



ENGINEERS WITHOUT BORDERS-USA  
UNIVERSITY OF MINNESOTA



# Financial Report Fall/Winter 2015



**DEAR FRIENDS,**

It has been a busy time for Engineers Without Borders (EWB) at the University of Minnesota! It's my honor to share the progress that EWB-USA UMN has made over the past summer through this report.

This past summer, we had tremendous success with the communities we served, which you can read about below. Various projects were implemented. But, having these great successes doesn't mean our chapter is taking a break. Right now, our Guatemala team is working on phase two of the water distribution system, designing a piping network to bring water to members of the community. The Bolivia team is hard at work developing designs for agricultural water tank and new catchment system while the Uganda program moves to a new project creating a larger rainwater harvesting system for a nonprofit school to allow them to educate more children in the surrounding communities.

As always, this great work would not be possible without the support of numerous donors. It's important to us that our donors know exactly what their money is accomplishing in the developing world. Inside this report, you'll find information on our financial activities for the past trips and our general estimates for the coming year. Hopefully, after reading this you will understand the direct impact your contributions have had on the lives of community members we serve, and continue to help us change their lives.

Sincerely,

Jesse Kasim,

President, Engineers Without Borders - University of Minnesota

# BOLIVIA





(Panel) A view taken of the community from the neighboring hills surrounding Yulo. (Left) Yulo, Bolivia is nested in the valley of the Jackucha River.



Over the course the past two years, the University of Minnesota Chapter of the Bolivia Program has been involved with helping the community of Yulo, in Potosí, Bolivia. Yulo is a small community of 150 people on the banks of the Jackucha River. Every winter, ensuring a stable supply of water is a problem for the people of Yulo, due to exposed water pipes that freeze and burst. A team of EWB-USA UMN students went on a recent implementation trip on August 21<sup>st</sup>, 2015 to protect and insulate this critically exposed piping from rampant temperature variations and erosion. They also collected important data which will allow us to address more challenges the community faces in the coming years.

The first of the implemented projects was on a bridge, which held piping carrying water from the spring source the community relies on to the community tank, and from the same tank to an old part of the community. Due to the topography of the surrounding area, a severely cold front was directed in the valley where the bridge was located, causing the piping on the bridge to freeze and burst - a near daily occurrence. This detrimentally affected the communities access to water, and greatly decreased water consumption during the day. EWB-USA UMN's Bolivia group was able to successfully insulate and protect this piping.



***Sin agua, no hay una vida.***

*(without water, there is no life)*

- Community member, Yulo



(Above) The pipe on the bridge prior to our work. The ragged strips of cloth visible were put by the community to stop from freezing, but much of it was uncovered. (Left) Our work on the bridge was to add insulation tape and sheath it in black pipe for protection.

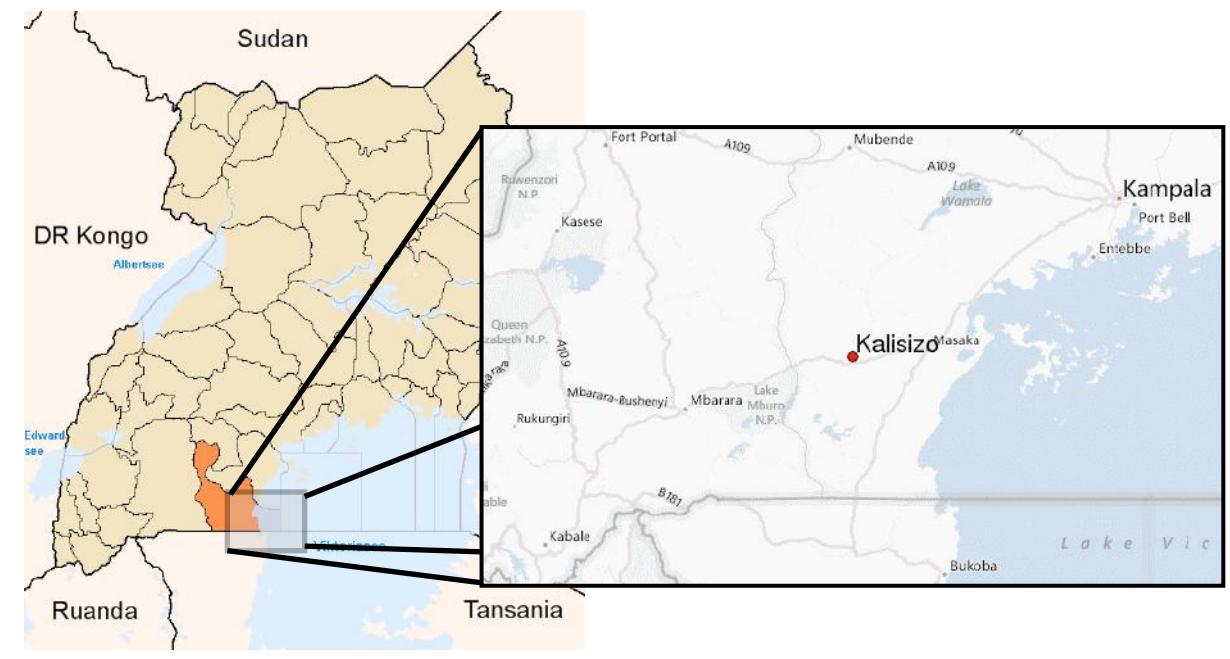
The community also presented the team with piping that needed an improved suspension system above a ravine. The piping was also exposed to freezing and was under the threat of erosion. After thoroughly insulating and protecting it, EWB-USA UMN resuspended the pipe in a location that is less likely to erode.

This year, the Bolivia program plans to make designs for an agricultural water tank, while also working to make a new design for a catchment box the community uses to collect its water from a spring source. In addition, they will work on ensuring the community has the knowledge and skills to repair and maintain their projects and understand the essentials of sanitation and good water-health practices.





**UGANDA**



In February of 2007, EWB-USA UMN established a partnership with the Uganda Rural Fund (URF) to provide sustainable water source solutions to impoverished communities in rural Uganda. Since then, EWB-USA UMN has successfully implemented over five projects in three different communities, with our most recent projects centered in Kalisizo. This community consists of 150 families and also houses a primary school that serves 150 children from the surrounding communities.

In January 2015, a team traveled to Uganda to address the inadequate water supply and dilapidated rainwater collection system that had been neglected since construction by a different group fifteen years previously. The team replaced the existing broken



gutter system with a functioning system and added an additional system onto another building on the campus. After the gutters had been installed, they were routed to a new 12,000 L masonry tank constructed by a community member trained during a previous EWB-USA UMN implementation. The team finished this trip with preparation for the next trip including measuring and staking the nursery plot, piloting potential post foundation structures, and integrating community input into our designs.

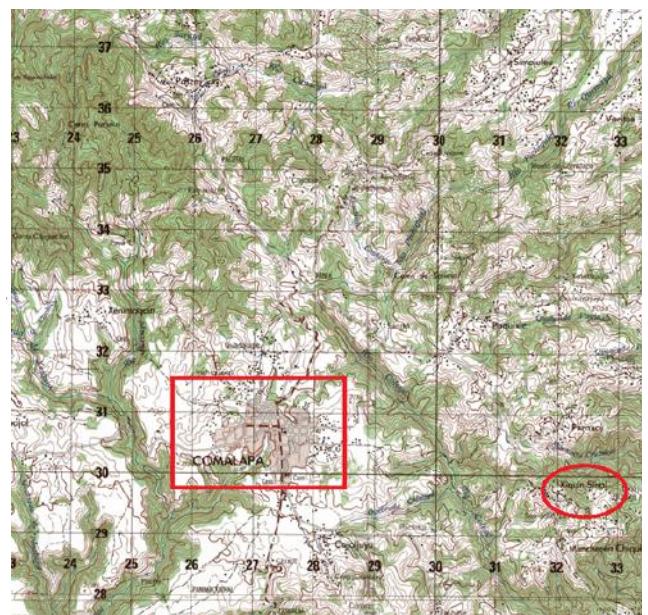
In August 2015, a team returned to complete the nursery project. They completed the foundation and lattice structure and securing the netting. In addition, a water storage tank with rainwater harvesting capabilities was built adjacent to the nursery to facilitate irrigation. Again, this tank was built with the help of an EWB-trained member of the nearby village of Bugonzi. This new nursery will be certified by the Uganda Coffee Development Authority, which community members estimate will provide an influx of an additional million Ugandan Shillings per year.

After construction concluded, assessments were made for the preparation of a future project at Hope Integrated Academy, a school managed by URF. These included measurements of new campus buildings for the design of additional rainwater retention systems and preliminary assessment of tank placements and water transportation design.



# GUATEMALA





**X**iquin Sanahi is a small, agricultural-based community of about 125 families located in the mountainous region of central Guatemala. This location is challenging for simple, gravity controlled water distribution systems. Currently, a two-kilometer pipe connects a spring to a central water storage tank; however, it is over 40 years old and requires constant maintenance. Additionally, women and children spend multiple hours each day walking to obtain sufficient water; negatively impacting youth education and household income. There is also no standard purification practice with the spring water, making waterborne diseases prevalent in the community.

In August 2015, our program travelled to Xiquin Sanahi to implement the first phase of the project. This 16-day trip included



installing a new main pipeline, refurbishing the spring box where water collects, and fixing the main storage tank where up to 30,000 gallons of water can be held.

Chlorinators were also added to storage locations to improve sanitation. A pump was installed in the spring source to provide a greater and constant flow to the community. Temporary taps were installed so community members could still collect water while our Program designs the second phase of this project.

The reason for this most recent trip for the Guatemala Program was to construct the foundation for this distribution system in the community. Currently, students and professional engineering mentors are developing solutions to bring clean, potable water from the new pipelines and refurbished tank to each household. Students and mentors will travel during August 2016 to implement the final design for the water distribution system. We will also work with the community to develop a suitable plan for maintenance and upkeep of their system, as well as educate them on the importance of clean water.

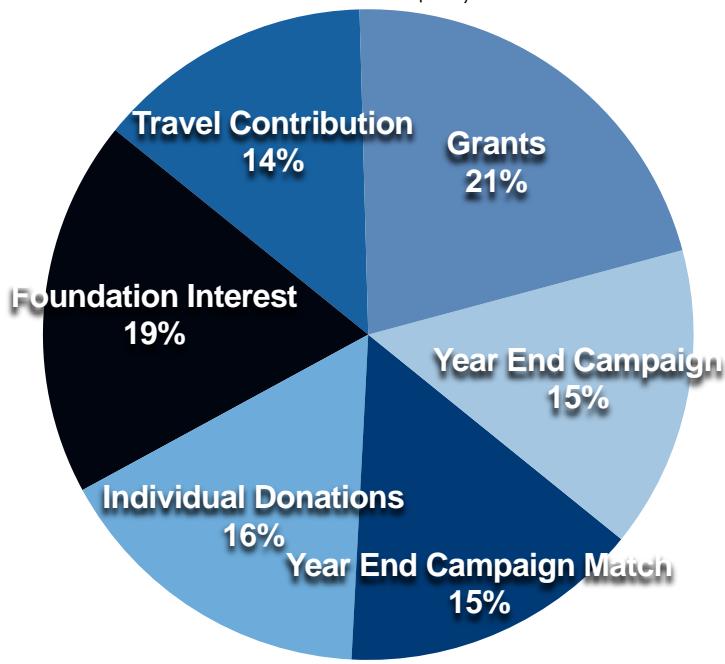


# FINANCES



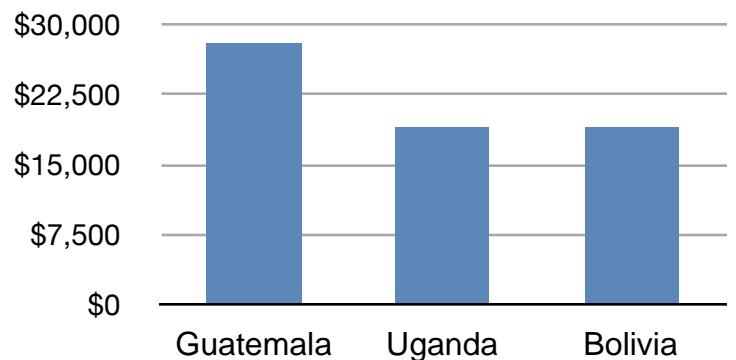
## Total Revenue Breakdown for 2014-15 Fiscal Year

Total Revenue: \$80,000



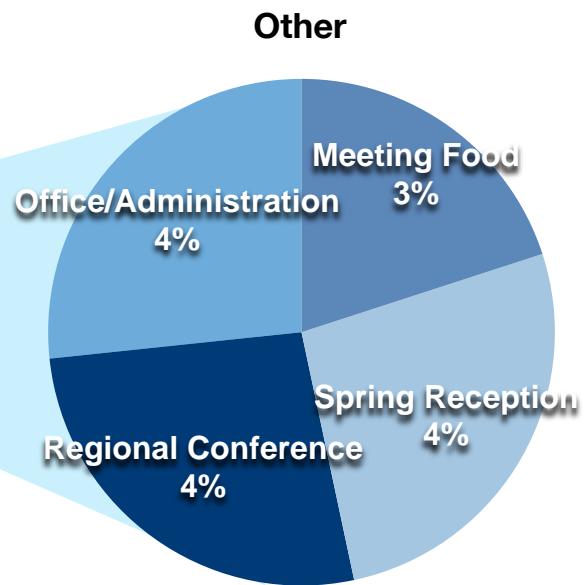
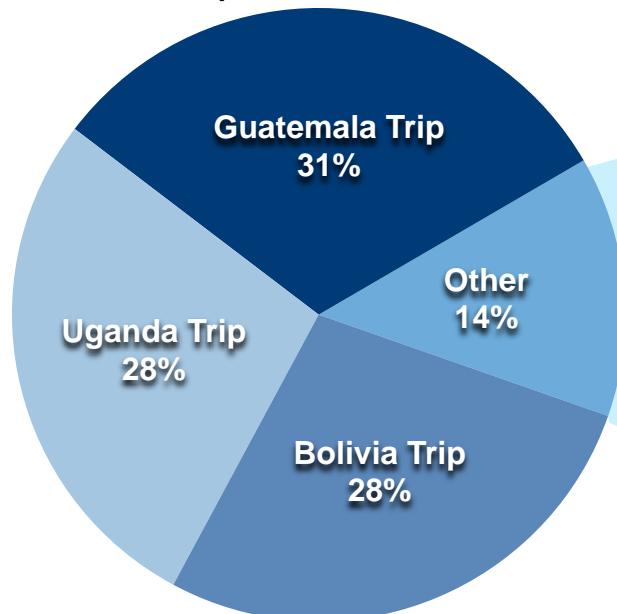
Our donors are the reason we can continue to make progress on impacting the communities that we serve. For this reason, our progress is your progress. Succinctly, here is our revenue and expense estimates for our trips this past year.

## Summer Expenditures 2014-2015 Year



## Expense Breakdown of 2014-2015 Fiscal Year

Total Expenses: \$80,000



Ways of making water  
Safe for drinking

- By boiling it
- By Adding chemicals like chlorine.



NEVER FORGET JESUS

VIP

LGDR

**“T**he key to ending extreme poverty is to enable the poorest of the poor to get their foot on the ladder of development, the poorest of the poor are stuck beneath it. They lack the minimum amount of capital necessary to get a foothold, and therefore need a boost up to the first rung.”

—Jeffrey Sachs  
*The End of Poverty*, 2003