

“GO GREEN! STORMWATER INFRASTRUCTURE”- BRIDGING THE EDUCATIONAL GAP BETWEEN HOMEOWNERS AND GSI

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Background

- Green Stormwater Infrastructure, also known as GSI, is used to prevent sewer systems from overflowing by reducing the stormwater volume entering the drains (Figure 1).
- The goal of RainWise is to decrease the number of sewer overflows by capturing rainwater through cisterns and rain gardens (Figure 2).
- GSI homeowners have required maintenance responsibilities under their 5-year contract with RainWise.
- This research aims to understand where improvement can be made in the program and how well homeowners understand their required responsibilities.

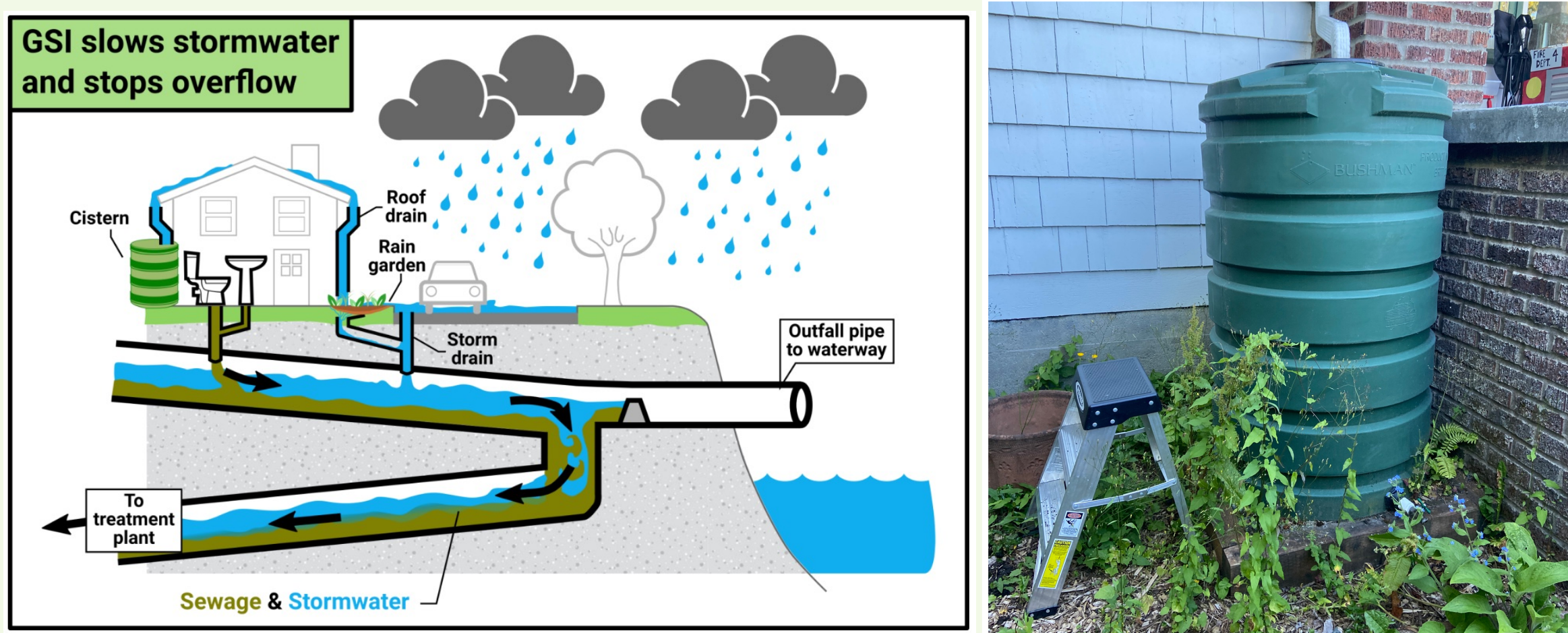


Figure 1 (left): A diagram of a combined sewer system with Green Stormwater Infrastructure in place. **Figure 2 (right):** An example of cistern from my maintenance checkup.

Research Questions

1. What areas can be improved to help expand GSI and educate homeowners?
2. How satisfied are homeowners with the RainWise program and the installation process?

Internship & Methods

- Interned with Sustainable Ballard working with their RainWise program.
- Performed maintenance checkups to homeowners with cisterns and/or rain gardens to find ways to improve the program and ensure they were keeping up with their responsibilities.
- Asked RainWise homeowners about their satisfaction during their visit with a Google survey.

Results

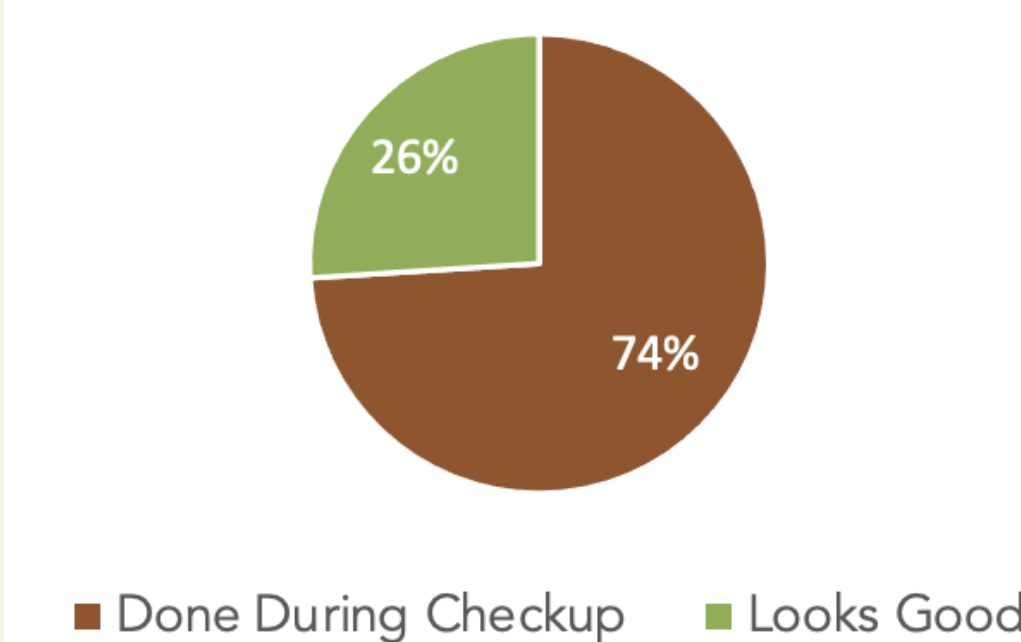
Question 1:

- I found there to be an educational disconnect between homeowners' and their required maintenance responsibilities.
- One responsibility of cistern owners is to keep the screen clear of debris to avoid buildup and many homeowners did not have this done or knew to do it (Figure 3 & 4).
- Based off my findings, ways to increase the percentage of homeowners effectively taking care of their installations:
 - Offer maintenance checkups more frequently
 - Increase education during the installation process either from contractors or RainWise staff
 - Educate new homeowners when there is a turnover
 - Expand the ambassador program to increase the RainWise community



Figure 3 (left): Circled in red is the the screen on the top of the cistern that is used to filter out debris from the gutters.

Homeowners with Cleared Screen



If Homeowners knew they needed to clear the screen

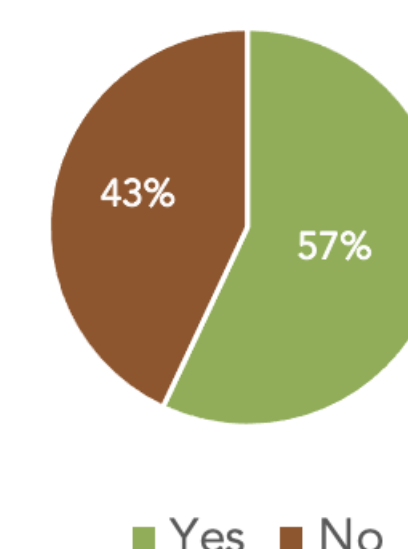


Figure 4 (above): Photo on the left shows the percentage of homeowners who had a cleared screen and who had theirs done during their checkup. Photo on the right is the percentage of homeowners who knew they needed to clear the screen and who those who did not.

Results (Continued)

Question 2:

- The survey asking for customer feedback and satisfaction showed that most customers had a positive experience with their installation, contractor, and overall felt supported by the RainWise program (Figure 5).

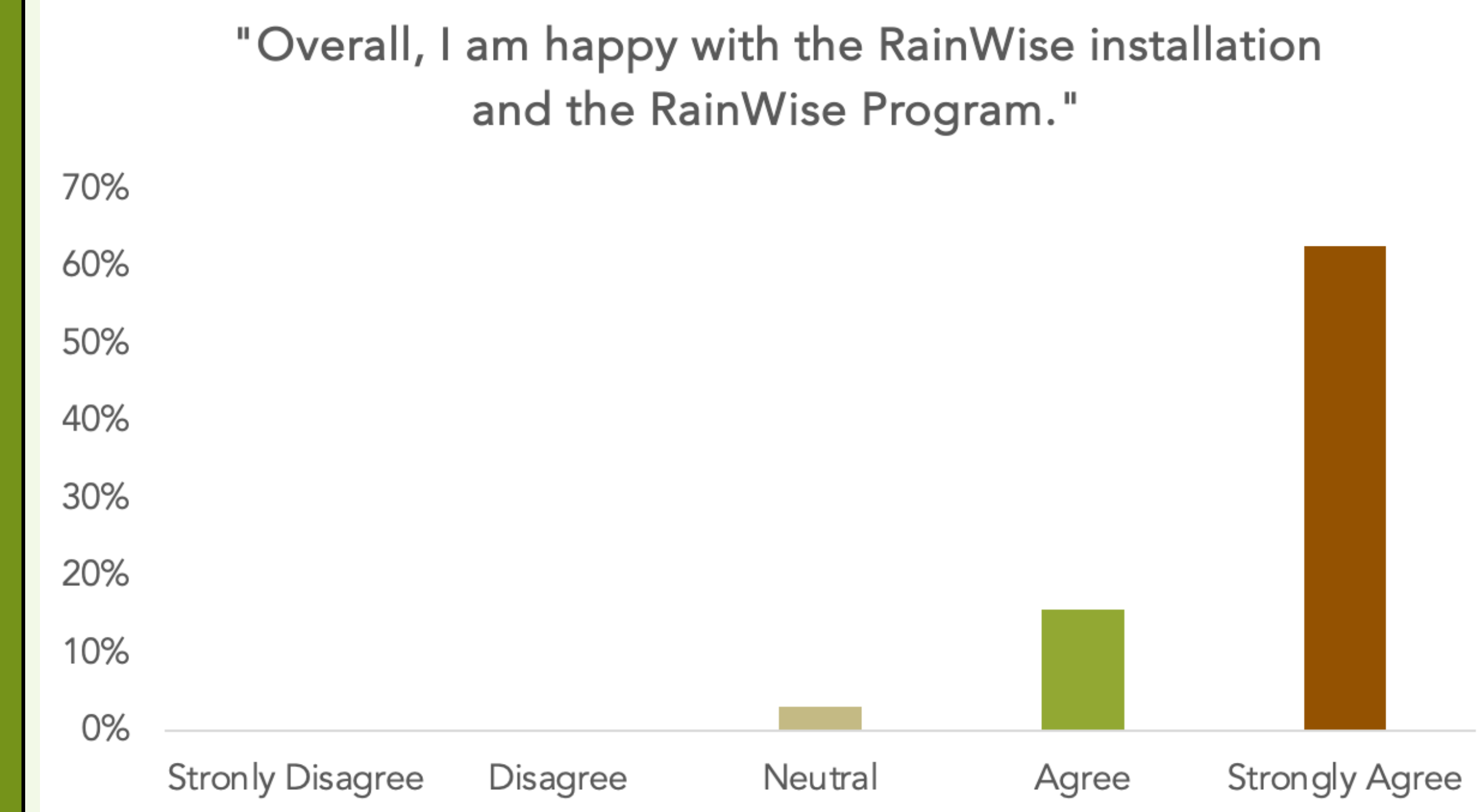


Figure 5 (above): One of the questions asked in the survey about homeowners' overall satisfaction with their RainWise installation and RainWise program. 25 homeowners were surveyed with 63% saying they strongly agreed with the statement.

Significance/ Broader Implications

- Overall, homeowners appreciated the maintenance checkup, education on how to take care of their installation and, the resources provided.
- Training RainWise staff and contractors to educate homeowners on maintenance responsibilities as a part of the installation process as well as educating new homeowners of previous installations.
- Continuing to expand GSI and educate homeowners and the public on GSI will increase functionality of installations and decrease sewer overflow.

Acknowledgements

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