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## Honduras Program Updates

By Wyatt Warell - Honduras Design Lead

In August, the Honduras Program traveled to begin the assessment of a new project in the communities of Ocotal and Potrerillos. It was our first assessment trip for the Ocotal Water Project, therefore building relationships with the communities was the top priority. The travel team began by having a small community meeting in Ocotal's community center, along with a representative from Potrerillos. In order to lay the foundation for a successful relationship and project, EWB-USA NEU emphasized the community ownership of a completed system and the commitment this project would require from all parties during the design and construction of the water system.

A large component of EWB-USA NEU's first trip to Ocotal was collecting data about Ocotal and Potrerillos for future design calculations. Tasks included a topographical and GPS survey of both communities and the path to the potential source of water. The travel team gathered health data, water consumption information, and water quality data.

While in Honduras, the travel team took the opportunity to evaluate our previous project in El Carrizalito, completed in December 2014. In El Carrizalito, EWB-USA NEU took as-built measurements of the tank, and inspected the condition of the source pump after a few months of operation. Over the past year, the distribution system has encountered a few hurdles, but the community has proven their ability to come together quickly to solve problems and maintain the new system. We concluded our visit to Carrizalito by distributing aerial photographs of the community,



along with photographs of members of the community working on the water system.

EWB-USA NEU has worked in the Yoro District in Honduras for over 10 years, and we are proud of our accomplishments, the relationships we have formed with the local communities, and the challenges that have been overcome. The water project in Ocotal and Potrerillos will be EWB-USA NEU's sixth project in the region. Throughout the beginnings of this project, the community has shown initiative and displayed their will to put in hard work.

Since returning from the trip, the Honduras Design Team has focused on writing reports and analyzing collected data. Moving forward, the goals of EWB-USA NEU are to establish the usability of the water source for the Ocotal Water Project and prepare for a future assessment trip to collect additional information and visit past projects to monitor operations.

## Uganda Program Updates

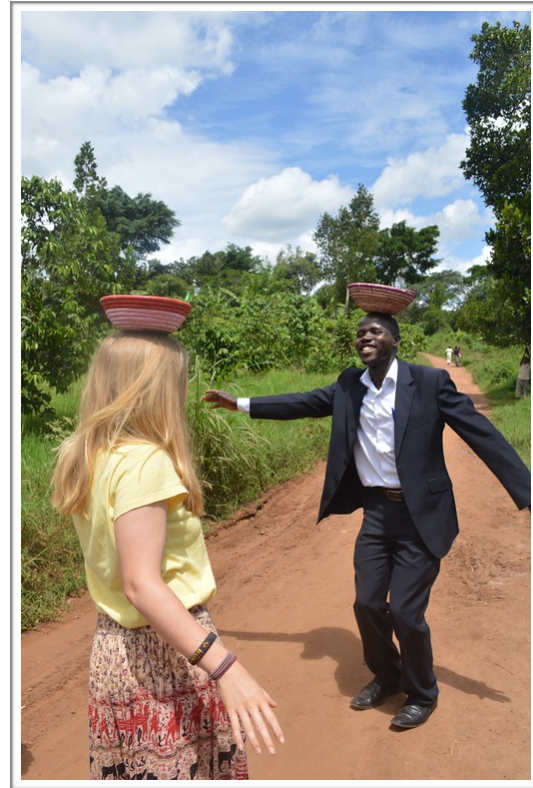
By Kim Perrone - *Uganda Design Lead*

The Uganda project has made significant progress this year. After traveling to Bbanda four times in 2014 and constructing the main system components, there were still several tasks that still needed to be completed before the ultimate goal of commissioning the Bbanda Distribution System could be accomplished.

The Uganda team spent the first part of the year working on minor improvements to existing components, while also refocusing their efforts on raising enough funds for another implementation trip. Another important task that we completed was securing a generator and pump. With this in place, we were ready to start planning a trip to Uganda.

In May 2015, a team of four students and a mentor traveled to Bbanda with the goal of ultimately turning on the Bbanda Distribution System. While in Uganda, the travel team supervised the installation of several system components, including the pump, generator, and the final piping. The travel team also oversaw the construction of a drainage overflow pit and a tank level indicator. After an initial disinfection and chlorination of all components, water was finally allowed to flow through to the tap stands. The community held a commissioning ceremony to signify the official opening of the Bbanda Distribution System.

EWB-USA NEU is very happy to be able to hand all responsibilities of the Bbanda Distribution System over to the community. The travel team met with the Water Board to train community members



about the daily operations and maintenance of the system. With the direction of EWB-USA NEU, the Water Board has established Tap Stand Monitors to collect fees, a Treasurer to manage a bank account dedicated to system funds, and a Maintenance Director to oversee all functional aspects of the system. With these measures taken, EWB-USA NEU believes the project can remain self-sufficient in the years to come. The Uganda team remains in contact with the community, and are happy to report that the system has thus far been successful in providing Bbanda with clean water.

Even with all that the Uganda team has accomplished this year, our work is not done. The Uganda team is diligently working to study the impact of the Bbanda Distribution system on public health and the life style of community members. EWB-USA NEU is hoping to perform additional assessment of Bbanda, which will allow the Uganda team to move forward with Phase Two, further expanding the water distribution system to more tap stands. EWB-USA NEU hopes to continue our work in the village and further improve the lives of the people in Bbanda.



### Panama Program Updates

By Brendan McManus - *Panama Program Director*

2015 has been an exciting year for the Panama program of Northeastern's EWB-USA chapter. The Panama program is brand new, and a team of burgeoning engineers set out to confront the water crisis that the village of Las Delicias is facing. In addition, a group of fresh faces has begun coming to the meetings and helping the project progress.

The first official trip to Las Delicias as a team took place in August, helmed by Design Lead Sarah MacClellan and Program Director Ollie Fishstein. The first trip is important because it establishes relationships, goals, and communication lines that will ultimately be vital to the success of the project. We are pleased to report that this trip was a great success. The village of Las Delicias has a water distribution system in place that is in severe



disrepair, evidenced by the fact that much of the village does not receive water much of the time. The team was able to use the trip to assess the system, and get the lay of the land to begin thinking about alternative approaches. In addition, relationships were built between the team, the community, the new Peace Corps volunteer Arlo, and our partner non-profit organization, Sustainable Harvest International (SHI).

The team surveyed both the population and the geography, to understand the needs of the community and the challenges that the project may face as it progresses in coming years. Two existing water sources were surveyed, as well as two potential new sources and the limits of the village. While there, we trained community members on how to take measurements and calculate the water produced by each of these sources, and they have been sending us monthly updates of their readings. Because of this trip, many important questions were answered, but as is often the case when questions are answered, more questions were revealed, so another assessment trip will likely be required before any final design and construction can begin.

With the help of SHI, the team and the village together drafted a contract for the project in which both parties could voice concerns and requirements of each other. The project is progressing nicely and with the help of all the new recruits, we should have no problem continuing right along with the work. Fundraising options are being explored and hopefully another trip will be able to be organized for this coming summer.

### Fall 2015 Bootcamp

By Alina Rossi-Conway - *VP of Administration*

The accomplishments of EWB USA-NEU are directly related to the education and further development of the students. Bootcamp! is a biannual recruitment activity that is focused on integrating and educating newer members about our projects and processes. Fifty-five chapter members, old and new, came together on October 24<sup>th</sup> to learn about the work EWB-USA NEU does by completing mock project activities.

The day started out just as a new project would: with an assessment trip. Teams of five students and an upperclassman facilitator worked to gather information about the village of Develo in the country of Ping (get it?) within the given time constraints of the trip. After assessing the needs of the community, the groups designed a gravity-fed water distribution system for the community. Once the design was complete, the teams of students partook in a virtual simulation of an implementation trip. From there, students learned about the PMEL program and got caught up to date on our projects in Honduras, Uganda, and Panama.

Since its creation in 2012, Bootcamp! has served to connect new EWB-USA NEU members with our great chapter by giving a crash-course on what to expect while in country. It has been so successful that we were invited by EWB-USA to present about Bootcamp! at this year's regional conference in Syracuse, NY!

### Member Spotlight: Alina Rossi-Conway

By Róisín Floyd-O'Sullivan - *PR and Recruitment*

The Northeastern University Chapter of Engineers Without Borders is very lucky to have so many talented engineering students participate in our programs. All of our members show dedication, leadership and initiative through their work in our design projects and on our executive board. Our chapter would like to recognize one of those members: Alina Rossi-Conway. Alina goes above and beyond and can always be counted on to get the job done.

Alina joined Engineers Without Borders her first semester of her freshman year, choosing to focus on our Uganda program. Currently a sophomore in Mechanical Engineering, she took over as Vice President of Administration at the end of her freshman year. Earlier this year she successfully organized and ran the Bootcamp! Fall 2015 program, which educated new members on the project process. Alina traveled with our team to Uganda in May 2015, to help turn on the water for Phase I of the water system in Bbanda. Over the summer, she continued to be active in our organization, as she participated in Northeastern's Engineering Leadership retreat and helped to make sure our chapter was ready for the fall semester.



This year she has represented our chapter at several events, including the Northeast Regional Conference.

Alina enjoys being on the executive board because it provides her with the opportunity to be more involved and to take part in planning activities and events for our chapter. She looks to remain involved in the Uganda program and executive board, and to become even more involved, if that's possible! The most satisfying part of this organization, she says, is how EWB-USA NEU uses real-world engineering experience to directly benefit people's lives.

### 2015 EWB-USA Northeast Regional Conference

By Elaine Kehoe - *Uganda Program Member*

In early November, eleven EWB-USA NEU student members, along with faculty advisor Dan Saulnier, piled into a van and set out for Syracuse, New York to attend the 2015 Northeast Regional Conference. This year's conference was hosted by the State University of New York College of Environmental Science and Forestry and featured a diverse group of speakers from professionals in industry to students, including four of Northeastern's own: Dan Saulnier, Emily Korot, Brandon Hornak, and Ashleigh Peterson. Our student members presented on fundraising strategies for student chapters, Fluid Mechanics, and our chapter's Bootcamp! recruitment activity.

The Northeast Regional Conference consisted of a series of hour long breakout sessions, which were divided into four categories: Technical, Project Management and Improvement, Chapter Presentations, and Community Relations. Sessions that stood out to our student members included: Bringing Education Globally Using Collaboration, How to Protect Natural Springs for a Water Source, The Glass Ceiling that African Woman Face, and Waste Management in Developing Countries.

Feedback from conference attendees was overwhelmingly positive, and EWB-USA NEU students are eager to share what they have learned with the rest of the chapter. Engaging in conversation with other chapters, both student and professional, is of tremendous value to our members and programs. The 2015 Northeast Regional Conference allowed students to learn from the successes and failures of their peers, and return to Boston with fresh ideas and new methods to cultivate EWB projects.

## Our Officers...

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