



ENGINEERS WITHOUT BORDERS USA

North Carolina State University Chapter

Spring 2019 | Issue 1



1 | GWS travels

Our Guatemala Water Systems team travelled in December 2018 to implement rainwater harvesting systems.



2 | SLRE travels

Sierra Leone Renewable Energy Systems also travelled in December for implementation of a renewable energy system..



3 | Local & SLW

Project progress and general updates

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Upcoming events and a thank you to our donors!

Get connected!



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Guatemala Water Systems



NC State students Carter Rucker, Sarah McConnell, Gracie Hornsby, Jeremy Lowe, Alexandra Boly.

12 days
20 rainwater
harvesting systems

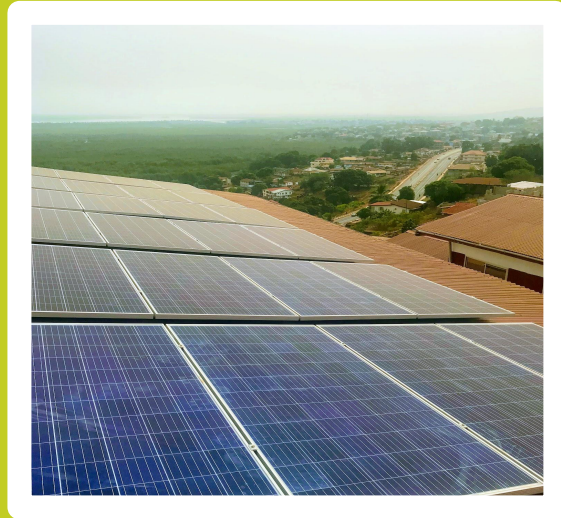
Over the past two years, the Guatemala Water Systems project has been partnering with the community of Caserio Panhux, Guatemala, to ensure year-round access to clean water. The project aims to implement a rainwater catchment system on each house with 54 systems in total. This past winter the project team collaborated with the community to construct 20 rainwater catchment systems. Beyond implementation, the travel team experienced the regional culture of Alta Verapaz, Guatemala and shared the holidays with new friends.

This project emphasizes the practical application and possibilities of engineering. The community of Caserio Panhux originally came to our chapter expressing a need for water storage during the region's dry season. In every step of the process our team has worked closely with the community from designing the systems, sourcing of materials, and the actual building of each system. This trip inspired NC State graduate student and project mentor Carter Rucker that "engineering is more often about finding the solution which works for a specific situation and person, rather than the textbook solution."

This upcoming semester, the thirty-nine students on the Guatemala Water Systems team will be documenting and preparing for their upcoming final implementation trip.



Sierra Leone Renewable Energy



11 Days
24 Panels
7 kilowatts

The renewable energy team has been working with the Dele School in Lower Allentown, Sierra Leone for over a decade to design and implement a 7kW photovoltaic system on the roof of the school. Most recently, in December 2018, the team travelled to work with local contractors to construct and implement the system. The team consisted of 5 current NC State students (Virginia Derick, Evan Grant, Conner Borkowski, Marie Spokas, and Ram Bala), a past team lead (Dustin Soutendijk), and a travel mentor (David Mulcahy).

The system was up and running by the end of the trip! It provides approximately 7 kW of power in peak conditions, and has a 12-battery system for back-up power during rainy days and nights. This system allows the school to be independent of costly generators and an unreliable national grid in order to power lights, fans, AC, laptops and computers, and printers. Less energy costs for the school will also allow them to allocate their funds to other projects, such as adding SmartBoards and laptops to the classrooms, possibly providing night classes for local women, or even storing vaccines for the community.



Sierra Leone Water



Our Sierra Leone Water project has also been working with the Dele School in Lower Allentown - last travelling in summer of 2018, a final monitoring trip will be taken in conjunction with our SLRE team in winter of 2019 to complete the project.

During the past implementation, the final touches were put on a system many years in the making. This project has helped students gain perspective beyond what they might learn in class; in the words of John McNulty, one of the SLW project team leads, "When you're there you can see the need for improvements, and innovation. We implemented a system that could help with these basic needs, and saw how realistic and attainable it is to accomplish. By no means was this easy or quick to do, but nothing in life is worth doing is."

Local Projects



Last semester the Local Projects Team continued its collaborative project with the SOUL Garden, securing an additional \$150 Sustainability Fund Grant for their bike-powered irrigation system with plans to complete implementation this Spring.

Throughout the semester Local Projects also had several opportunities to volunteer within our community, co-building the Civil Shack at NC State's Shack-a-Thon, traveling to Spring Lake, NC to help with hurricane clean-up, and presenting at Neal Middle School in Durham. In the coming semester we will continue to work with our community partners, returning to Neal Middle School in February and Spring Lake in April, and are always looking for more ways to bring EWB NCSU to North Carolina!

Upcoming Events

8th Annual Benefit Dinner & Silent Auction

On **March 30** from **6-8 PM**, our chapter will be hosting our **8th annual Benefit Dinner & Silent Auction!** The event will be held in **Duke Energy Hall in Hunt Library** and helps support our current projects in Sierra Leone and Guatemala. The evening will consist of a presentation of our chapter's work in international communities as well as within the local community. In addition, our chapter will be hosting Dr. Jack Allison as our keynote speaker, who will be discussing the work he has done on a local and global scale. The silent auction will be comprised of donated items from our local partners and items from the international communities that we work with. Tickets are available online: www.ewbnscu.org/benefit-dinner



Thank you!

Fundraising events hosted by our chapter were successful in 2018 thanks to the hard work of our newly-formed Fundraising Team. In March, we hosted our 7th annual Benefit Dinner, featuring live jazz music, catering from Royal India, as well as an inspiring talk from our keynote speaker and NC State alum, Tate Rogers. In December, the team hosted its first EWB Holiday Shag Night, with a hot cocoa bar, shag dancing, an ugly sweater contest, and a raffle. In addition, the team began reaching out to potential community partners in hopes of creating a line of support for our project teams and the communities they serve. This new team is excited to continue their work for EWB and is looking forward to more events and outreach in 2019!



Holiday shag dancing night:

81 attendees

25 days of giving:

\$2,400 raised