

Water Quality in Guatemala: Community Outreach Project

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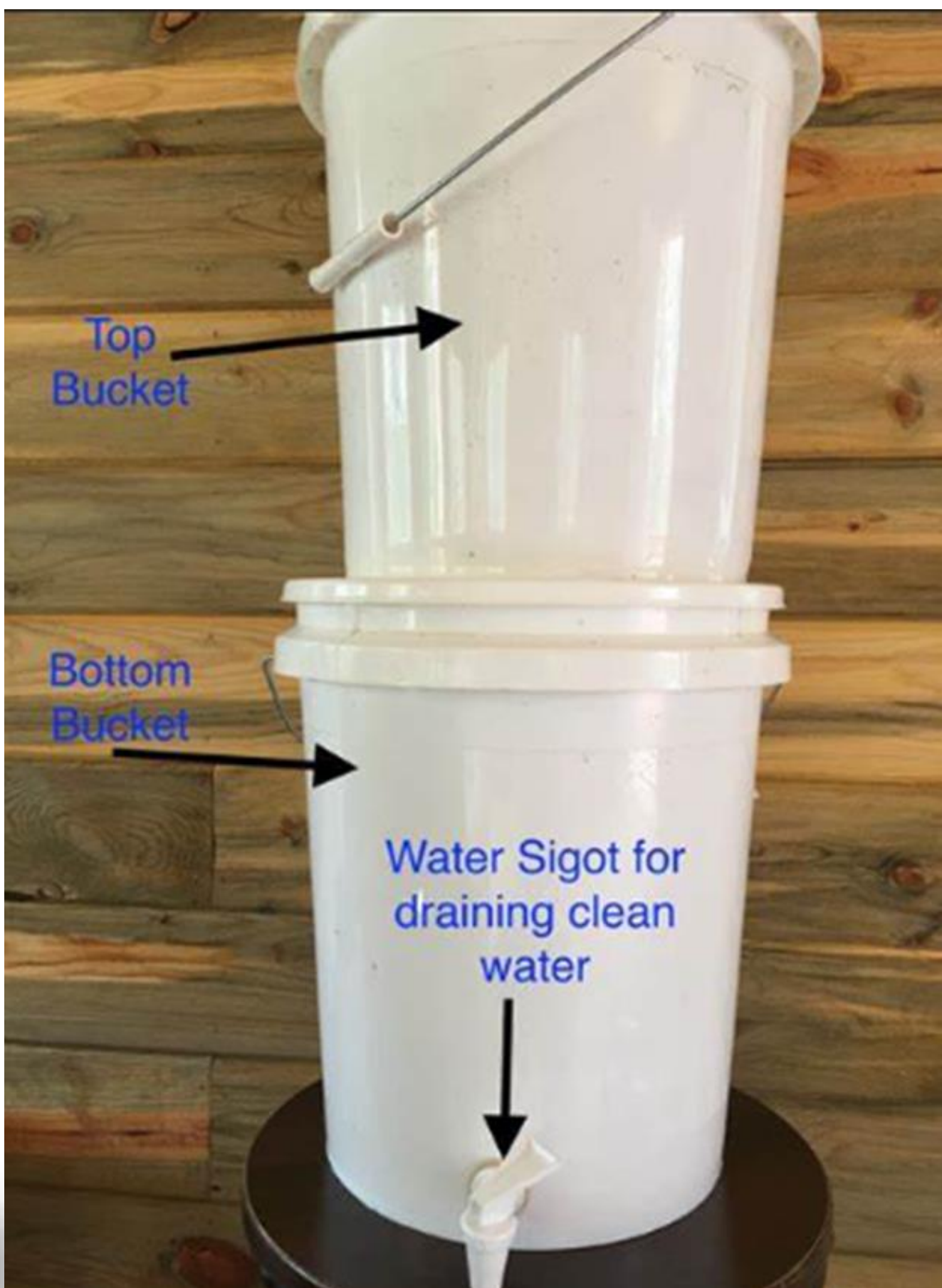
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Abstract

The poor water quality of Lake Atitlán is a health risk to the residents of Santa Catarina, a small village in Guatemala. Sewage and nutrient influx into the lake contributes to cultural eutrophication, which leads to the presence of harmful bacteria such as *E. coli* in the drinking water supply (Harvey). As a result, illnesses are common in the community, particularly among children. One effective solution to this issue is the implementation of plastic water filters equipped with ceramic candles, which require annual replacement to maintain their effectiveness. Due to the high poverty rate in this area, most families cannot afford to replace the candles as needed. After participating in a faculty-led study abroad program to the lake in 2023 with Dr. Tracy Allen, I developed a passion for assisting the community with this problem. This project aims to raise awareness of the water crisis in Santa Catarina and generate funds for the ceramic filter candles. It can be linked to several of the UN Sustainable Development Goals, but goal #6: *Clean Water and Sanitation* is the most relevant. Through community engagement, particularly within the Greek Life community at SUNY Oneonta, outreach efforts will include on-campus tabling events, presentations, and the use of social media. The expected outcomes include increased awareness among SUNY Oneonta students and the collection of funds to supply additional ceramic candles to the community. By securing these resources more families in Santa Catarina will gain access to clean drinking water, significantly improving their health and quality of life.

Ceramic candle pictured below.
Filter pictured to the right.



Outreach Goals

1. To what extent does individuals' existing knowledge of global water insecurity influence their willingness to engage with and contribute to water filter fundraising efforts a community in Guatemala?
2. To what extent are organizations on the SUNY Oneonta campus willing to support sustainability projects, and what barriers or incentives impact their level of engagement?
3. Which outreach strategies (tabling, social media, presentations, ect.) are most effective in encouraging individuals to actively engage with sustainability-related issues?



Map of Lake Atitlan's location within Guatemala..

Rationale

Lake Atitlan has been a source of life for the Mayan people who live on it for centuries (Clabault). In Guatemala 44% of households do not have access to safely managed water supply (The World Health Organization). Dr. Tracy Allen has done water monitoring research and water filter installation in Santa Caterina for over a decade. He does so through a study abroad course where he informs undergraduate students at the college about the environmental issues surrounding the lake and gets them involved in the research and volunteer work. I am passionate about this project because the course and the locals living in Santa Caterina truly changed my life in a meaningful way. I believe that using this opportunity to give back to them is well worth the time and effort it may require. While this project may not be local to the Oneonta community, it has the potential to change the lives of many families in a tangible way. This is a sustainability related issue because every person regardless of income, ethnicity, geography, and any other factor deserves the right to safe clean drinking water (Michel).

Methods & Event Planning

Presentations explaining the topic and asking for collaboration using a PowerPoint were given to the presidents and advisors of all of the Greek-Life organizations on campus, and then another presentation was given to the SUNY Oneonta Inter-Greek Council and the representatives for each fraternity and sorority on February 29th, 2025. After these meetings occurred the Community Service Chair for the Sigma Delta Tau and the Sigma Sigma Sigma sororities reached out and planned tabling events for the month of April

Expected Results

- Data regarding how many people were willing to stop and learn about this topic at tabling events.
- Funds from fundraising events.
 - The goal is to raise at least \$500 in order to supply new candles to 20 families. The money raised will go into the OAS Guatemala account for the Water Monitoring Course.
- Information on how willing organizations on campus were to help out with this project.
- Data depicting which forms of outreach/fundraising strategies were most successful (tabling, social media, presentations, ect.).



Students installing water filters in homes during the Water Monitoring course. (Taken by Hugo Villavicencio, 2023)

Literature Cited

References available upon request.

Acknowledgements

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