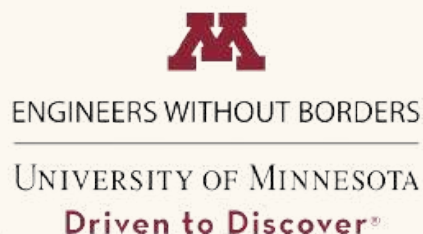


2025 FALL DONOR REPORT



East Africa, Guatemala, Local, and Context Committee Updates



Meet Our Admin



Top Row: Jade Murray, Gregory Barrett, Mason Hamar, Conrad Rodriguez.

Middle Row: Nathan Tomas, Jacob Brule, Allie Magarian, Madelynn Mikkalson, Leah Corey.

Bottom Row: Ryan Reasat, Nate Ramberg, Milan Datta-Nemana, Jeri Wilkerson, Mariana Houle, Nicholas Peterson.

Mason Hamar
President

Nathan Tomas
Vice President

Madelynn Mikkalson
Project Coordinator

Ryan Reasat
Finance Officer

Wesley Barnhart
Guatemala Project Lead

Jeri Wilkerson
Guatemala Project Lead

Nicholas Peterson
East Africa Project Lead

Nate Ramberg
East Africa Project Lead

Jade Murray
Local Project Lead

Milan Datta-Nemana
Local Project Lead

Conrad Rodriguez
Events Officer

Gregory Barrett
Outreach Officer

Jacob Brule
Fundraising Officer

Allie Magarian
Fundraising Officer

Leah Corey
Creative Director

Mariana Houle
Context Committee Lead

Thank You

A Letter From our President

Dear Donors,

It's our pleasure to share with you all the updates and changes to our chapter over the past year. While our annual Fall and Spring reports offer the latest updates of our group, there are always new changes and exciting stories to tell. From our travel and camping trips to our seminars and conferences, we're thrilled to share the highlights and updates from another impactful year!

This year, like many in the past, has brought many challenges to our group. Since the start of 2025, across the country, Universities across the nation like the UMN have seen reduced funding and tighter budgets, impacting all aspects of those institutions - including EWB. The CSE Small Grant, a long-standing source of funding for our group, has been indefinitely put on hold. Broader pressures on higher education have also strained the ability of the University and its departments to support student organizations, particularly those that travel abroad like EWB.

In the face of these challenges, I'm proud to say our chapter has persevered and continues to move forward in all of our work. Thanks to the continued support we have received across the University, especially from our group's advisors, Dr. Kimberly Hill and Erin Surdo, we have been able to navigate through the difficulties our group and the University face together. In addition, thanks to our robust funding sources, including the funding we receive from all of our donors, we can push forward with our projects with local and international communities, and still intend to fully address community-identified unmet needs.



I'm also proud of the way our students and admin team have been able to navigate and work through the hurdles we've faced, and I'm confident that we'll continue tackling and working through these head-on.

Looking ahead to 2026, our group will be busier than ever. Both our Guatemala and East Africa Projects are set to travel abroad during the summer, bringing students to our partner communities to work on design implementation and assessment, and the Local project has made multiple trips to Alexandria to support the development of a filtration system in collaboration with the NDSU chapter. With an action-packed spring and summer lined up, we're excited for the meaningful work to come.

I would like to finish by saying thank you to each and every one of you for your generosity, support, and care of EWB-UMN. You are the reason we can address community-identified needs while developing as students, engineers, and global citizens.

Thank you,

A handwritten signature in black ink that reads "Mason Hamar". The signature is fluid and cursive.

Mason Hamar
President
EWB-USA University of Minnesota

East Africa Project

Project Leads: Nicholas Peterson & Nathan Ramburg

Malawi

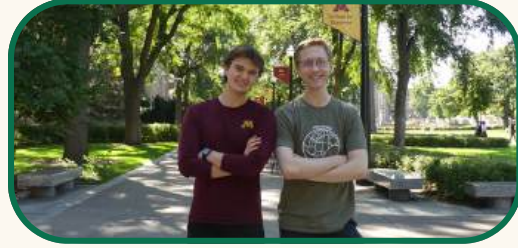
Namatapa Primary School in the Southern Malawi district of Zomba, is in need of water and sanitation aid. Currently, the school's over 1,000 students only have access to 7 poorly functioning stalls, inhibiting proper hygiene practices. The East Africa Project aims to address this by providing on-demand water access and improving sanitation access.

Providing On-Demand Water Access

Students used to walk 150 meters to the nearest borehole for potable water. This distance discouraged proper hygiene practices. We are planning to implement closer sinks that also include handicap accessibility, to ensure equitable and safe water access for all students.



final exam pass rate is now at 100%, and the secondary school acceptance rate rose from 55% to 97%. They are now the #1 school in the area, which has resulted in government funding for two new buildings, a roof replacement, and two additional tap stands for students.



Improving Sanitation Access

New, student designed latrine blocks are being designed, with deliverables planned for completion in December. Each latrine block has 6-8 stalls, which helps to lower the student to toilet ratio from 300:1 to 80:1. With proper access to bathrooms, the East Africa Project hopes that their systems will significantly improve sanitation practices for the school's students.



Major Updates

During this last summer, a monitoring trip to the St. Pius Primary school assessed the impact of our project. The student to toilet ratio, previously 208:1, has since decreased to 130:1. Their

Subgroups

Sanitation

This is split into two smaller groups; CAD and Soil. CAD designs the walls, floor slabs, waste pit, roof, and vent pipes for the sanitation blocks. Soil analyzes soil tests to determine the best spot for sanitation block construction. Additionally, they decide how deep the waste pit could be without risk of collapsing.



PMEL

This subgroup looks at past projects and ensures that the implemented systems are working as expected and are still sustainable for the community. We want our projects to align with community wants and needs, so PMEL is performing demographic and cultural surveys to ensure we are consistently reevaluating how our projects are impacting our community partners.



Water Distribution

Responsible for designing pumps, piping and water storage, this subgroup is ensuring that the Namatapa Primary School will receive a consistent and safe supply of water from distant community boreholes. In conjunction with designing the school's water tower and sinks, they are also working to implement solar power to ensure constant power to the borehole pump during peak usage hours.

Future Goals

We want to ensure our projects are sustainable for communities post implementation, so our project will soon be making an assessment trip to St. Pius. There, we will assess the construction quality of the latrines and water distribution systems. Throughout the remainder of the semester, the PMEL subgroup will draw plans for a new community and search for different organizations to team up with.



Guatemala Project

Project Leads: Wesley Barnhart & Jeri Wilkerson

Problems Facing The Community

The 3,500 residents of Simajhuleu, located in Comalapa, Guatemala, do not have consistent water access. 3 freshwater springs produce 80 liters of water a day per person, but less than 25% of it makes it all the way through their water distribution system. When taking hydration, hygiene, and general daily water use into account, this is severely low. The Guatemala Project is in the process of redoing the majority of their system, as the current piping cannot withstand greater development. Through the implementation of pressure relief tanks, valve systems, and trunk lines, we hope to provide the community access to on demand, quality water.



projects. Through them, the community can more easily express concerns and provide information, while we can share updates and suggestions. Currently, this subgroup is translating the project's status and resources to the community. They ensure it is completed in line with Simajhuleu's wants, needs, and culture.



Future Goals

This year, once designs for pressure reduction devices and trunk lines are completed, we will begin the largest phase of the project. In May 2026, our team will assess trunk lines laid prior to our arrival and aid in their completion. From there, we will connect them to 5 pressure reduction tanks. Pressure relief valves will at this point be added to the 15,000 ft system, at which point community members will see increased flow into their homes. We will continue to work with community leaders, the water committee, and community members on educating on-demand system usage.

Subgroups

Community Relations: is vital in translating and communicating important aspects of subgroup

Pipelines: oversees the implementation of the system. Pipelines built an EPANet model of the current one to determine locations for pressure relief valve and tank systems. An Operations & Maintenance Manual is being drafted along with designs to describe proper use and upkeep of the system. All of their work is completed with the main focus of creating a more effective, sustainable system for the community.

Computer Aided Design (CAD): This subgroup is working with Autodesk's AutoCAD software to model designs and create detailed plan sets for implementation. It is used to design cross sections for proposed piping in 2D and to create construction plans and drawing packages for piping systems and pressure relief valves for tank systems. They also worked on creating complete 3D models of pressure break tanks along with a complete construction plan drawing package for the entire water distribution system.

PMEL: The PMEL subgroup focuses on revisiting and maintaining past projects to address any issues that arise. We want our work with the communities to last long-term, so these updates are crucial. While the project is ongoing, they collaborate with Guatemalan material distributors to estimate costs and plan implementation for each automation system.

Major Updates

Chirijuyu: Recent erosion and farm runoff has put the community's water in danger of chemical and organic contamination. Working with U.S. stream restoration specialists our in-country NGO, the current plan is to reinforce existing layers of clay to combat the substantial erosion. Chirijuyu has also requested our help in automating their pumping system by monitoring the water level.

Paraxaj: Currently in Paraxaj, a community member must hike up to the pump multiple times a day. To minimize the water loss and miles of hiking, we plan to automate their system as well. We also intend to help the community implement the necessary infrastructure for even water distribution and usage.



Local Project

Project Leads: Jade Murray & Milan Datta-Nemana

New Project (Alexandria):

The Local Project has always sought to improve quality of life for communities here in the Twin Cities, but are now expanding to work with a community in Alexandria, MN. At 20 ppb of arsenic, the 40 residents drink more than double the safe, nationwide limit of a known carcinogen and developmental inhibitor. Our project, in conjunction with the EWB NDSU chapter, plans to provide a solution to this problem.

Semester Plan for Subgroups

Filtration

Our filtration group is focused on finding a way to remove contaminants, namely arsenic, from the community's drinking water system. They are researching several possible solutions and preparing the Preliminary Engineering Report (PER) for regulator approval.

Water Chemistry

This group is working with well data, lab results, research and more to design a low-cost and easy to operate process to produce safe, clean, and compliant water. They are also contributing to the PER.

Piping

The Piping group works to implement the designs from Water Chemistry and Filtration into construction documents. They are managing our on-site utility conflicts, ensuring the feasibility of our project. Piping is collaborating with our other groups on the PER.

Community Relations

Community Relations is collaborating with community members, handling fundraising projects and issues, and ensuring we have a holistically collaborative project.

Safety

The group enforces safety rules by providing safety-related education, and creating a safety-oriented culture. Our safety officer ensures we maintain a safe, zero-loss operation.

Future Goals

We are preparing our Preliminary Engineering Report, which will be reviewed and hopefully approved by the Minnesota Department of Health. In future trips to the project site, we will conduct a survey to create an accurate site plan, implement flow metering to help us determine demand, and meet with the community to learn more from them about their water issues.



Context Committee

Lead: Mariana Houle



Purpose of Context Committee

Unique to our chapter, the CC lead serves as a liaison between the admin team, students, mentors, and our community partners. They ensure that every member and community voice is represented in project decisions and documentation. This role focuses on facilitating dialogue, fostering reflection on ethical, social, and cultural dimensions of engineering, and consolidating collective experiences to strengthen continuity between semesters and travel teams.

Semester Progress & Plans

CC consolidates member experiences, community insights, and mentor feedback. They then wrap this into a unified narrative that accurately conveys the project's values and impact. Responsible for involving mentors in the creation of Travel Guides and leveraging their expertise. Define the roles of subgroups within the project if necessary, while encouraging leadership of younger members and mentorship from experienced members.

Semester Progress & Plans

Support onboarding and mentorship of new members and leads, including defining subgroup roles and responsibilities where necessary. With the counsel of the Program Coordinator. Oversee the transition of knowledge and resources to incoming CC Leads to ensure project continuity between years (past communicated lessons learned from both community and projects from past years).

Future Goals

We want to connect each subgroup's deliverables to the community in ways that don't rely on literacy, ensuring that community members can easily see our progress, build trust in the process, and stay actively involved at every stage



Other Initiatives

Member Engagement

Whether it be at our annual camping trip at Interstate State Park, or right on campus, we love taking time to relax around a campfire. It's another chance for our hardworking students to take a breather and catch up with friends over hot dogs, s'mores, and fried donuts.



Several CSE groups join together annually for a friendly kickball tournament, where our students get to learn about different clubs and get active. We are proud to announce that this year, in a feat of underdog prowess, we are the reigning champions.



This year, we hosted a new event in collaboration with NOMAS (National Organization of Minority Architecture Students). Engineering and Architecture students faced off to impress a panel of judges with their bridge building skills using spaghetti, hot glue, and marshmallows.

Seminars

Earlier in the semester we held a construction seminar on GPS surveying. Its goal was to teach students how to operate the Trimble R12i GNSS system on a Trimble TSC7 data collector and input it into AutoCAD. The device is used to help us place various structures and pipes. Field research is of huge importance to EWB, as our engineers spend a lot of time in the field figuring out how best to carry out our projects. Having a tool to make that job easier or quicker makes us much more efficient.

We currently have a drone surveying seminar planned. The use of photogrammetry technology stitches together videos from the drone to create a 3D map of the area. Surveys by drone are extremely helpful for our Guatemala project due to the difficulty of traversing the mountainous terrain. This seminar teaches engineers how to operate the drone and to interpret the data.

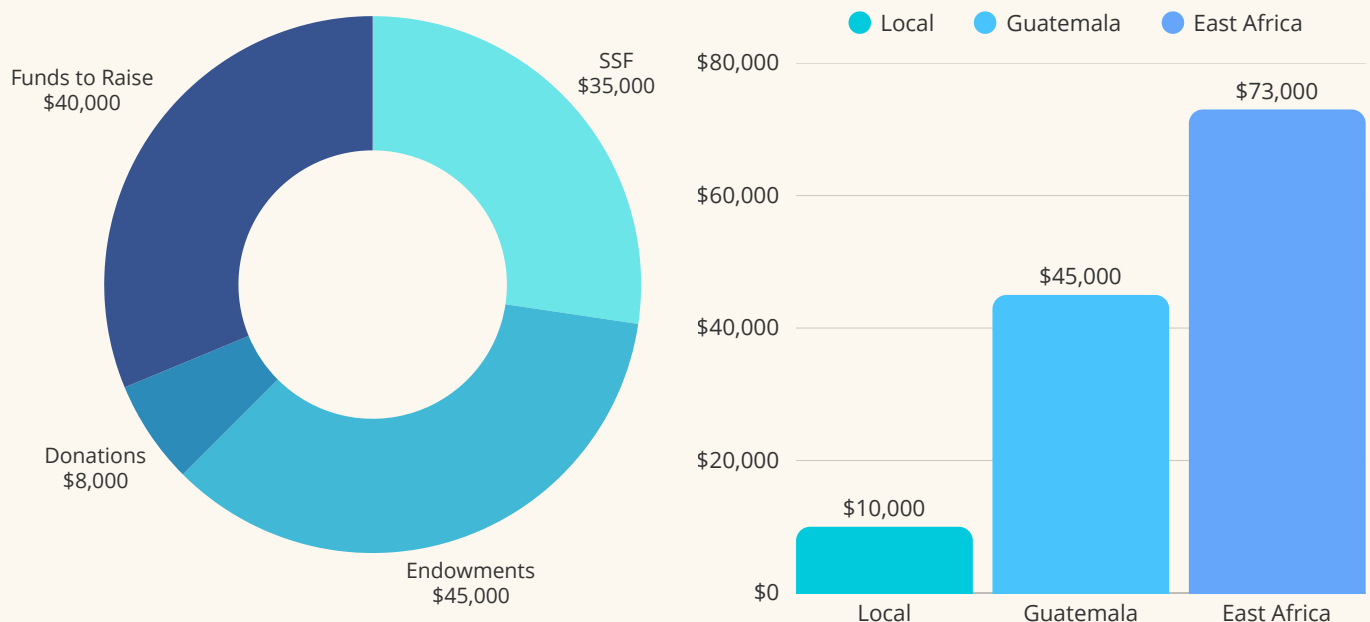
We would like to thank Frontier Precision for loaning us the surveying equipment for free. We would not be able to complete our GPS seminar without it and it has been incredibly helpful during travel trips.

Financial Report

Monetary Updates

So far this semester, we have raised and obtained \$88,000 from donor contributions, the annual payout from our Ruth V. Jones and EWB Quasi endowed funds, and university funding.

The remaining \$40,000 will be raised by applying for grants such as the American Society of Agricultural and Biological Engineers (ASABE) grant, and the National Council of Examiners for Engineers and Surveying (NCEES) grant.



We also plan on obtaining additional funding through external grants and corporate sponsorships. This is in addition to donations from Give to the Max Day on **November 20st**.

We would like to thank our donors, sponsors, and the Ruth V. Jones Estate for allowing our chapter to accomplish its mission. Without their help, we wouldn't be able to make impacts on global communities or build better engineers for the future.



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