



ENGINEERS WITHOUT BORDERS USA  
NORTHEASTERN UNIVERSITY CHAPTER



# YEAR-END REPORT

NORTHEASTERN UNIVERSITY | 2013





## OUR VISION & MISSION

### OUR VISION

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

### OUR MISSION

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 would like to boast that we have had another outstanding and incredibly demanding year. Not that we did not have our challenges; whether it be travel team member illness in country, difficulties with technical design, or the state department's travel warning – but these are all things that the group is able to overcome.

In spring semester of 2013, we were again awarded with grants through EWB-USA, and held our first successful Spring Edition of Bootcamp!. Over the summer, 10 students and our two mentors traveled for a total of seven weeks - and broke ground in Bbanda, Uganda. The Honduras group overcame the aforementioned travel restriction, and sent

a team of alumni in December to El Carrizalito to begin implementation and continue assessment for their water distribution system. During the fall semester, we had a very active time in the Northeast. First, hosting the second annual Fall Bootcamp! for new members, and later attending EWB-USA's Northeast Region Conference where our members led a handful of breakout sessions and the chapter received the *Regional Premier Chapter Award*.

Northeastern and our student members have been recognized by EWB-USA for quality work and strong leadership through the *National Premier Chapter Award*. On behalf of the chapter, I would like to sincerely thank everyone who has been a part of bringing the chapter to this point. First to the *EWB Alumni*, as our predecessors, you laid the groundwork for excellence. The current *Student Members*, you have taken what we have been given, and absolutely ran with it. Our *mentors*, Tim and Dan, you two have been incredibly patient and

are the constants for the projects with our students' generational turnover. Our *Partner Communities* of Los Oreros, El Carrizalito and Bbanda, thank you for teaching us your local practices, both technical and cultural, and providing our members a truly global engineering experience. Our *Partner Organizations*, for providing the group assistance in the communities and back at home in Boston. And finally, to our *Sponsors*; these projects would still be theoretical designs if it were not for your continued and growing support. We cannot thank you enough for all you allow us to accomplish, learn, and experience.

Warm Regards,

*Maria Proulx*

Maria Proulx  
President 2013-2014



# AWARDS & ANNIVERSARIES

## NATIONAL PREMIER STUDENT CHAPTER

EWB-USA NEU was titled the EWB-USA National Premier Student Chapter this year! Our chapter was chosen out of over 200 student chapters across the nation for our “strong organizational structure, outreach and collaboration with local chapters and varied fundraising approach” (News & Media, EWB-USA).

## FIVE YEARS FOR THE UGANDA PROGRAM

Our chapter is proud to announce that we are in our 5th year of working with the village of Bbanda, Uganda. We began working with the village in 2008 and have successfully completed several localized solutions to improve access to water. We constructed two new rainwater catchment systems and rehabilitated three existing systems at the primary schools in the village. We also drilled two boreholes outfitted with hand pumps to fur-

ther provide the community with more accessible water. By the end of our fifth year, we are excited to be amidst the construction of our village-wide water distribution system! See page 5 for more details.

# EWB-USA NEU OFFICERS

**MARIA PROULX**  
President

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VP of Administration

**EMILY KOROT**  
VP of Development

**MARIA GEORGE**  
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Director

**ANNA MURPHY**  
Honduras Design Lead

**ALYSSA STAVOLA**  
Uganda Program  
Director

**CATHERINE MCMANUS**  
Uganda Design Lead

**JILL PINSKY**  
Newsletter Editor

**TYLER HALL**  
Webmaster





## NEW PROJECT SEARCH

Since the release of the travel warning for Honduras last year, EWB-USA NEU has been looking to begin a third program. Although we are continuing both of our existing programs in Honduras and Uganda, we are confident that our growing membership can support a third program. With that being said, we are also not rushing into this new venture. A small committee of experienced members are working hard to reach out to many different

communities and NGOs until they find a pair that will be a good fit for the skills and expertise of our chapter.

Through our almost 10 years of EWB experience, we have found what works well for our chapter and the areas in which we excel. We are searching for a small to medium sized, tight-knit community that is in Latin America or the Caribbean. We want to utilize our members that speak Spanish, and have found it beneficial to be able to speak directly to villagers in their native language. Furthermore, it is less time-consuming and less expen-

sive to travel to these areas. We have found that villagers in smaller communities take on project ownership more readily. We are hoping to find a fitting community in the coming year, so that we can continue to grow as a chapter and help as many people as we can.

## EWB-USA NEU MENTORS



**TIM MCGRATH**  
**PHD, PE**

Uganda Technical  
Mentor

Traveled 7 times

**DAN SAULNIER**  
**MBA, PE**

Faculty Advisor and  
Honduras Technical  
Mentor

Traveled 13 times





## UGANDA

Construction of the Bbanda Water Distribution System is underway! After several years of building rain-water tanks and boreholes, and doing assessment and design for the system, we started laying pipes, which will eventually distribute water to 12 tap stands throughout the village. This will be borehole water, which is the best quality available and will also substantially shorten the distances villagers must travel to fetch water.

In 2013, we sent two teams of students to Uganda for a total of six weeks to begin construction of Phase I – the first five tap stands. During this trip, we oversaw installation of about 2/3 of the main water transmission and distribution lines from the source to the tank site. We also worked with the community on organization and mobilization issues. Their commitment to do the trench excavation is a much larger task than they have ever been confronted with, but through community meetings the entire village has devised a workable plan to get it done.

We are planning to continue our aggressive construction approach in 2014 to bring water to over half of the village. We are looking forward to another productive year and hope that it will be equally as successful as 2013.

## EWB-USA NEU BY THE NUMBERS

**212K**

Miles traveled by members

**52**

Days spent in other countries

**358**

Report pages submitted to EWB-USA

**2442**

Feet of trench dug





# HONDURAS

The Honduras program spent 2013 coping with change. In March, the US Department of State issued a travel warning indicating that crime and violence in parts of Honduras had increased to critically high levels and, as a result, Northeastern prohibited student-group travel there. This occurred just as we were completing travel plans to begin construction of a water distribution system in the village of El Carrizalito – all approvals were issued, the travel team was selected, and dates were set. It would be an understatement to say the chapter, and especially the travel team, were disappointed.

We have been working with the village since 2010, and did not want to back out of our promise to deliver water. With a source, 300

feet in elevation below the village at the end of a 1,000 foot long winding path, fetching water was a long and laborious trip and we had spent years designing a pumped system to bring water to them. So, we developed a plan that used our dedicated mentor and the strong network of professional alumni to travel to El Carrizalito to implement the student design.

Using this system, we were able to proceed with design and construction of Phase I, which included the pump tank and the transmission main. Current students completed the design in Boston, while alumni acted as construction managers in Honduras. The village was excited to begin work and organized to excavate the trench for the transmission main in just six days and all before arrival of the travel team!

Design is well underway for Phase II of the El Carrizalito project, which will initiate delivery of water to a temporary community tap stand in the village. Tasks include installing the pump and extending the elec-

trical grid to power it. Phase III will bring individual tap stands to each house.

We were also approached by the community of Los Oreros, who requested that we rehabilitate an existing pipe bridge in their system. We have designed a suspension bridge to support and protect the pipe as it crosses a 100 foot wide channel. The bridge will consist of steel cables and posts for structural support and a PVC water pipe with a metal and plastic encasement system to protect against sun damage. The pipe bridge in will be constructed concurrent with the work in El Carrizalito.





## BOOTCAMP!

Our chapter's event, Bootcamp!, had two more successful sessions in 2013. It was created in the fall of 2012 as a way to increase new member retention rates and help smooth the learning curve that new members experience when starting with EWB. Since its creation, Bootcamp! has evolved into a semi-annual event that focuses on different audiences each semester. Fall Bootcamp! remains focused on new members and allows attendees to work through the phases of a mock EWB project to develop a

better understanding of the scope of EWB work. Spring Bootcamp! is a two-day event that focuses on advanced members to broaden their understanding of the factors that contribute to a successful EWB program and how to administrate an efficient chapter. The spring version includes a more in-depth mock project activity and open discussions regarding everything from chapter sustainability to evaluating the outcomes and impacts of a project.

The effectiveness of Bootcamp! has been shared with other EWB chapters in the region this year. During spring 2013 Bootcamp!, we invited members from chapters in the local area to join in the event and share

their experiences, including the successes and the failures. Collaborating with other EWB chapters is extremely beneficial because we share experiences and learn from each other's mistakes. Two of our members presented at the EWB-USA Northeast Regional Conference about Bootcamp! and student betterment, so that other EWB chapters in the region could create their own versions of the event within their chapters as well.

## EWB-USA NEU SPEAKERS AT NERC

Presentation Title	<b>Overcoming Unforeseeable Obstacles in the Project Process</b>	<b>Community Involvement on Opposite Ends of the Spectrum</b>	<b>Student Betterment Through Bootcamp!</b>
Speaker(s)	Anthony Maiorano & Anna Murphy	Catherine McManus & Alex Piers	Maria Proulx & Kelly O'Connell
Membership Status	Students (2014 & 2015)	Students (2016 & 2017)	Students (2015 & 2016)





## NORTHEAST REGIONAL CONFERENCE

EWB-USA's Northeast Regional Conference is a forum for sharing knowledge and experiences valuable to our work as an EWB chapter. It is a unique opportunity for both EWB-USA and the student chapters to communicate with one another on a large scale.

This year's conference was held at Rutgers University in New Jersey. As in past years, EWB-USA NEU had a

strong presence at the conference with over 20 members in attendance.

Attending members were able to branch out to the various other lectures and presentations put on by professionals and students.

Afterward, we regrouped and shared our experiences and learnings with one another and with members who were unable to attend the conference.

Outside of the structured events of the conference, EWB-USA NEU networked with other chapters and

professionals - finding common interests in project work and chapter growth. Dialogues were started with other universities about inter-school activities and how projects with similar obstacles could learn from each other. Students left the conference with a stronger connection to the EWB community and each other.

**Design for International Development: Human Rights and Innovation**

Ann Polaneczky

Alum (2011)

**Water Distribution: It's a Jungle Out There and Software Can Help**

Mike Sanders

Alum (2009)

**Introduction to Pipeline Hydraulics**

Dan Saulnier

Mentor (1998)







## ALUMNI SPOTLIGHT

Most people's involvement in EWB ends once they graduate from Northeastern, usually as soon as their Senior Design Projects begins. As they move on in their lives, EWB no longer fits as well. This is not the case for Ryan Gordon, whose continued involvement in the organization has been an asset to the continuation of the Honduras program of our chapter.

Ryan became a member of the organization as a third year student, and quickly worked his way up to be the Program Director of

the Honduras committee. In his time as Program Director, he traveled to Honduras to construct the Los Oreros water distribution system and complete the assessment for the El Carrizalito water distribution system. He continued to stay involved in the group until his graduation in May 2013, even when we found out we could no longer send students to Honduras.

Ryan was one of the first to volunteer for the alumni team to construct the first phase of the Carrizalito design, and remained dedicated to trip preparation. He

traveled to Honduras with the team in December and was a part of an extremely successful trip.

Ryan has recently taken on the role of EWB-USA State Representative for Massachusetts and Rhode Island. His continued involvement in EWB-USA and our chapter of EWB has really shown how much a member can do, even beyond graduation.

## WHY EWB MATTERS

Liz Cherchia is a senior civil engineering student, graduating in 2014. She was the Uganda Design Lead from 2012 to 2013 and has always been a very committed member. When asked why she participates in EWB, her response was candid and heartfelt:

*"Tough question. It's hard to remember now why I joined. It wasn't really a desire to help people in need. It was sort of an abstract desire to do something meaningful, something important - which I knew vaguely meant to me*

*that I didn't want to just write papers or attend conferences. I wanted to travel, definitely - and I knew it wouldn't be free, but I could pay for it in the only currency college students have in abundance - time.*

*EWB is addictive. It's*

*something of an abusive relationship. It punishes us, physically and emotionally, but we're a little bit proud of that. The highs are astronomically high and the lows are abysmally low... And then, when we finally get good at it, it's time to move on.*





## SENIOR SPOTLIGHT

Kevin Rathbun is one member of EWB that will never be forgotten. When he began working with the organization in his third year at Northeastern, he did not waste any time becoming acquainted with project work. He developed from new member to Uganda Program Director in a matter of a few months and joined the travel team shortly after. He worked alongside Liz Cherchia, who was serving as the Design Lead at the time. Together, the two became an unstoppable force that led the group through one of its most exciting and developmental years. After traveling on the last assessment trip, Kevin was influ-

ential in leading the group in the design phase of the Bbanda Distribution System.

After transitioning out of the intense design work that he was immersed in for over a year, he became a mentor for the group. He took charge of the Uganda Program's approach to EWB-USA's newest Planning, Monitoring, Evaluating, and Learning (PMEL) program. He researched and created an impact analysis plan that catered to the unique situation of the Uganda project. PMEL determines how EWB's work is impacting the lives of the villagers we work with. His passion ensured that younger members understood the significance of this new approach and will continue to develop it after he graduates.

Additionally, Kevin has remained involved with the fundraising aspect of the project, working with Village In Focus to raise money for this cause he so truly believes in.

Throughout his three years in EWB, Kevin made a lasting impression on the group. He always lent advice to those who asked, answered the smallest of questions, or joined group discussions. He has a natural ability to work well with different types of people, and brings out the best of everyone with his openness and humor. He has been a great role model to many of our younger members and will be greatly missed.

*EWB helped me prove to myself that I can work hard, I can put in more than 8-hour days, if I care enough. I feel exhausted after a 14-hour day of EWB, but not the same way that co-op exhausts me. EWB also makes it really hard to ever do a*

*job that I don't care that much about. And for me, it's not just because the work is important and we help people, it's also because our decisions and ideas matter. They steer the organization.*

*That empowerment, the people, the work,*

*the opportunity to do something that matters, the chance to learn something. The reminder that I'm just a muzungu [Luganda word for Westerner] and there is a whole world to experience outside New England."*







## PARTNERS

### **ACTS HONDURAS**

The mission of ACTS Honduras is to promote sustainable programs for health, education and development in collaboration with rural Honduran communities and to foster cross-cultural understanding. ([www.actshonduras.org](http://www.actshonduras.org))

### **VILLAGE IN FOCUS**

Village In Focus, previously known as Friends of the Sick and Poor, is a community-based organization designed to improve the quality of life for underprivileged villagers in Bbanda, Uganda who have been devastated by poverty and disease. ([www.villageinfo-cus.org](http://www.villageinfo-cus.org))

### **SUSTAINABLE HARVEST INTERNATIONAL**

Founded in 1997 by Returned Peace Corps Volunteer Florence Reed, Sustainable Harvest International addresses the tropical

deforestation crisis in Central America by providing farmers with sustainable alternatives to slash-and-burn agriculture. ([www.sustainableharvest.org](http://www.sustainableharvest.org))





# FINANCIALS

Revenue Sources	Total
<b>CORPORATIONS</b>	<b>9,535</b>
<b>PERSONAL</b>	<b>7,261</b>
<b>GRANTS*</b>	<b>14,500</b>
<b>STUDENTS (CONTRIBUTIONS, DUES, ETC)</b>	<b>4,535</b>
<b>VILLAGE IN FOCUS</b>	<b>25,792</b>
<b>OTHER</b>	<b>5,328</b>
<b>TOTAL REVENUE</b>	<b>66,951</b>

Expense Sources	Total
<b>HONDURAS</b>	<b>1,637</b>
<b>UGANDA</b>	<b>65,705</b>
<b>STUDENT BETTERMENT</b>	<b>7,793</b>
<b>ADMINISTRATIVE</b>	<b>2,728</b>
<b>EXPENSE TOTAL</b>	<b>77,863</b>

\* Includes grants that have not been deposited in EWB-USA accounts yet

# ACCOUNT STATEMENT



2013 Start Balance



2013 End Balance





# THANK YOU TO OUR 2013 SPONSORS

## SPONSORSHIP LEVELS

Bronze | \$1500+

Silver | \$2500+

Gold | \$5000+

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**DN TANKS**

## 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](http://ewb.neu.edu/donate)  
Click "Donate Now."  
You will be redirected to EWB-USA's donation page for the Northeastern University Chapter.

### MAIL

Engineers Without Borders  
400 Snell Engineering Center  
360 Huntington Ave.  
Boston, MA, 02115

\* Please make checks payable to Northeastern University EWB





## **OTHER DONORS**

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**PENETRON**

**THE SCRANTON  
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**SCHWAB  
CHARITABLE FUND**





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NORTHEASTERN UNIVERSITY CHAPTER



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