

# Distributions

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## Assessment Trip to Bbanda

By Kelly O'Connell, VP Recruitment

Lindsey water quality testing | Photo: K. O'Connell

EWB-NEU's most recent trip to Bbanda, Uganda was this past August and served as our final assessment trip before construction begins on the water distribution system for the village. We collected all final data for the system layout, expanded our relations with several community groups, worked extensively with the Water Board to negotiate administrative plans, and established relationships and tasks with local government officials.

The travel team consisted of Professional Mentor Tim McGrath, Trip Lead Liz Cherchia,

Kevin Rathbun, Andrew Rohrman, Lindsey Broderick and Kelly O'Connell. In contrast to the last trip in which all members had previously traveled, all of the student members of this team were new to the country. This did not hold back the team at all, and we were able to accomplish many important tasks during the trip to allow for final design completion and preparations for implementation on our next trip.

One of the major focuses of this trip was to work closely with the Water Board to decide on the specific layout and organizational structure of the

system. This involved a trip to some nearby water systems to examine functioning systems; multiple meetings with the Uganda National Association of Community and Occupational Health (UNACOH), a local NGO, to discuss a possible partnership; a meeting with a local government level, LC3, to talk about landowner agreements; and five meetings with the Water Board about these same topics as well as administration of the system and the role of the village in all phases of this project. We initiated the writing of a supplemental Memorandum of Understanding between EWB-

NEU and the Water Board to outline all of the details of the system that had been discussed.

We also met with the district engineer, Jack Katende, on two occasions. Mr. Katende informed us of the standard construction practices in the area, the district's role in water quality and pump assessments, the groundwater maps available through a government office in Kampala, and possible sources of government funding for the project.

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## Assessment Trip to Bbanda

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We were given two reports to assemble, which will be submitted to the Ugandan ministry to request funding for the water distribution system.

Along with all of our meetings concerning the technical aspects of the design, we met with the Muslim community and the business leaders of the town center to make connections with a wider range of the village. During these community meetings, we introduced our group and explained our project and presence within the village, as well as the contribution needed by the community members to the project.

Another important focus of the trip was to collect all remaining data needed to complete the technical design of the system. This included survey data of critical design points, such as pinpointed tap stand locations, a photographic layout of the pipe network, pump and generator sizes available in the area, and more precise water usage data from 55 business owners in the town center. By meeting with local suppliers to find available pump and generator sizes, we learned that the pump and generator of the preliminary design are not easily accessible and would be very expensive, which forced us to reassess our initial model choices. We also continued to monitor the previously built rainwater catchment systems, which displayed a range of care levels. Although the Bbanda Umea tank had clearly not been maintained, Godfrey Sserwagi, a member of the Water Board, made it his personal mission to acquire the help necessary to ensure that it was cleaned properly.

One of the major obstacles that we faced during the trip is the state of the rectory borehole, which is the main source of the distribution system in our current design. Before the trip, we had been notified that it was broken, but were unsure how and why it broke. During the trip, we had two different pump mechanics assess the damage and found that both the rods and tubes had rotted and broken, which caused the hand pump to fall to the bottom of the well. The bottom of the borehole also needs to be redeveloped and capped. These issues were unable to be resolved during the trip and further research is being conducted concerning how we will address this setback.

All of data collected will allow us to finalize the design in time for the first phase of construction in April of 2013.

All in all, we conducted a very successful trip full of meetings and lessons. We even got to experience the milestone event of the official beginning of construction to the new Catholic Church in Bbanda! With the conclusion of this trip and the upcoming months of final design work and preparations, we will be ready come spring to begin construction of EWB-NEU's biggest water project yet.



Filling up jerry cans before the tank cleaning | Photo: K. O'Connell



Andrew Surveying | Photo: K. O'Connell



Liz (left) and Kevin (right) forming friendships | Photo: K. O'Connell



Final Waterboard meeting with (left to right) Kelly, Tim, Lindsey, Liz, Kevin and Andrew | Photo: K. O'Connell

## Honduras Committee Update

By Ryan Gordon, *Honduras Design Lead*

The Honduras Design Committee has started off to another exciting year. The group plans on traveling one time before the year ends and to begin construction of a water system in El Carrizalito in 2013.

Currently, the group is completing reports that will allow a travel team to lead a final assessment trip to El Carrizalito in December 2012. The main focus of this trip is to improve community involvement by overviewing the final design with the Water Board to gain their thoughts and approval. With the final design, another focus of this trip will be to gather any data that will be needed for materials and labor costs associated with the first phase of project construction and to gather more information for the implementation of subsequent phases.

With a full room of new and returning members, the Honduras Design Committee is also revamping the alternatives analysis for the El Carrizalito project before the December 2012 trip. This will help new members become acquainted with the project and give them a chance to contribute while working with some of our more experienced members.

The Design Committee also has some new faces in leadership this semester. middler civil engineer, Anna Murphy, is the Design Lead for the 2012-2013 school year. Other members have also stepped up into important roles specific to the Honduras group. sophomore



Surveying in Honduras during the December 2011 trip | Photo: M. Pellegrino

chemical engineer, Cait Reiter, is the Honduras Secretary; sophomore civil engineer, Julieta Moradei, is the Honduras Fundraising Lead; sophomore civil engineer, Elisa Arriaga, is the Honduras Culture & Education Lead; and junior mechanical Engineer, Dan Sobel, is the Spanish Translator Committee Lead. In addition, senior civil engineer, Christine Abichaker, will be leading the group to complete the alternatives analysis for El Carrizalito. These roles have been assigned to improve the fluidity of the group's communication and work.

## SPOTLIGHT ON...

### JULIETA MORADEI

by Gabe Woolf-Sullivan



Photo: J. Moradei

Every May while the mass exodus from the dorms, classrooms, and quads is taking place, our work steams on without missing a beat. Inevitably this leaves us with big holes to fill. Enter Julieta Moradei, a fiery, reliable, and eager solution. Just completing her freshman year in civil engineering, Julieta attended her first EWB

meeting this summer, and she could not have come at a better time. Julieta was a huge force in pushing the Honduras project forward this summer. With no fear of jumping in with us, she has already helped write and edit several major reports, worked on an alternatives analysis, led the writing of a grant proposal, and assisted the treasurer.

Calling home thus far, Buenos Aires, Ohio, Montreal, and most recently Boston, Julieta comes to us with worldliness that we all strive to reach. Not only is she a native Spanish speaker, a much-needed skill in EWB, but Julieta also attended a French speaking high school and speaks English without the hint of an accent. These broad experiences have fostered in her a passion for traveling. Julieta hopes to study abroad in Australia and travel throughout Europe, Asia, and South America. I am sure each new city will just lead to more, so perhaps one day Julieta will travel the entire globe.

Not surprisingly for such an experienced individual, Julieta cites the experiential learning style of the co-op program as her main reason for choosing Northeastern. But even before reaching her first co-op, which will start this January, she has found many other ways to apply her academic studies. Freshman year she devoted much of her free time to teach literacy skills to disadvantaged preschoolers in Roxbury through Jumpstart, and she is now deeply involved with structural engineering research for the civil engineering department chair. And needless to say, she is a stellar student.

In addition to her passion for helping, she looks forward to the opportunity to travel, so she can learn about the culture and lifestyle of other communities. This fall, Julieta has embraced a leadership role as the Honduras Fundraising Lead. All of us are excited to see the great heights Julieta and all of our new enthusiastic members will help us reach.

# SURVEYING OUR ALUMNI

**Name:** Ryan B. Mahoney

**Years involved with EWB-NEU:** 3-4 years

**Positions held:** VP of Projects

**Villages traveled to:** El Chaguite, Los Planes

**Current location:** Boulder, Colorado



Ryan Mahoney during the December 2008 trip to Honduras |  
Photo: D. Saulnier

## 1. What have you been up to since graduating / What are you up to these days?

Well lets see...after graduation I enrolled in the Engineering for Developing Communities track at CU Boulder. It is a certificate program as part of a MS in Environmental Engineering started by Bernard Amadei (founder of EWB-USA). I spent a little less than 2 years going through the program, taking courses like Sustainable Community Development, Water, Sanitation & Hygiene, Engineering for Disasters instructed by Bernard and other development professionals. Not only is the EDC program at CU really unique... Boulder, CO is an amazing place to live. I am writing this survey sitting at the base of a mountain and I can't find a cloud in the sky. I did a practicum in Peru and spent three months there evaluating rural water treatment plants installed by an NGO along the Amazon River and I did my master's project integrating charcoal (biochar) as part of a point-of-use chlorination/filter design for developing communities. Throughout my time as a student I also worked with the CU chapter of EWB and served as project manager of their Peru program. After I graduated I helped write a grant with my professors for the Reinvent the Toilet Challenge at the Bill &

Melinda Gates Foundation. When our team won the \$700,000 grant, I was hired on as a professional researcher on the project. Now I spend most of my days thinking about creative ways to address the sanitation problem, reading literature about biochar, nutrients and composts and I conduct experiments on charring biomass, treating urine, and making fake poo!

## 2. What skills have you gained from being a member of EWB?

Engineering skills... tons of those! Between co-ops and EWB work I became well versed in many design procedures before even graduating. Also time management was huge for work both in the US and in Honduras. But I have to say one of the biggest things I learned was leadership & project management skills - something you don't really get from classes (you just... need real stuff going on to really get that) and you don't really get it from co-ops (while you are doing real engineering work, you are never in charge). Our mentor, Dan Saulnier really makes this happen... he does an amazing job balancing the growth and learning of new students and leaders as well as the very real responsibility we have in Honduras.

## 3. How has your involvement with EWB made an impact on your life?

I think its fair to say there is no way in hell I'd be doing what I'm doing now without EWB. How would I even get a view into the challenges present in developing communities without EWB? There are one-off alternative spring breaks, or you can read books or something. Nothing puts you there like spending many years thinking about your project and many weeks on the ground learning from people living in the community.

## 4. What is your fondest EWB memory?

Dang... FONDEST?! Tough stuff. I'll never forget the time we gave a presentation to the community of El Chaguite telling them our recommended work plan... it was all numbers and figures, man we were such engineers! Dionicio (an elder in the valley and one of our best partners in Honduras) got up when we finished and really pumped everyone up, talking about how much better the future of the community will be, all the social, economic and health reasons why we are doing this project. It was awesome, he really brought it all home (for me, and the community members). Getting water flowing in El Chaguite the day before we left (and finding it was supplying 50% more water than they previously had) has gotta be up there! Also a laundry list of experiences; late night design improvements (both in the 4th floor of the engineering building and on the kitchen table in Honduras), post meetings (aka the REAL meeting) at Qdoba, the one time I submitted something to Dan S. and didn't get it black bleeding with red marks (just kidding, that never happened :-p).

## 5. If there anything else you'd like to add?

After working with a different EWB chapter and interacting more with EWB-USA I can say with absolute confidence, EWB-NEU is the cream of the crop! Keep it up ya'll! If you guys really want to keep it up, after graduation think about peace corps or NGO jobs or academia (look into graduate fellowships!)

### For More Information:

**Solar Biochar Toilet:** [facebook.com/SolarBiochar](https://www.facebook.com/SolarBiochar)  
**CU's Mortenson Center in Engineering for Developing Communities:** [mcedc.colorado.edu](http://mcedc.colorado.edu)



Storing PVC pipes for the Los Oros System in Honduras | Photo: M. Pellegrino

# Strengthening Our Chapter

By Caitlin Candee, *President*

In conjunction with the cool work being done in the Honduras and Uganda Design Committees, we have big goals for the chapter as a whole this year. We are working to build some organizational capacity to support our largest projects yet, and we are also working to maximize the positive effects we have on the students involved. To accomplish these goals, this fall we are running two new member programs, ramping up fundraising efforts, outlining our goals, and increasing our attendance and visibility at the EWB Northeast Region Conference.

This fall is our first time trying two new programs aimed at transitioning new members into the group more effectively. The first was **EWB**

**Bootcamp**, an event where we had 70 new and existing members run through a mock project in order to get familiar with our methods and see how all the pieces of a project come together. The feedback has been positive and we are excited about seeing it improve and grow in the future.

The second is a **buddy system**, which pairs new members with existing members in order to give new members a resource in a group where the learning curve can be overwhelming.

With help from University Advancement, we set up a strategic, yearlong plan to focus on **fundraising** and have begun to implement it. We are focusing on renewing relationships with previous corporate donors and

reaching out to personal donors.

We have also set up a yearlong plan to focus on **design, monitoring, and evaluation**. This will help us outline what we hope to achieve, monitor what we are currently doing, and finally set up a system to evaluate our impact. The focus this fall is on design, which is happening retroactively for us, as our projects have already been started.

We are very excited about the upcoming **EWB Northeast Region Conference**, which is taking place at the University of Pennsylvania in November. Through the generosity of the Scranton Fund, we have funding to subsidize the costs of this conference for several of our members, so we are looking forward to having a strong presence there.

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### Donations

EWB-NEU is a group of dedicated students with ambitious goals for the future of our chapter and project locations, which can only move forward with your support. Please find information below on how to donate. All donations are tax deductible.

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Checking out the system in EWB-NEU's El Chaguite project  
| Photo: M. Pellegrino