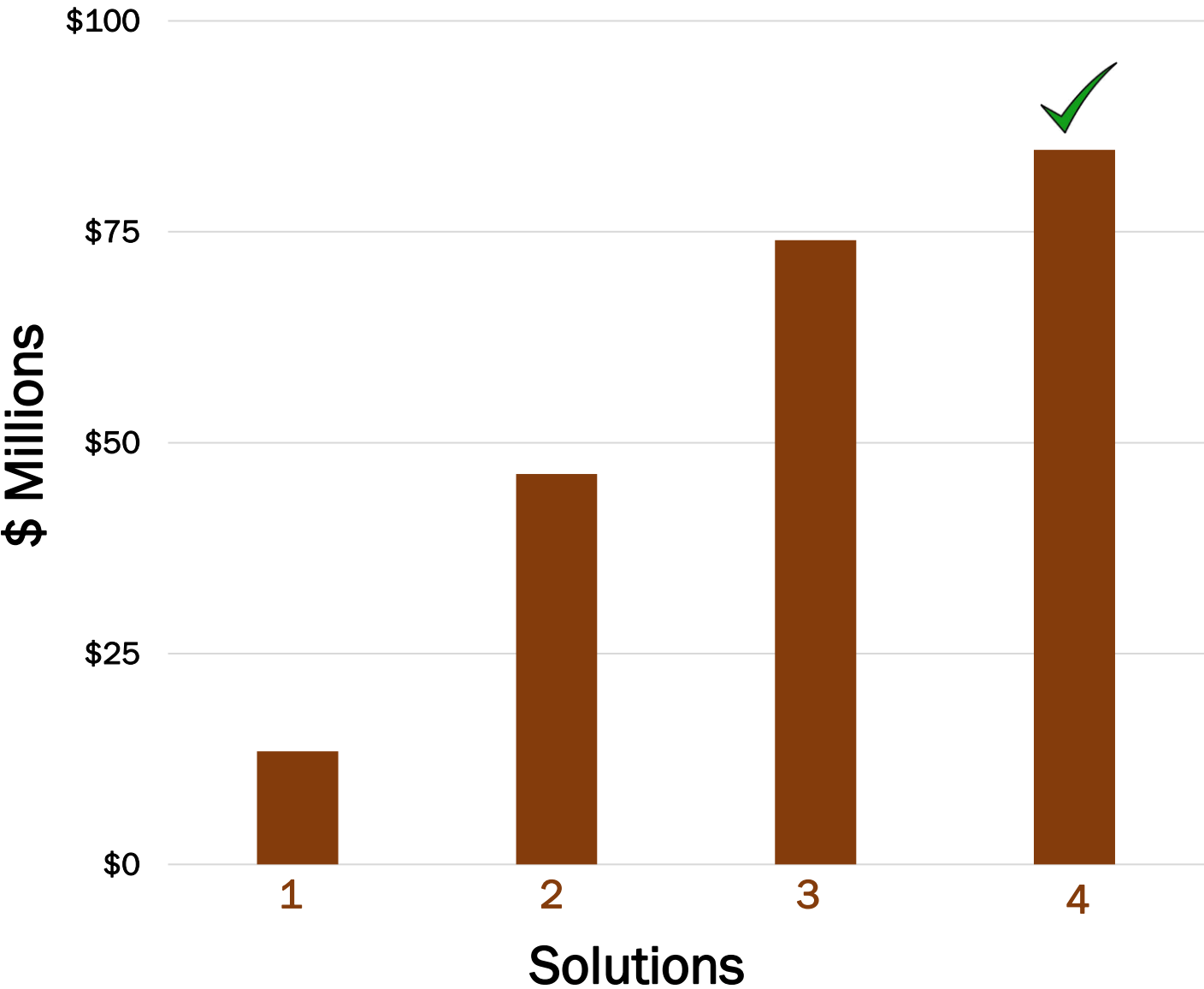


Gillies Creek

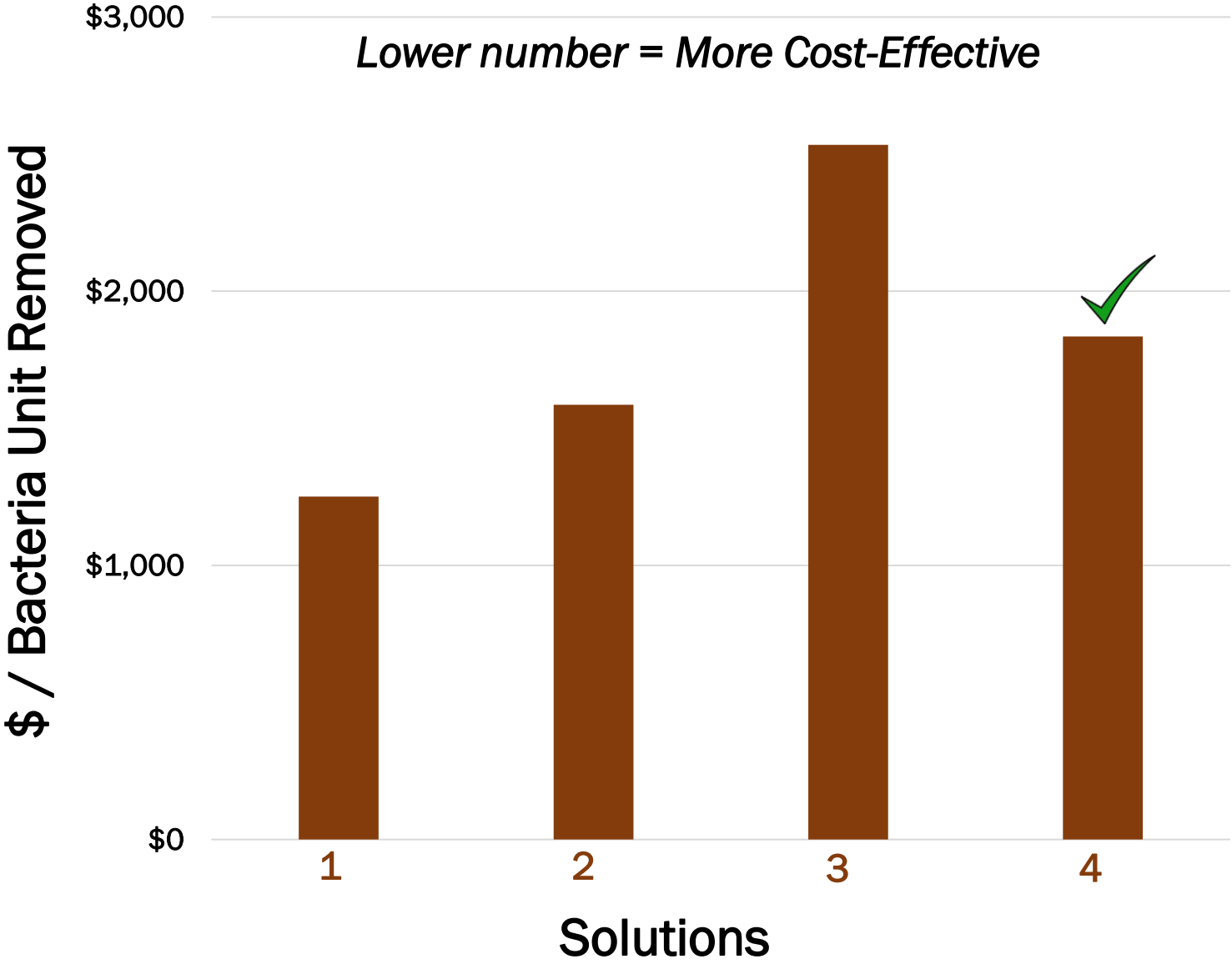
Gillies Creek Solutions – Annual Bacteria Reduced



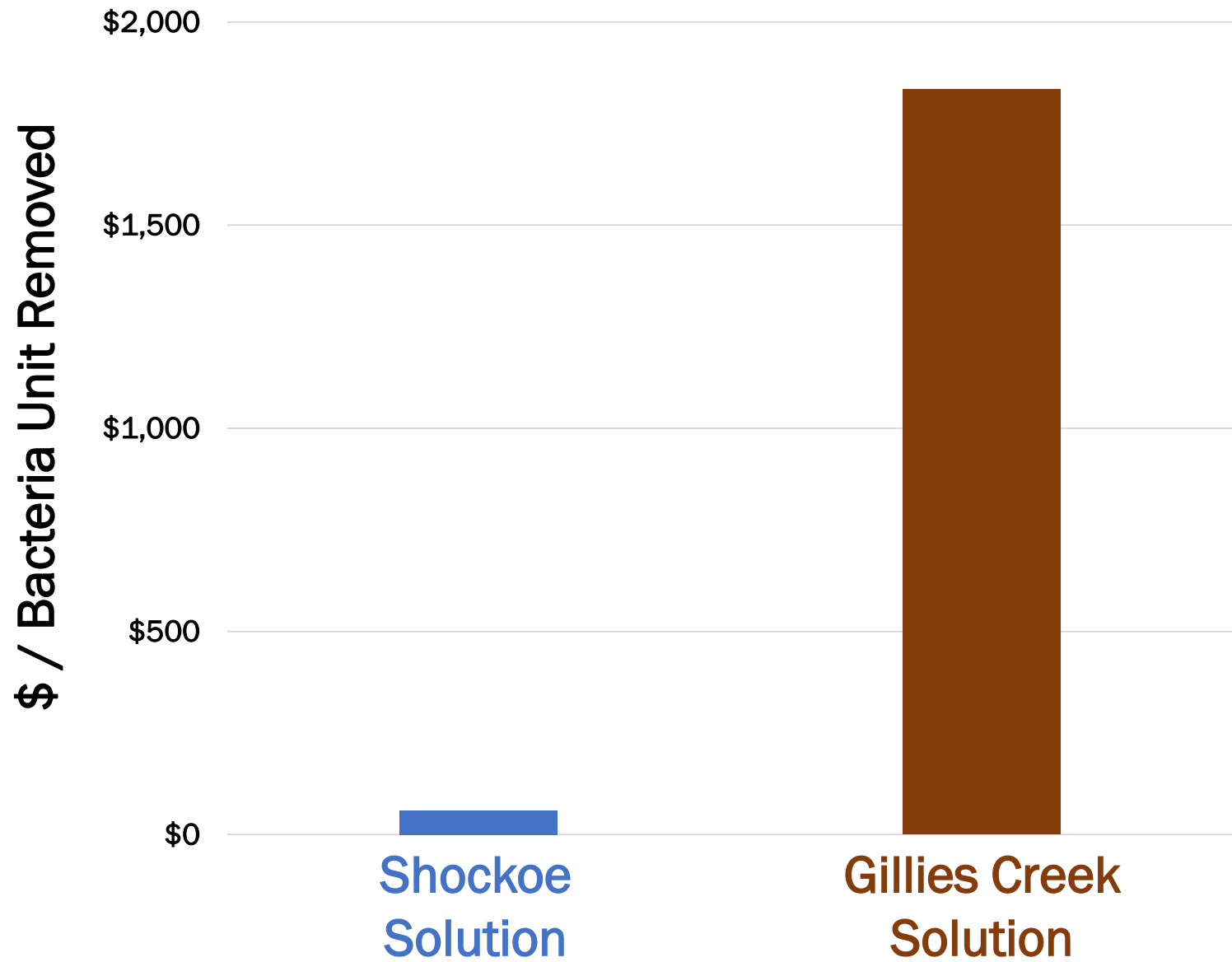
Gillies Creek Solutions - Capital Cost



Gillies Creek Solutions - Cost-Effectiveness



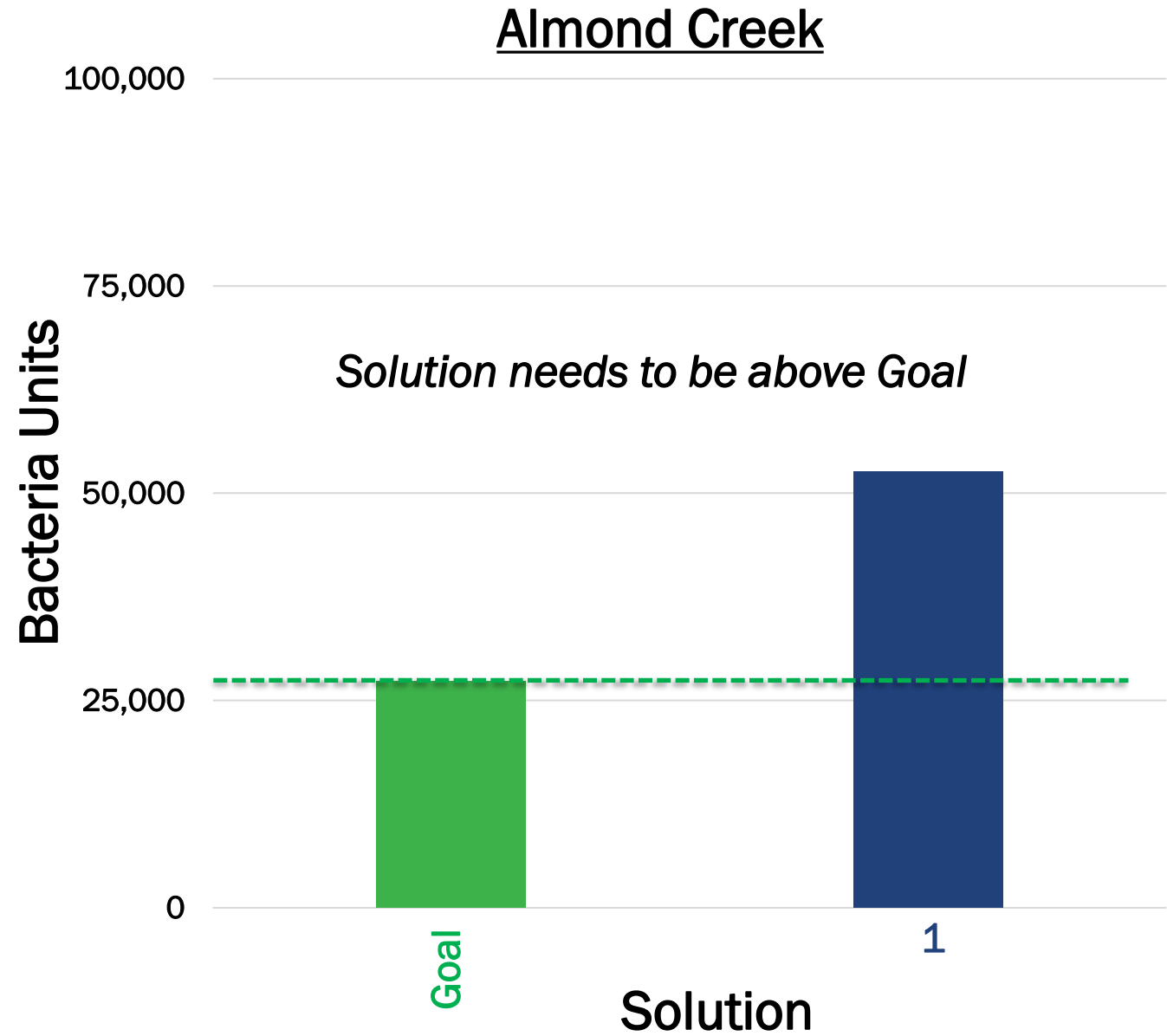
Shockoe and Gillies Creek Cost-Effectiveness Comparison



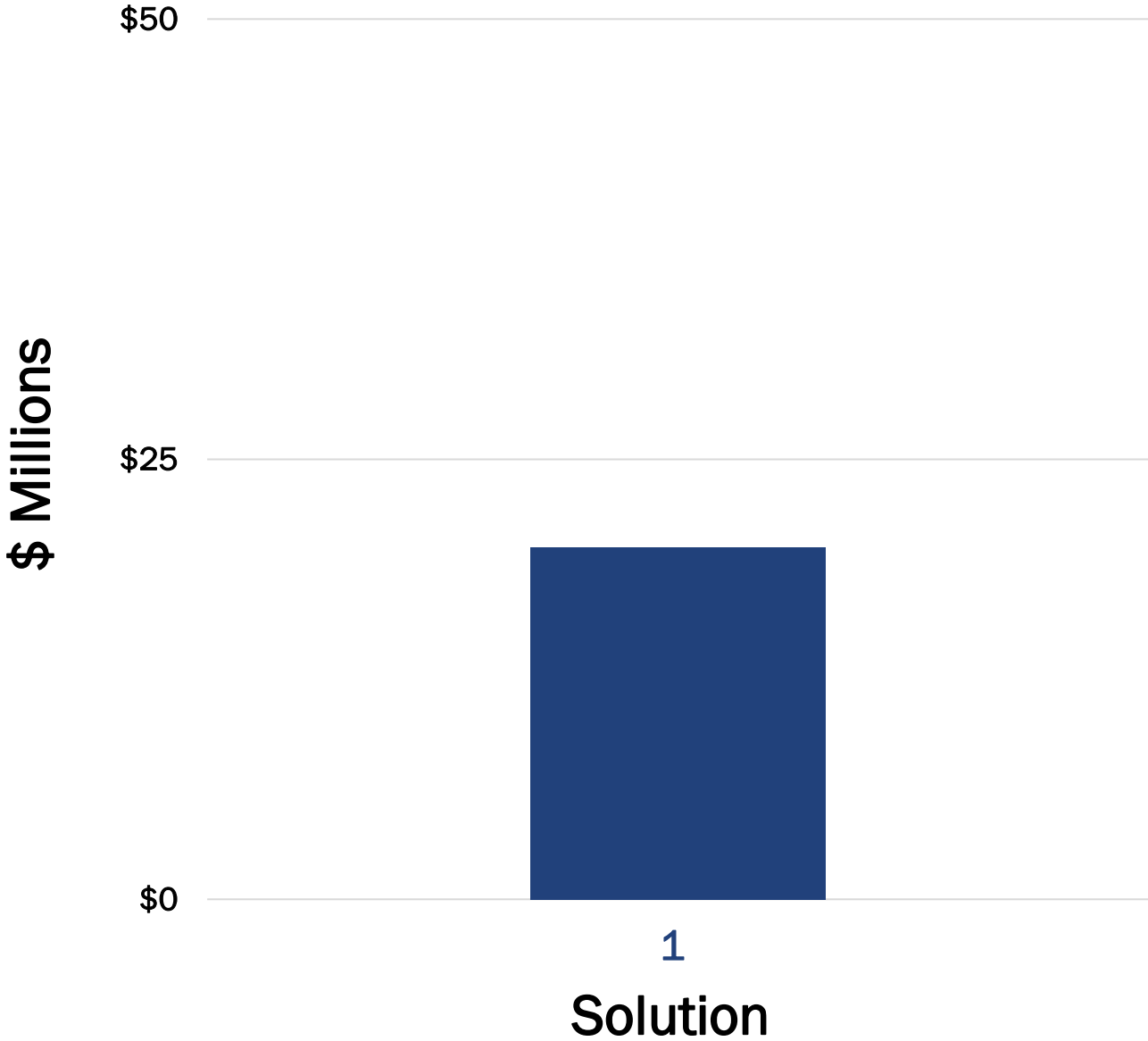


Hilton Street

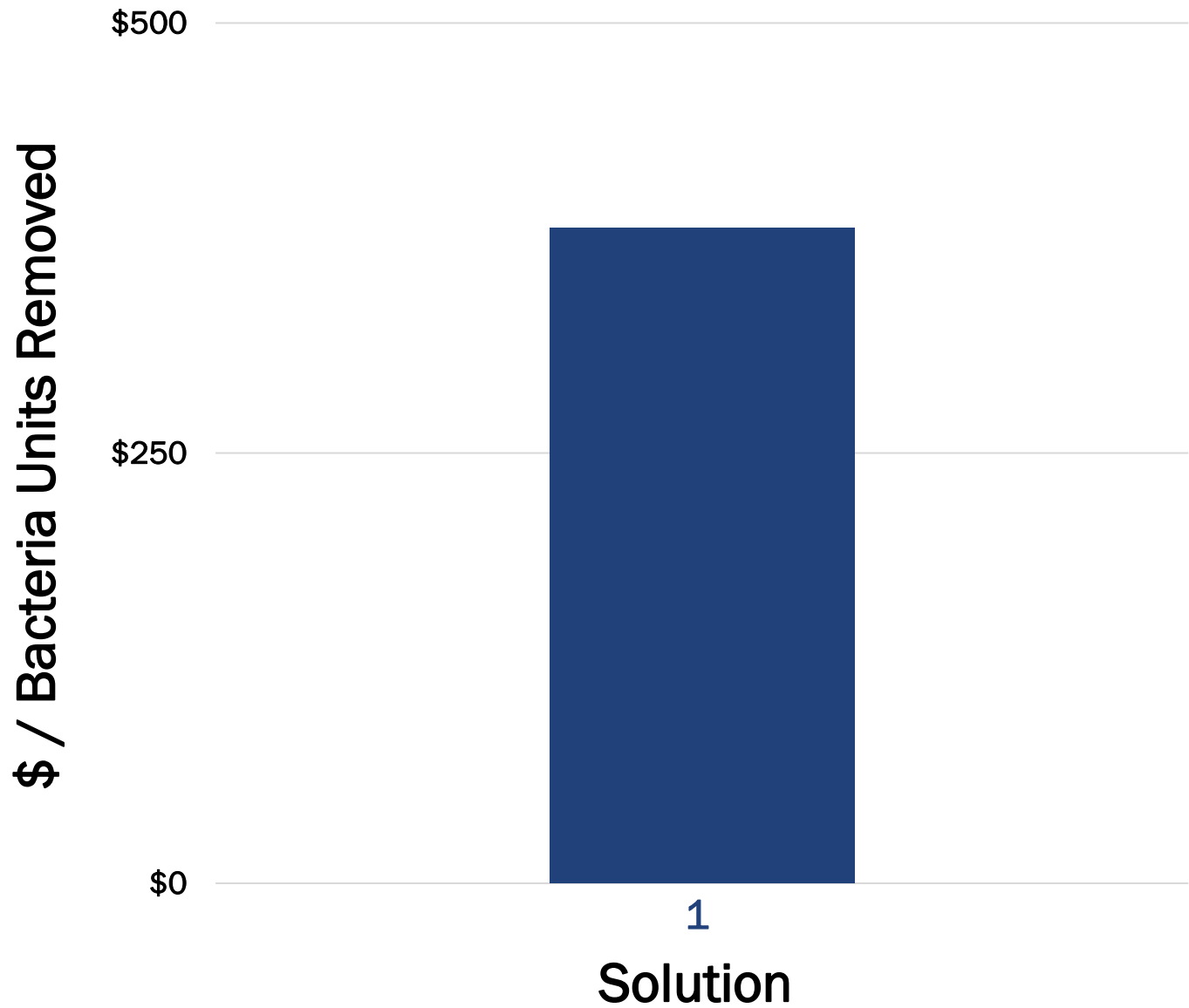
Hilton Street Solutions – Annual Bacteria Reduced



Hilton Street Solutions - Capital Cost



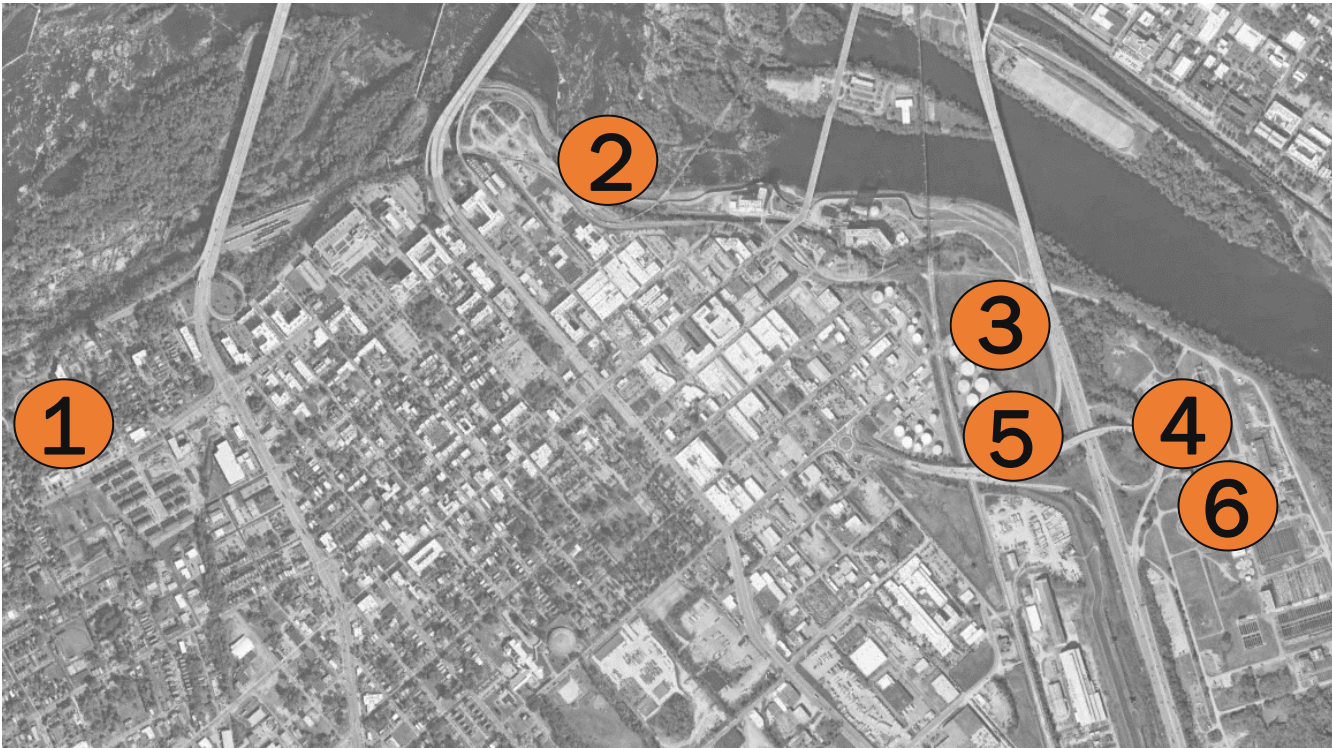
Hilton Street Solutions - Cost-Effectiveness





Southside and Manchester

Southside/Manchester Solutions – Annual Bacteria Reduced



Southside

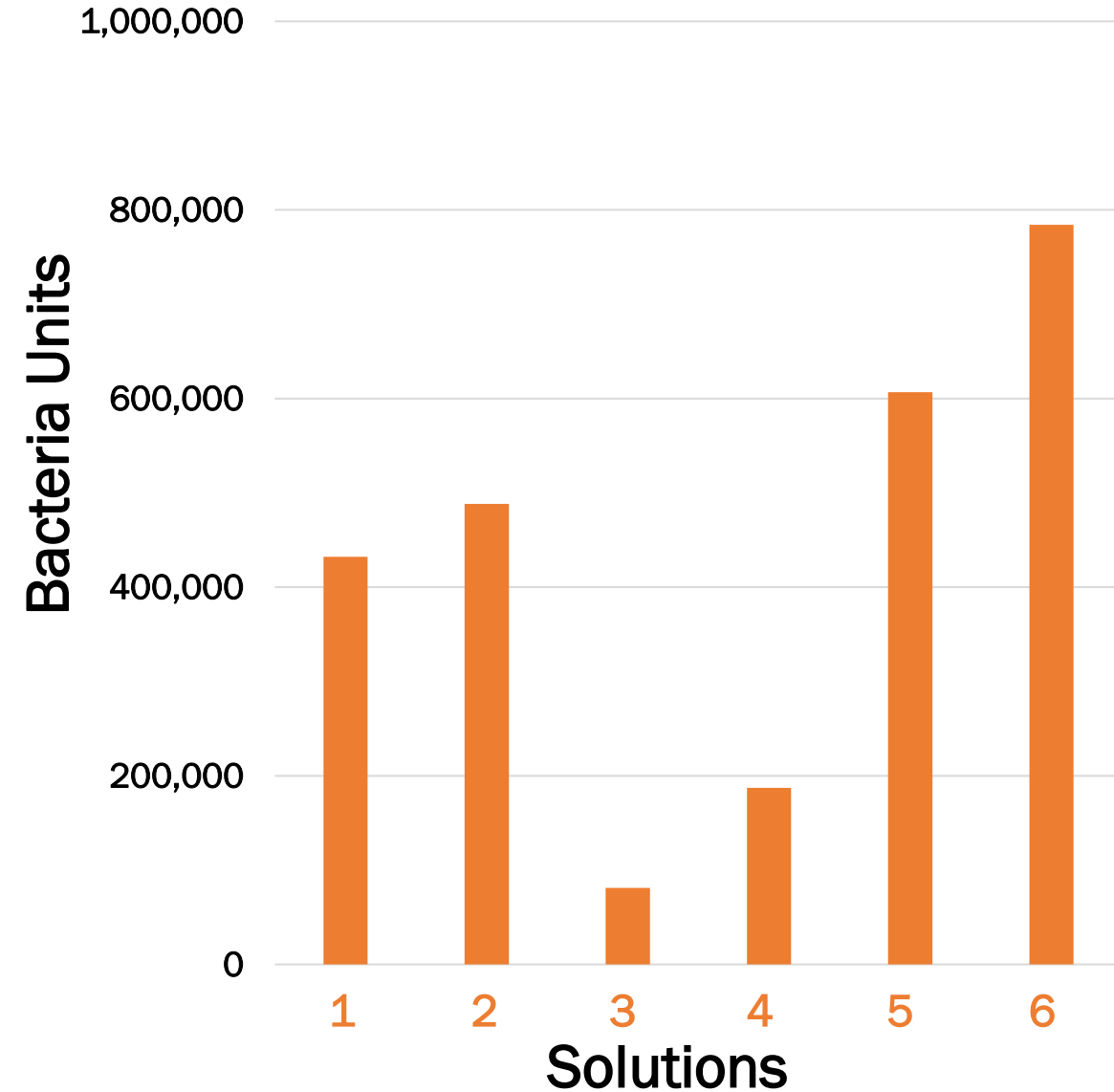
1. 6 MG Storage Tank in Canoe Run Park
2. 6 MG Storage Tank in Canoe Run Park / 1.5 MG In-Line Storage

Manchester

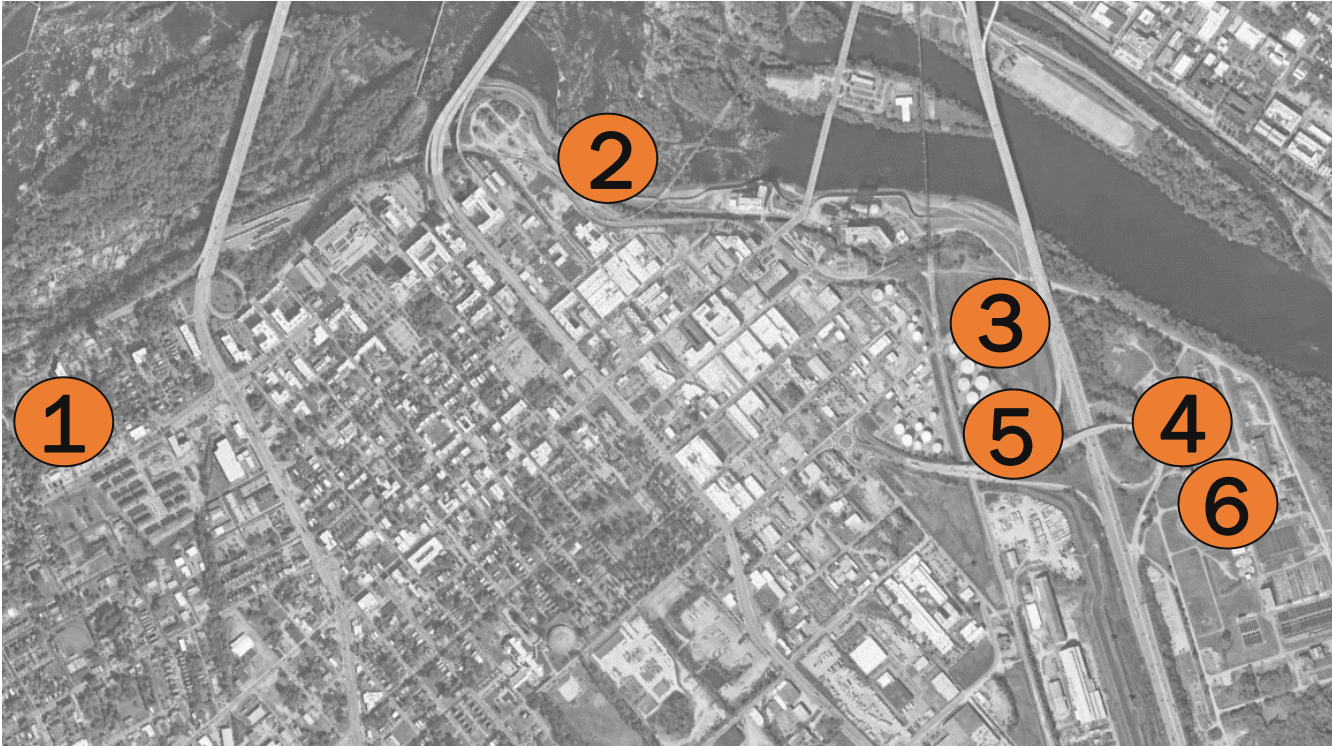
3. 9 MG Storage Tank
4. 100 MGD HRD Facility

Southside/Manchester

5. CSO 014/040 Conveyance Sewer / 12 MG Storage Tank
6. CSO 014/040 Conveyance Sewer / 150 MGD HRD Facility



Southside/Manchester Solutions - Capital Cost



Southside

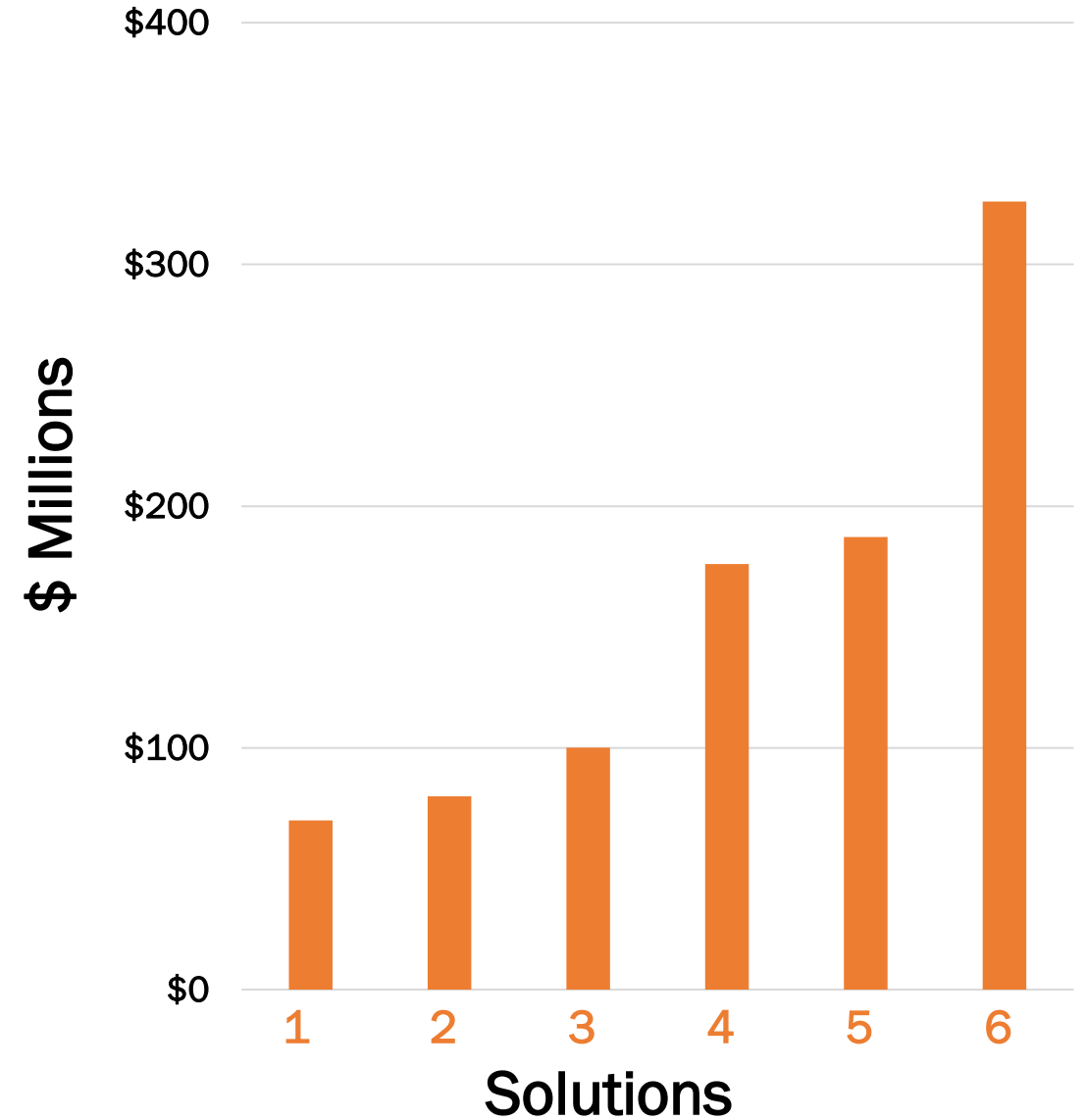
1. 6 MG Storage Tank in Canoe Run Park
2. 6 MG Storage Tank in Canoe Run Park / 1.5 MG In-Line Storage.

Manchester

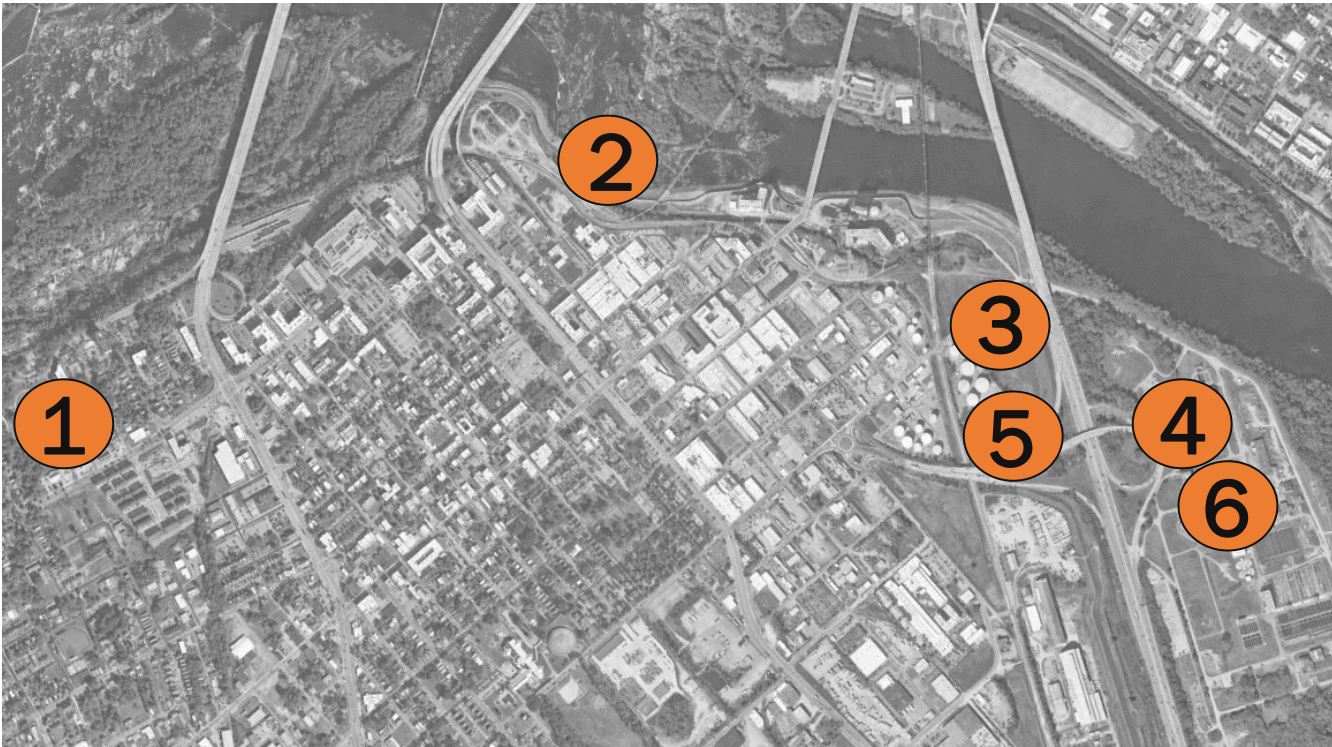
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Southside/Manchester

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6. CSO 014/040 Conveyance Sewer / 150 MGD HRD Facility



Southside/Manchester Solutions - Cost-Effectiveness



Southside

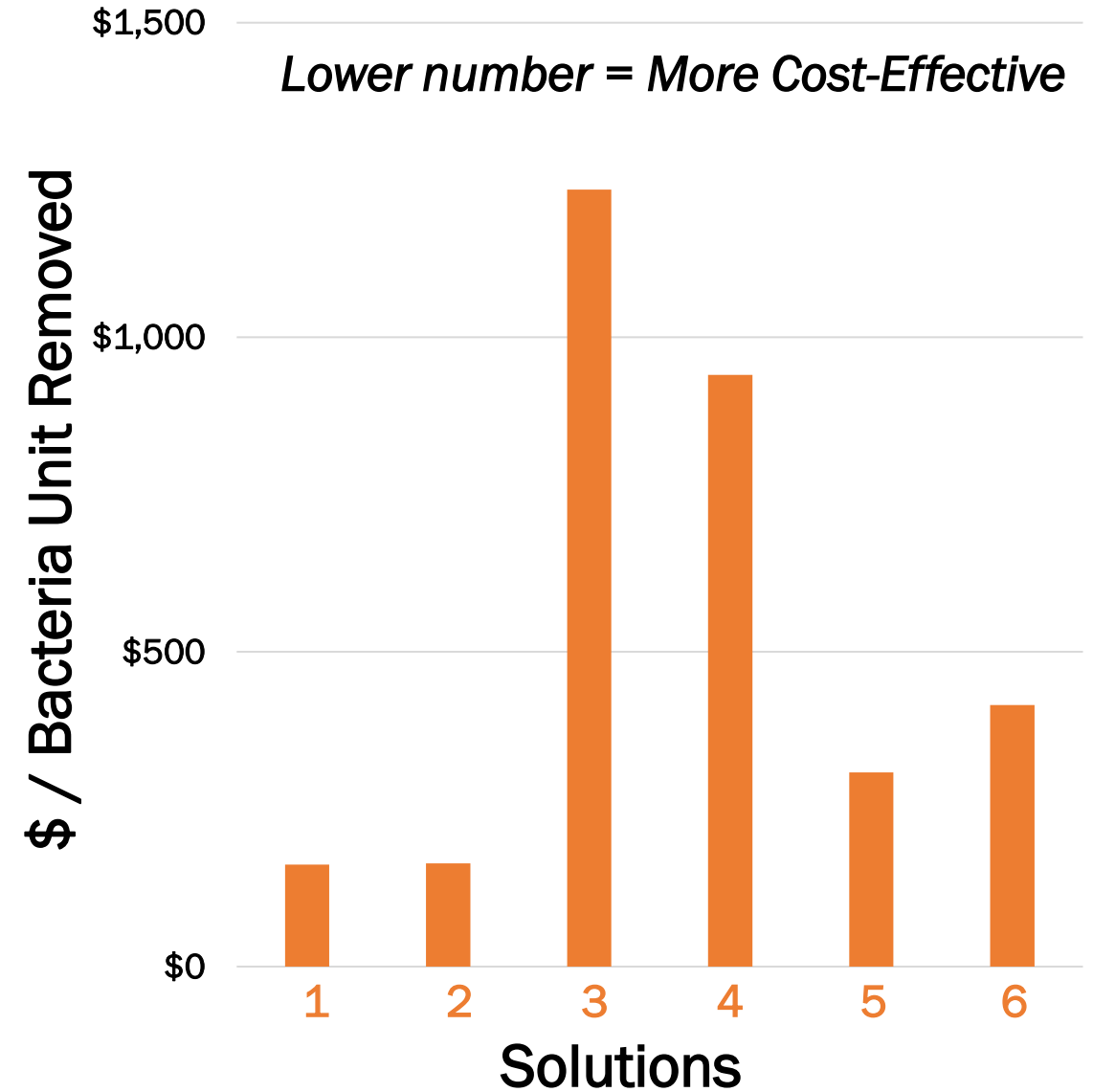
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Manchester

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Southside/Manchester

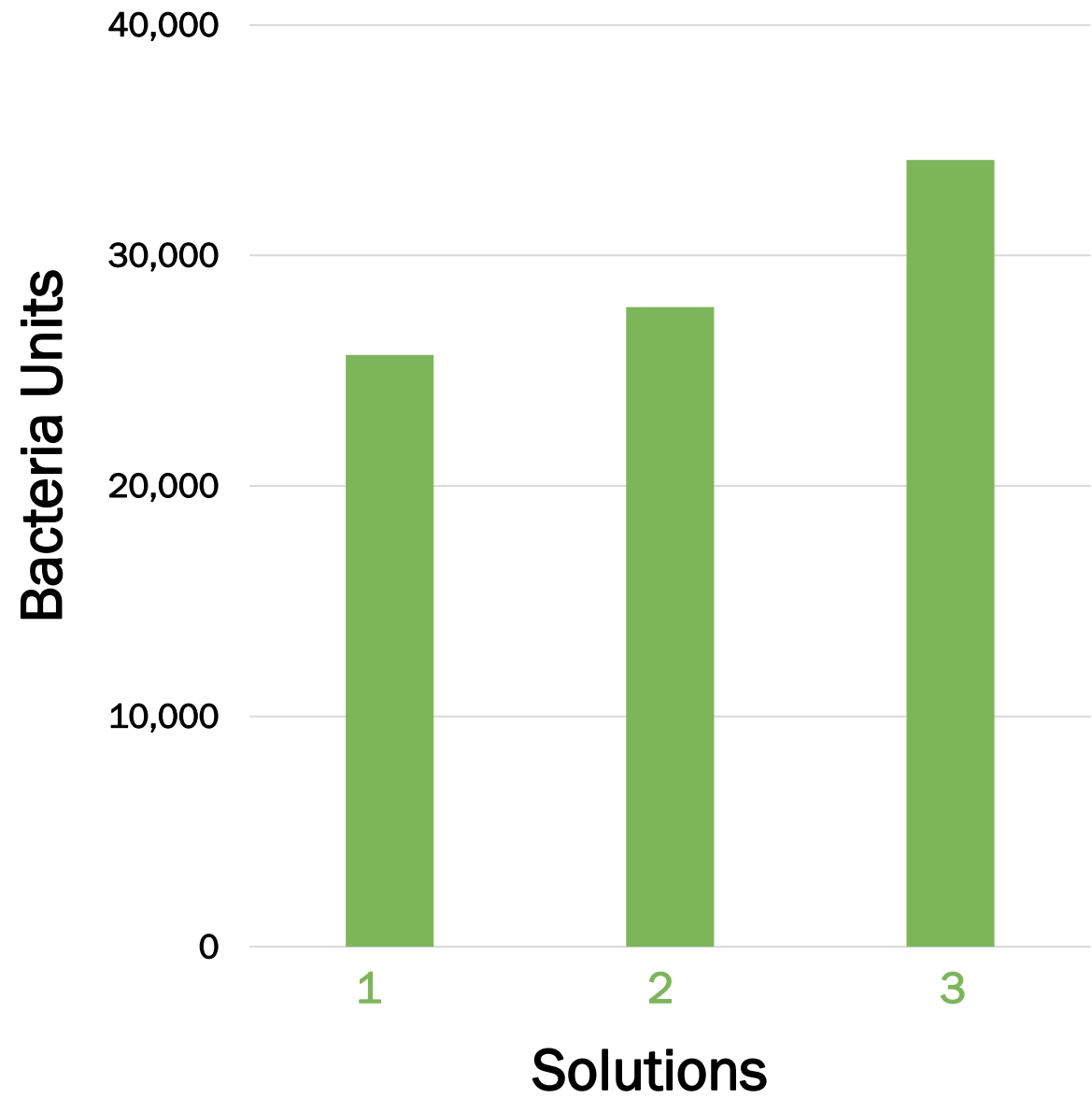
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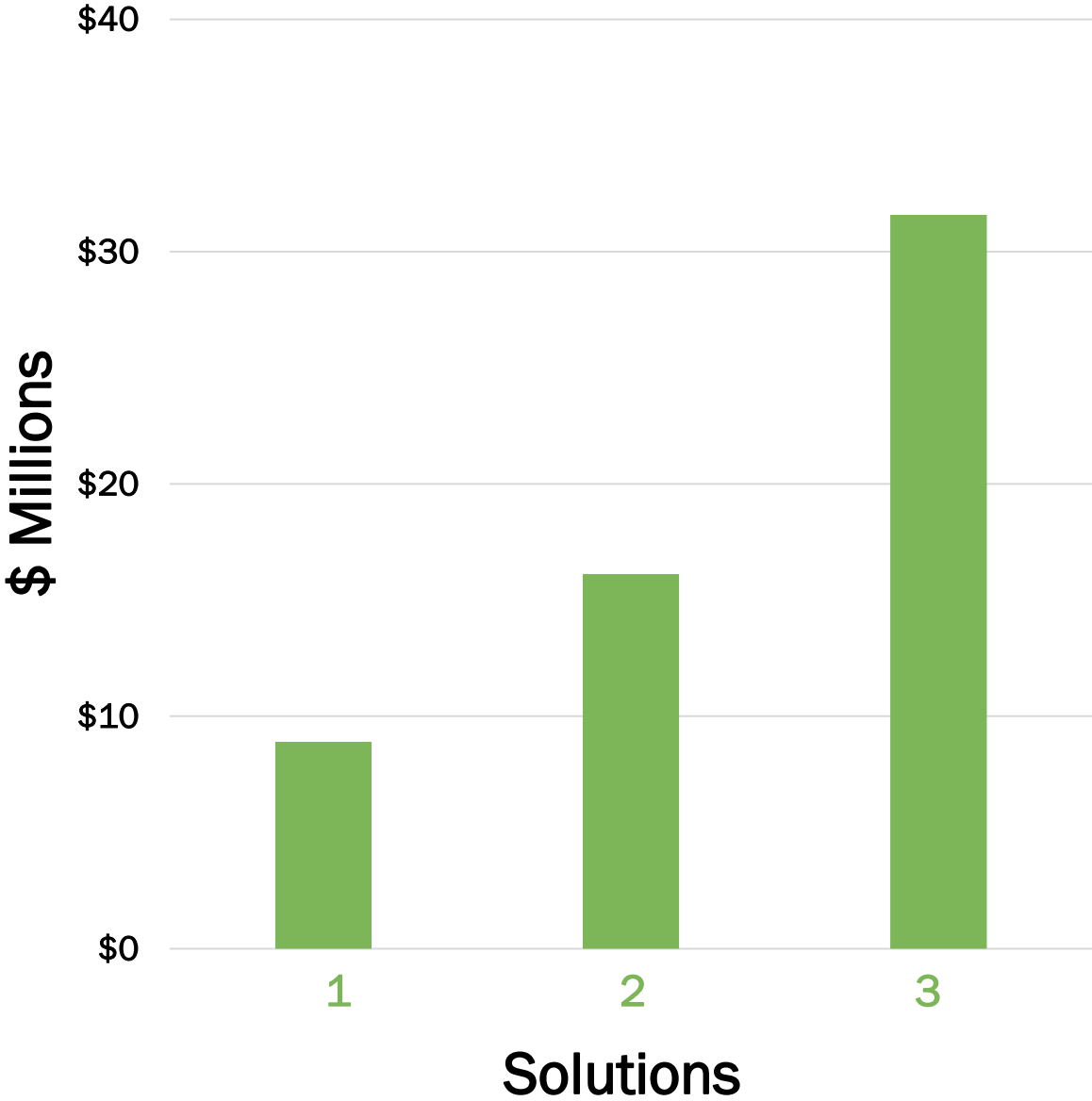


North Side

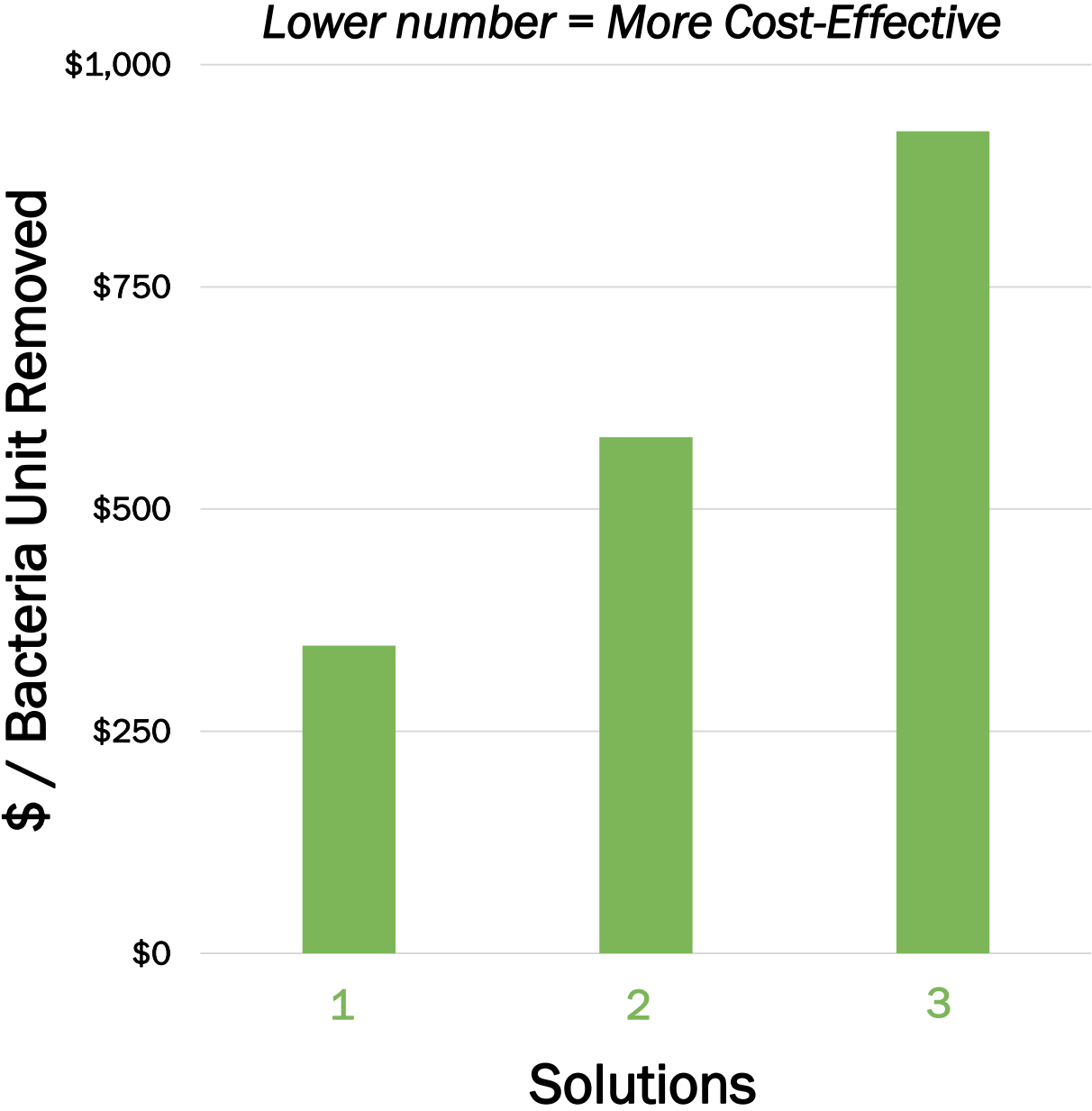
North Side Solutions – Annual Bacteria Reduced



North Side Solutions - Capital Cost



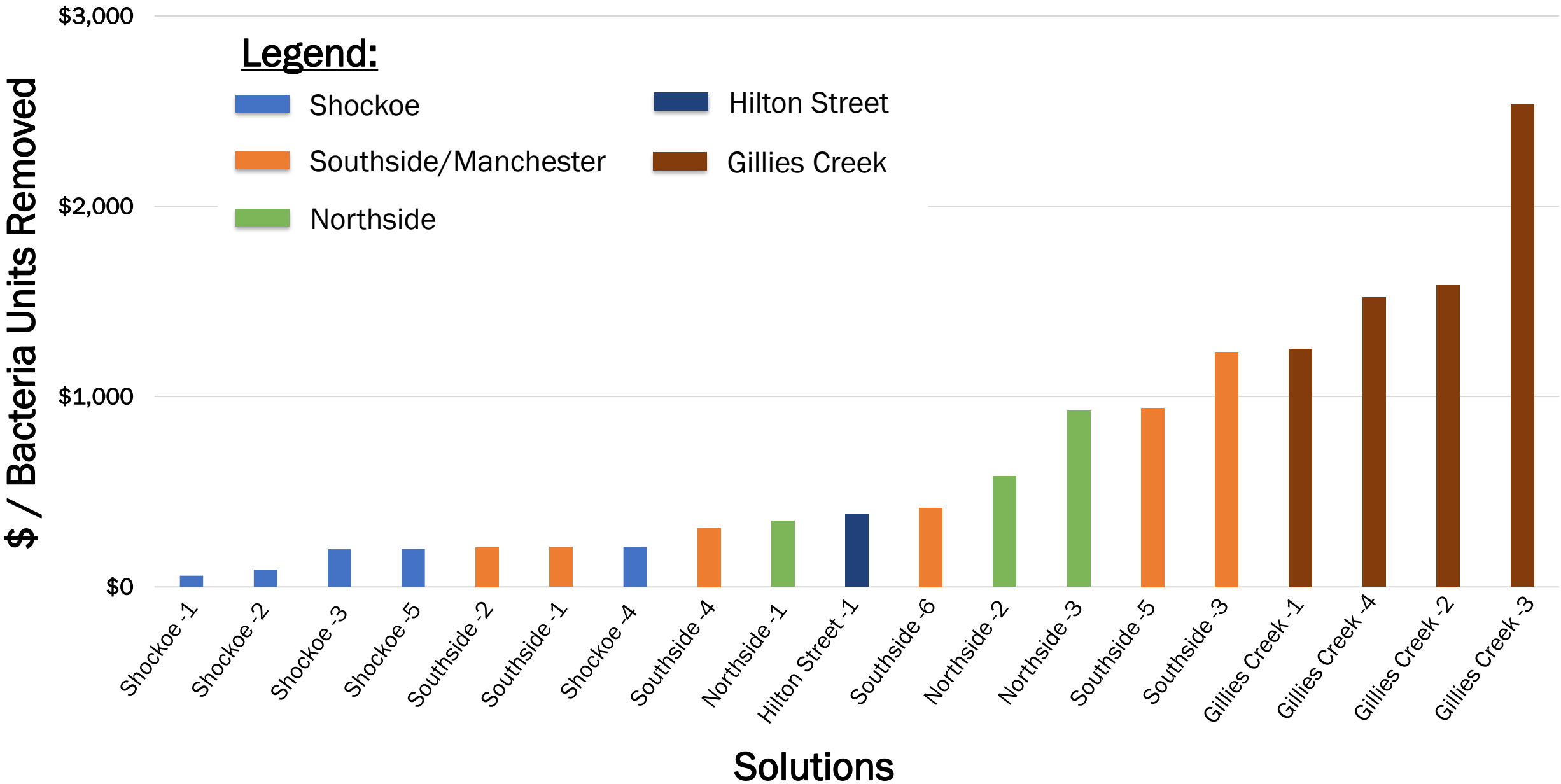
North Side Solutions - Cost-Effectiveness



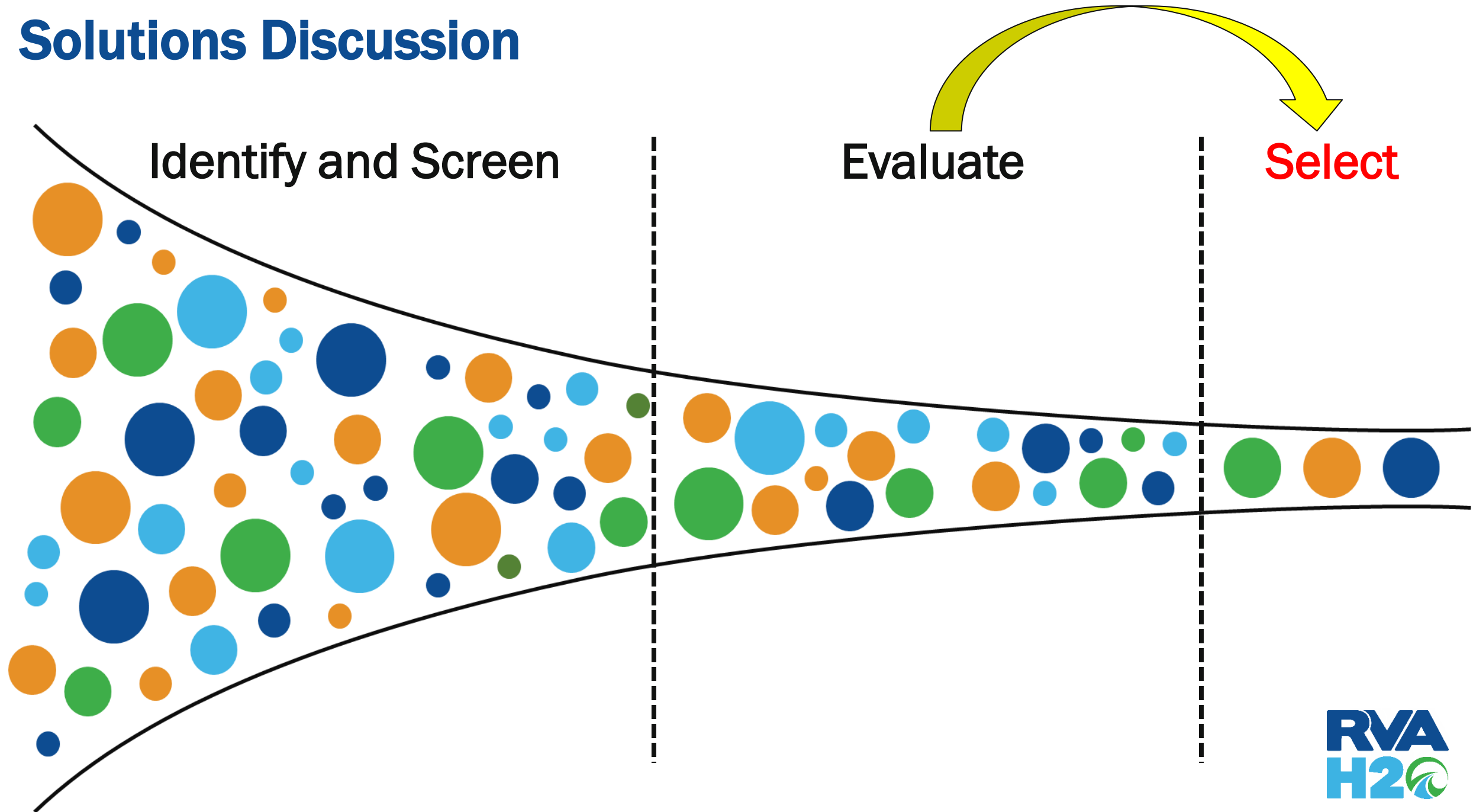


Overview / Next Steps

Cost-Effective Solutions – James River



Solutions Discussion



Solution Selection

Shockoe

☐ 1 Solution

Southside/Manchester

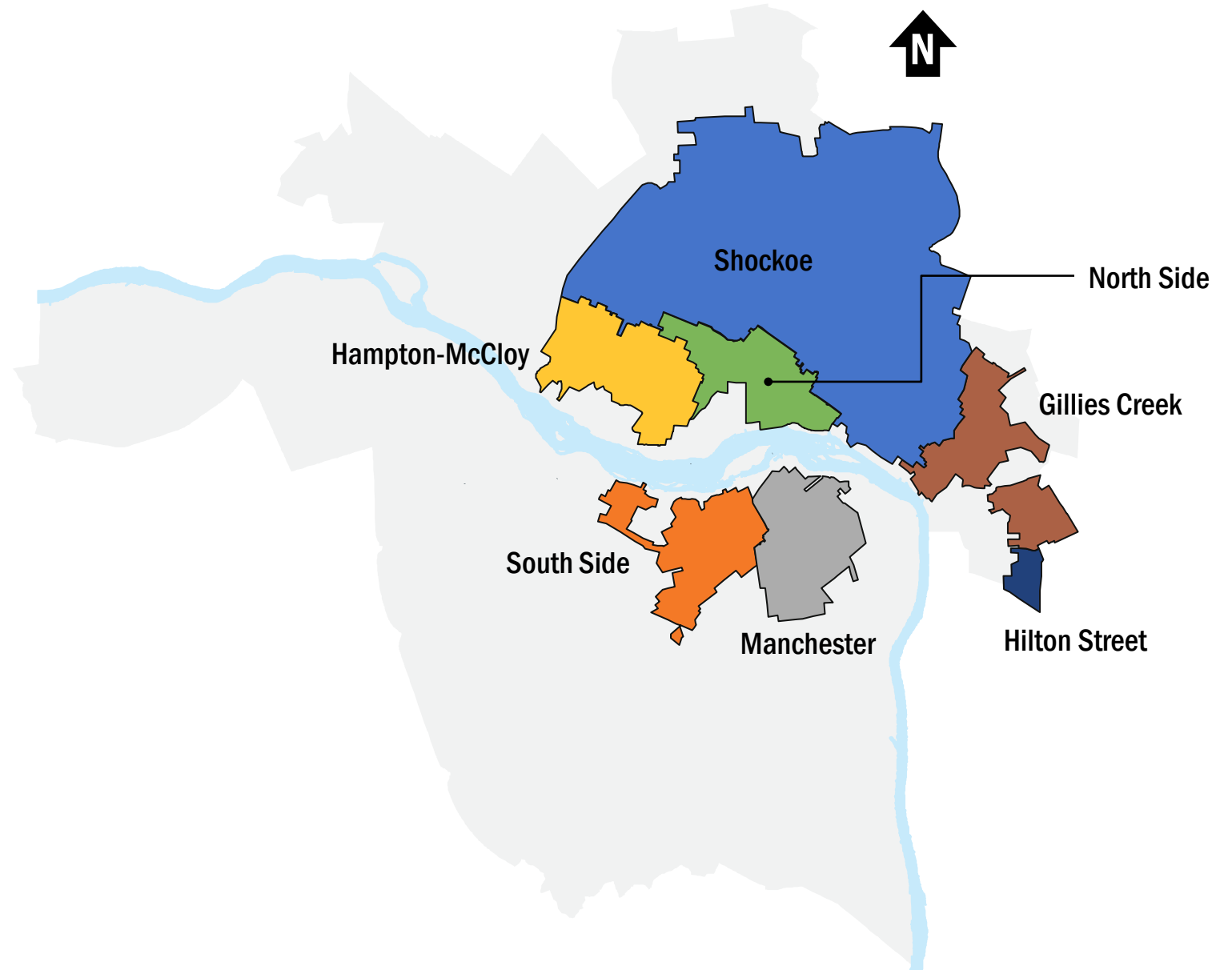
☐ 0-2 Solutions

Gillies Creek

☐ +3 Solutions to meet TMDL

Hilton Street

☐ 1 Solution to meet TMDL



What's Coming Next

Purpose	Meeting Date	Key Topics
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:
October 2023**

Grace.LeRose@rva.gov

CSO Outfall 003 Pipeline & Canal Walk Construction

