



Year End Report 2014

ENGINEERS WITHOUT BORDERS USA
NORTHEASTERN UNIVERSITY CHAPTER



Our Vision & Mission

EWB-USA's vision is a world in which the communities we serve have the capacity to sustainably meet their basic human needs.

EWB-USA is a nonprofit humanitarian organization established to support community-driven development programs worldwide through partnerships that design and implement sustainable engineering projects, while creating transformative experiences that enrich global perspectives and create responsible leaders.

From the President

Dear Friends,

I am honored to share with you the successes that 2014 has brought to Northeastern University's chapter of Engineers Without Borders USA. After ten years, our chapter continues to develop. We sent seventeen students and four recent graduates on a total of 5 trips throughout the year. The Honduras program regained permission for student travel, which could not have come at a more opportune time. We turned water on in El Carrizalito and finished the pipe bridge rehabilitation for Los Oreros during our two trips in 2014.

Our chapter's travels are not limited to project trips though. We also sent two students to the week-long ASCE Global Engineering Conference, cohosted by EWB-USA, in Panama City, Panama. The students were able to spend one of their days visiting the community of Las Delicias to assess it as a potential third program for our chapter!

All of our travels and developmental activities would not be possible without the amazing support structure that our chapter is truly appreciative to have. This structure is analogous to the parts of a tree. EWB-USA is like the soil; it provides a place for our chapter to begin and gives us the nutrients we need to grow from a small sapling to a tall, thriving tree. At the roots, we have our two mentors, Dan and Tim, who have been here since the start. They provide design guidance, technical review,

and a foundation to build upon across the generations of students. Our student body is like the trunk, which is the main support and work force that drives the chapter. Our partner organizations, ACTS Honduras, Sustainable Harvest International, and Village in Focus, act as the branches that extend into the world and connect the students to our partner communities, which are like the leaves. We help these communities grow from buds to full, green leaves, which, in return, allow the rest of the tree to continue developing. Our donors provide the funding which is the ever-present and essential sun and water our EWB tree needs to live and grow stronger each year.

We cannot thank you enough for all that you have contributed to our chapter, which is improving the lives of all people involved, from our students to professional engineers to the villagers we work with.

Sincerely,



Kelly O'Connell
President 2014 – 2015



Officers

President

Kelly O'Connell

Vice President of Administration

Ashleigh Peterson

Vice President of Development

Emily Korot

Treasurer

Miranda Taylor

Secretary

Lauren Grant

Honduras Program Director

Brandon Hornak

Honduras Design Lead

Elisa Arriaga

Uganda Program Director

Alex Piers

Uganda Design Lead

Charlie Audi

PR and Recruitment Coordinator

Ollie Fishstein

University Relations

Maria George

Webmaster

Tyler Hall

Faculty Advisor

Dan Saulnier

Professional Mentor

Tim McGrath

Uganda

2014 was an exciting year for EWB-USA NEU's Uganda project; over the course of four trips, we transformed the Bbanda Distribution System (BDS), a gravity-fed, community-wide, water distribution system, from a trench and pipe passing through the center of town to a nearly completed water system. The group made strides towards completing the BDS as tangible structures were constructed throughout the village. The project is close to completion, and soon the community of Bbanda will have improved access to water!

The community of Bbanda, Village in Focus (our partner NGO), and EWB-USA NEU worked together to dig trench and install about 3.3 km of pipe, construct a 12,000 gallon water storage tank, a generator house, five community tap stands, and several manholes. We also drilled and developed a borehole for a clean water source. Each construction task was critical to system completion, and all of the work

we accomplished during 2014 would not be possible without the community's hard work, support, and willingness to help. During construction, EWB-USA NEU members taught community members how to operate and maintain the system to ensure that the project continues to function long after we leave.

Our final task is to provide power to the system. EWB-USA NEU will install a diesel fueled generator to power a submersible pump on our next implementation trip. We will commission the BDS so that the people of Bbanda, the entire impetus behind our project, can enjoy a shorter walk to get better quality water than previously available. The people of Bbanda are ready for a sustainable water supply at community tap stands. We are equally excited to turn on water and optimistic about the future of the Bbanda Distribution System and work in Uganda.



5 tap stands, a tank, a generator house, and 11 valve vaults were constructed this year in Uganda.



Honduras

2014 was a year of progress for the Honduras program. Over the past twelve months, two teams of students and alumni - totaling ten volunteers - traveled to Honduras to continue the construction of a community-wide water distribution system in El Carrizalito and to build a pipe bridge to improve system reliability in Los Oteros. In 2013, Northeastern University banned all student travel to Honduras. EWB-USA NEU turned to alumni to serve as liaisons in country to fulfill the promises that were made to both El Carrizalito and Los Oteros. We are happy to announce that since May, EWB-USA NEU has been approved for student travel and will continue working in the Yoro District of Honduras.

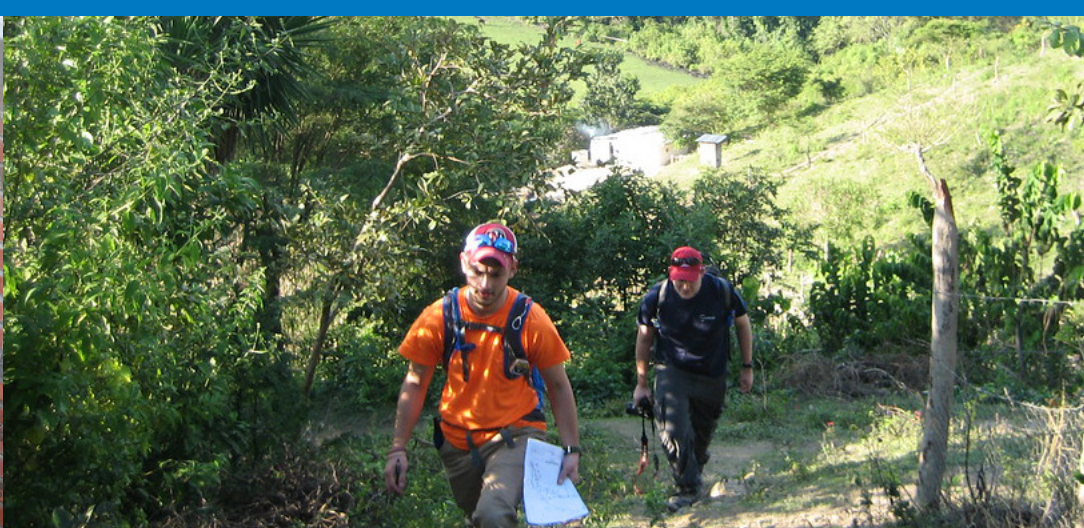
In May of 2014 a group of alumni and students went to El Carrizalito to construct Phase 2 of the El Carrizalito water project. We worked with a local electrical contractor, Enercom, to extend the electrical grid to serve as a power source for the pump. We also installed a water pump, pump controller, and community tap stand that would provide temporary access to the water supply until the final system was completed. The team also began construction in the village of Los Oteros

with the installation of columns and anchors for the new pipe bridge.

The second team traveled to Honduras in December to complete the construction of both water projects in El Carrizalito and Los Oteros. When EWB-USA NEU arrived, the community and students went right to work laying pipe and starting construction of a 4,000-gallon water storage tank. Since there was more work to be done than could be accomplished in two weeks, the team trained community members about how to continue work without the engineering team around. In Los Oteros, the team worked with community members to finish construction of the pipe bridge that had been started in May. A couple of months after we left, we received word that the community of El Carrizalito had finished installing all piping and taps, and water is flowing!

EWB-USA NEU is very excited that both of these projects have been completed. Two years ago the future of these projects was in doubt, but with the help of dedicated alumni and student members EWB-USA NEU was able to make clean water more accessible for the communities of El Carrizalito and Los Oteros.

45 homes in Honduras received access to clean drinking water.



EWB-USA National Conference

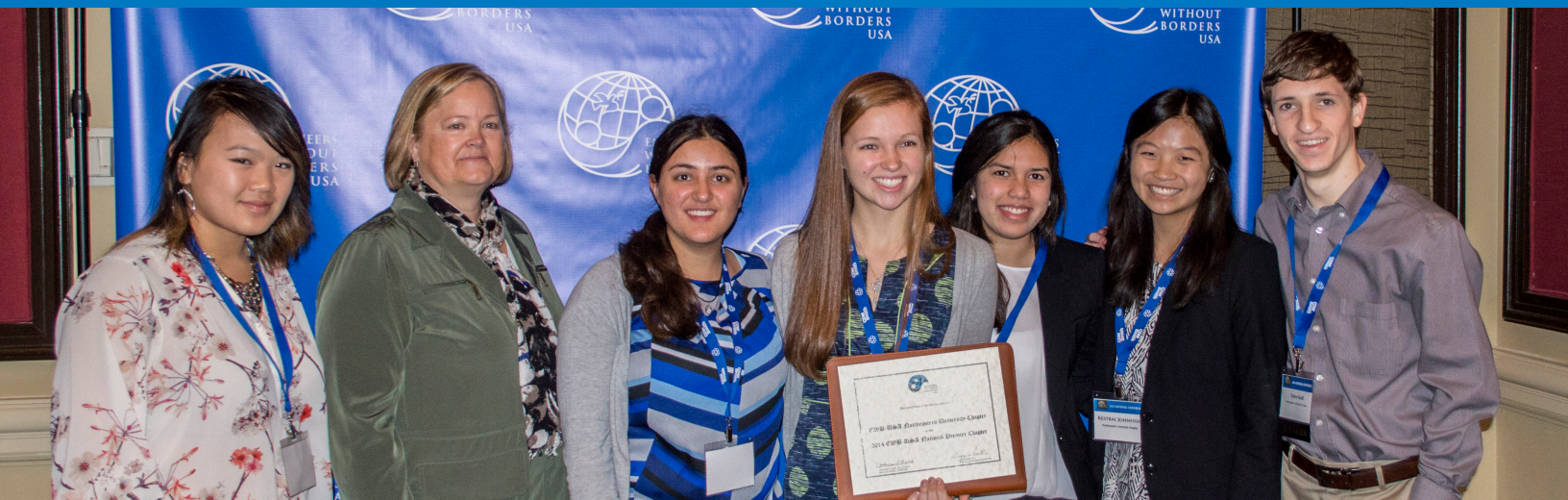
Reston, Virginia

At the end of October, six members of EWB USA-NEU traveled to Washington D.C. for EWB-USA's National Conference. The weekend began with a reception dinner on Friday night, where students mingled with members of other chapters. Saturday kicked off with an entertaining and engaging keynote address from the Vice President of Sesame Workshop, the people behind Sesame Street. While a seemingly odd pairing for an engineering crowd, the Sesame Workshop is leveraging its global audience to advance a variety of critically important health initiatives, including reducing childhood obesity.

Breakout sessions covered a range of technical, cultural, and career-focused topics. Northeastern student and former Honduras Design Lead Elisa Arriaga and Webmaster Tyler Hall, along with a representative from the Washington D.C. Professional Chapter, co-led a session on EWB-USA's new guidelines for planning, monitoring, evaluation, and learning (PMEL).

This session sparked a fruitful dialogue among attendees about the challenges different chapters have faced while collecting data, the importance of building strong community relationships, and how to develop a multi-disciplinary team dedicated to the PMEL process.

Overall, the conference was a worthwhile experience. The variety of projects and experiences among the EWB chapters was impressive, and members took away some important lessons and strategies to share with the rest of the chapter.



ASCE Global Engineering Conference

Panama City, Panama

Uganda Program Director Alex Piers and Honduras Program Director Brandon Hornak traveled to Panama to represent Northeastern University at the American Society of Civil Engineers and Engineers Without Borders Global Engineering Conference. The conference focused on gigaprojects, mainly the Panama Canal and the celebration of the 100th anniversary of its construction.

The conference was also a platform to discuss the potential global impact civil engineering can have, especially through the work done by Engineers Without Borders. EWB-USA hosted seminars to familiarize the engineers in attendance about the projects done and the process by which they are done.

Alex and Brandon used the conference to discuss their projects with other student and professional chapters as well as professionals throughout the industry. It was evident that there is strong interest in the work done by Engineers Without Borders and an equally significant interest in supporting their work. The two students also spent time speaking to some of the most

decorated professionals in civil engineering about the current state of the industry and current projects going on around the world.

The conference offered an excellent developmental opportunity for the two representatives as young professionals both in learning about the industry and sharing their experiences with Engineers Without Borders.

At the end of the conference, the pair traveled to the village of Las Delicias for a day to assess it as a potential new location for a third program. Our chapter was introduced to the community through a Northeastern service trip that went there over the summer. Brandon and Alex were able to tour the village and existing water system, and meet the members of the water committee.



Alumni Spotlight

Lindsey Broderick

This chapter is proud to claim Lindsey Broderick, class of 2013, as one of our own. After graduation, she became involved with the Boston Professional Chapter of EWB-USA and rose to her current position as President, working specifically on their Tanzania project. Her contributions to the chapter mark nearly six years of membership with EWB! Outside of EWB, Lindsey works for VHB in Watertown as a Structural Design Consultant and resides in Brookline, MA. In between her many commitments, she shared her memories from EWB-USA NEU and words of wisdom for current members.

What was the highlight of your EWB experience at Northeastern?

The highlight of my EWB-USA NEU experience was receiving the opportunity to travel to Uganda for an assessment trip. My trip was the final trip before starting the implementation phase for the Bbanda water distribution system. We gathered data, met with suppliers, surveyed the village and coordinated with the Water Board. Traveling is an amazing privilege and helps to put context into our work.

How has your experience with EWB-USA NEU impacted your experience in the professional chapter?

Being involved with EWB at Northeastern gave me the framework for my participation in the professional chapter. Having an understanding of the EWB project model allowed me to easily transition to another project. Through EWB-USA NEU I learned how to design water systems using area appropriate technologies. EWB-USA NEU provided me with the technical and leadership skills I needed to succeed in the

professional chapter.

How has EWB impacted your life as an engineer?

EWB has given me more motivation in my career. As engineers, we are very fortunate to have all the skills necessary to help people by developing technical solutions. EWB also made me more aware of how our engineering projects affect the public.

Do you have any advice for current EWB members?

Stick with it! EWB is a rewarding and unique group in that your participation is what you make of it. Don't burn yourself out by thinking you need to solve all problems immediately. EWB can be a lifetime commitment so pace yourself. Secondly, talk to people! I have never met a more interesting and diverse group of people than in the EWB community. Use these people a resource in the projects and in life. Lastly, travel! To be immersed in another culture is an invaluable experience. Make the effort to understand people's lifestyle, culture and tradition. See the project site, make friends, eat the food, learn the language and embrace the opportunity because you will not be disappointed.



Bootcamp!

Semi-annual Bootcamp! returned in 2014 with two successful sessions. Bootcamp!, which began in 2012, is an event focused on quickly educating new members about EWB-USA procedures and our own projects. It is intended to increase member retention rates and ease the sometimes formidable transition into the group. Bootcamp! consists of design discussions, mock project simulations, guest presentations on culture and technical subjects, and plenty of opportunities to interact with current EWB members.

Spring Bootcamp! further enhanced this opportunity. Members from six student EWB chapters in the region gathered at Northeastern to network and learn from each other. The first day followed the format of a typical Bootcamp! session; there were activities regarding each phase of the EWB-USA project process, and EWB-USA NEU Faculty Advisor Dan Saulnier gave a presentation on hydraulics. The second day was structured more like a forum. Each chapter had the opportunity to speak about its programs, projects, concerns, and advice. Spring Bootcamp! opened up

new networking opportunities for regional student groups, encouraging interaction and mutual growth.

As usual, fall Bootcamp! was aimed at new members in our own chapter. Facilitators led freshman members through assessment, design, monitoring and evaluation, and implementation activities, engaging groups in discussions and fielding questions. The design activity was a particular highlight; it was a new feature this year and allowed new members to approach a problem that the Uganda committee had been grappling with for months, the tank-level-indicator. In addition, Massachusetts and Rhode Island EWB-USA Representative Ryan Gordon, who is also a Northeastern alumnus, gave advice about traveling abroad. His anecdotes inspired many new members to aim to someday travel with EWB-USA NEU.



Thank you to our donors!

Partners



Platinum - \$10,000+

Chambers Family Foundation

Gold - \$5,000+

The Ford Family
The McGrath Family
The Richard J. Scranton Fund

SIMPSON GUMPERTZ & HEGER

Engineering of Structures
and Building Enclosures



PATEL GROUP



Silver - \$2,500+

The Crowley Family Charitable Trust



Environmental Partners GROUP
A partnership for engineering solutions.

Bronze - \$1,500+

The Scranton Family



CIVILized Solutions

Become a Sponsor

Why Us?

Our projects are developing and advancing faster than ever. In order to continue growing, we need our donor and sponsor support to grow with us. Your help makes our work possible.

Online

ewb.neu.edu/donate
Click "Donate Now" to be redirected to EWB-USA's donation page for the Northeastern University Chapter.

Mail

Please make checks payable to:
Engineers Without Borders USA - NEU
400 Snell Engineering Center
360 Huntington Ave.
Boston, MA 02115



Financials

Start Balance **\$30,760**
End Balance **\$15,932**

Revenue

| | |
|----------------------|------------------|
| Corporate: | \$17,778 |
| Personal: | \$26,910 |
| Grants: | \$30,250 |
| Engineering Society: | \$2,300 |
| Partner NGOs: | \$69,674 |
| Other: | \$1,960 |
| Total: | \$148,872 |

Expense

| | |
|---------------------|------------------|
| Honduras: | \$34,950 |
| Uganda: | \$119,019 |
| Student Betterment: | \$6,684 |
| Administrative: | \$2,481 |
| Other: | \$566 |
| Total: | \$163,700 |



Engineers Without Borders

Website: ewb.neu.edu
Photos: ewbneu.smugmug.com
Twitter: [@EWBNEU](https://twitter.com/EWBNEU)
Contact: president.ewbneu@gmail.com

Design

Rachel Bakish
rachelbakish@aol.com
bakishdesigns.com