



ENGINEERS WITHOUT BORDERS USA
Boston Professional Chapter

Winter 2021 Newsletter

International Projects

Chamhawi Water Supply Project



Left
Current Water Board formed during CBWSO Training in September

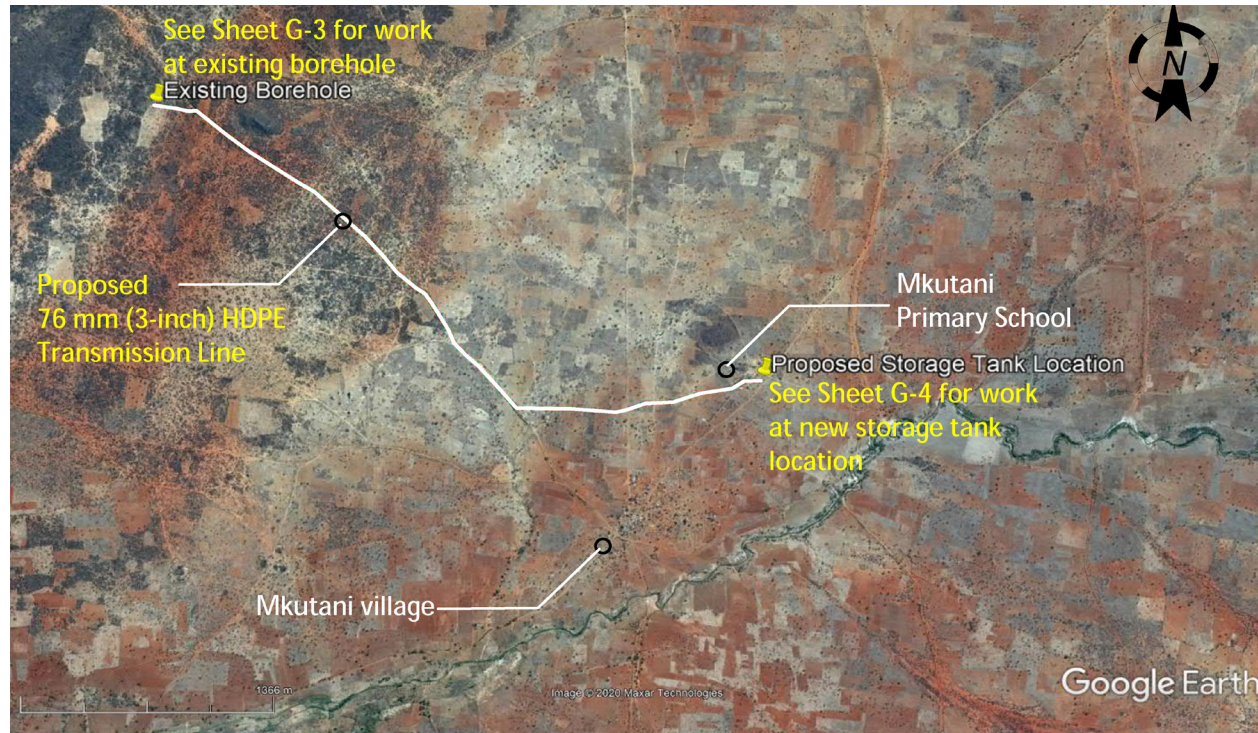
Right
Community member using the new borehole in Chamhawi

This year has been a busy one for the Chamhawi Water Supply project! Though we were no longer able to oversee implementation in person due to COVID-19, EWB-BPC forged ahead with remote implementation in September. The borehole drilling was scheduled for September 21st under the contract with Masochi Water Resources. On September 19th, the community cleared the area in preparation for the drilling. There were a few bumps in the road, quite literally, as the first drilling rig wasn't able

to reach the site. Finally, on October 7th and 8th, a borehole was successfully drilled in Chamhawi, Tanzania with a depth of 120 meters and, based on preliminary calculations, a safe yield of 23 gpm. EWB-BPC chose New Hope Tanzania (NEHOTA) to conduct the Community-Based Water Supply Organization (CBWSO) training to teach the community how to manage their new well. CBWSO training began on October 5th and continued through the week. An interim Water Board was selected with

twelve community members, six men and six women. Water quality testing met safe drinking water standards, and the community is being readied to use this new resource. They are in the process of constructing a fence around the borehole and finishing raising funds to pay the required 5% community contribution. The Post-Implementation report was submitted to EWB-USA and approved on February 1st. A community household survey was conducted to obtain baseline data and develop a community profile.





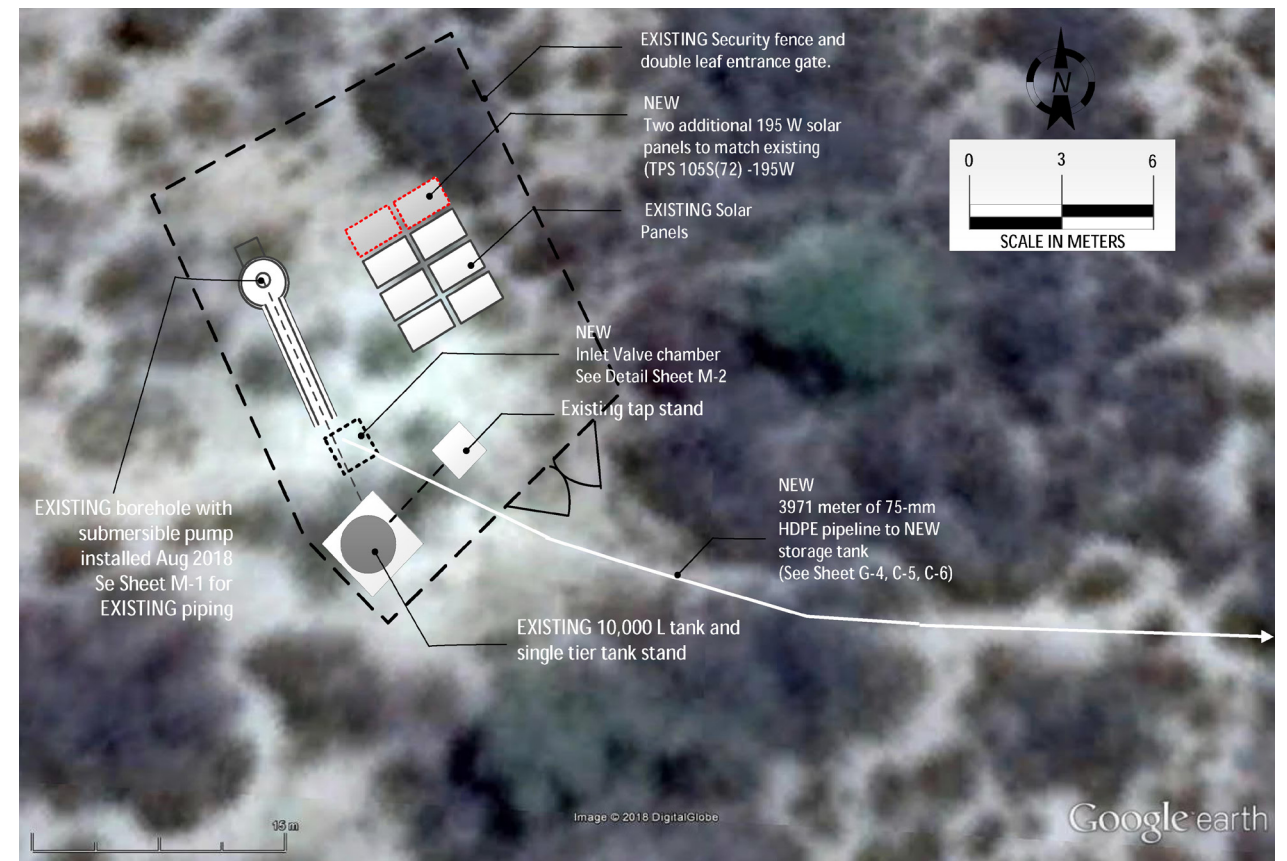
Mkutani Water Supply Project Phase 3

EWB-BPC has been working hard to raise the money needed to construct a 4 km water supply pipeline in Mkutani, Tanzania. This pipeline will bring water from the borehole well which was drilled in 2016 to the community of 3,000 people who struggle with lack of access to potable water. Thanks to the hard work of several of our members, and

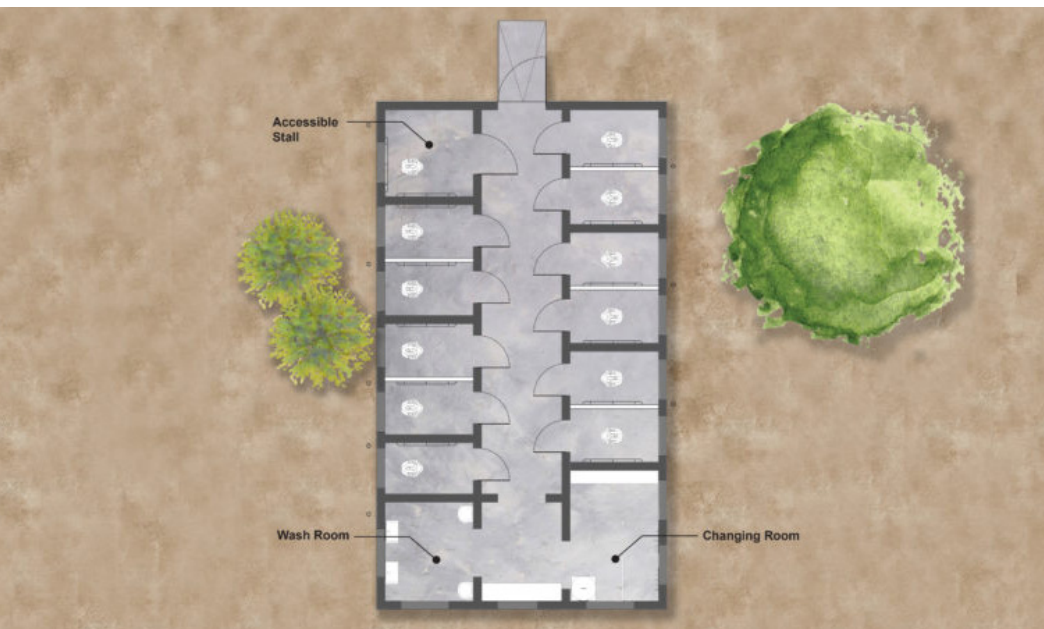
a big thank you to Jerry Bowling, we were able to raise the necessary funds to implement this project! Project leader, Bill Clunie, completed the design in December 2020 and other EWB-BPC members assisted in the completion of the report which was submitted to EWB-USA for review. We are in the process of obtaining current quotes for the work and plan to

begin implementation remotely in May 2021.

The diagrams in this section detail the route for the pipeline and infrastructure to be added during the upcoming implementation. The photos were taken during the 2019 monitoring trip of the existing infrastructure, including the storage tank and solar panel.



Mkutani Girls' Latrines Project



Left
Rendering of EWB-BPC's design for the new latrine facility done by volunteers at SMMA

Right
Current state of the girls' latrines at the Mkutani Primary School



The Mkutani Primary School is attended by approximately 640 students (312 boys and 328 girls). Although a six toilet latrine block for boys was constructed in October 2017 with financial assistance from the NGO, UFUNKO, the girl's latrine block remains in poor and deteriorating condition. Not only does the substandard state of the latrines contribute to girls not attending school, the number of latrines available is not in compliance with Tanzanian School Guidelines.

The guidelines state that there should be at least one toilet stall per 20 female students. During an implementation trip in Summer 2018, and an assessment trip in August 2019, concerns were raised about the conditions of these toilet stalls.

EWB-BPC completed the design and report for the girl's latrine block in September 2020. This design involves the construction of one private washroom and 12 individual stalls, each with a ceramic

pan and some form of latch on the door to ensure privacy while maintaining the safety of the younger girls. The Feminine Sanitation Team from the EWB-MIT Student Chapter is working with the Boston Professional Chapter to develop educational posters and materials for the children of the primary school in relation to sanitation and puberty. The report has been approved and EWB-BPC is working on raising the remaining funds necessary to implement the project in 2021.

Domestic Projects

Mashpee Wampanoag Food Sovereignty Project

The Mashpee Wampanoag Tribe joins a large number of Tribal Nations and communities in the establishment of a food sovereignty program: The Community Food Project.

The Community Food Project aims to provide access to nutritious food and fresh produce to tribal families most in need—including elders and children. Not only does the Community Food Project address improving healthy lifestyles and overall well-being, but will bring the community together in the intergenerational exchange of traditional ecological and tribal knowledge.

As reported in the Summer of 2020, the Mashpee Wampanoag Tribe agreed to partner

with EWB-BPC in the development of a pressurized irrigation system that meets the water demand to support agricultural production. Despite the disruptions of the COVID-19 pandemic, EWB-BPC team members have been able to perform two site visits in order to develop an understanding of the system infrastructure and operation.

In our time on site, team members have discussed irrigation practices with our partners, measured irrigated areas and inventoried crops, carried out an elevation survey of the features of the irrigation system, measured the rate of flow and pressure at above-ground taps, evaluated drop in head at the water main, and generated a

pump curve by evaluation of the pressure head and rate of flow.

An assessment report exploring our findings has been finalized as of December 2020, and additional investigations are currently being planned to inspect the well design, determine the pump condition, and carry out an inspection of the water main.

The photos on the right depict the gardens and hoop houses at the Mashpee Wampanoag Reservation.



Partner Spotlight

Father Harry, Trinity Episcopal Church



Fr. Harry Walton and the parish of Trinity Episcopal Church in Canton, MA recently celebrated with great joy the successful drilling of the well in Chamhawi, Tanzania. This project is the realization of a dream of Peter Churchill, a parishioner at Trinity who saw a need for a safe drinking water source in Chamhawi after hearing a sermon by a visiting supply priest, Fr. Phillip Kutta who grew up in the community.

Fr. Harry is the Rector of Trinity Episcopal Church in Stoughton, arriving there after his ordination in 2014. He graduated from the Episcopal Divinity School in Cambridge, MA with a Masters of Divinity with a focus in pastoral care and liturgy. He was awarded the William H. Lincoln Prize for excellence in reading and the J. Norman Hall Prize, given to a member of the graduating class recognized as outstanding in peace and justice work.

He has helped lead the Stoughton community into a new era of growth and commitment to helping others through their outreach programs. In the fall of 2018, Fr. Harry volunteered to begin leading the parish in Canton during a time of need. In Canton, his focus and commitment on mission and outreach is helping to revitalize the parish in their call to do God's work in the world. The well project in Chamhawi has had a tremendous impact on the Canton community.

Prior to his ordination, Fr. Harry worked in the business sector as Director of Procurement, overseeing the purchasing departments in three distribution centers for a major East-coast distribution company servicing 12 states, from the Northeast to the Mid-Atlantic. In his role, he oversaw corporate donations of excess inventory, donating much-needed supplies to food pantries and soup kitchens as well as personal care items to nursing homes.

Fr. Harry has a strong passion for international mission work. He has participated as part of



a medical mission team to the Dominican Republic for over a decade. He has helped support other global mission efforts in Malawi through fundraising efforts.

After hearing the strong interest expressed in this mission project, Fr. Harry worked with a newly formed Chamhawi mission team at Trinity Episcopal Church to apply for and receive a \$10,000 matching mission grant from the Episcopal Diocese of Massachusetts. Together with this and a year of fundraising efforts, Trinity raised the funds to cover the

cost of the well drilling. Trinity partnered with EWB-Boston Professional Chapter in the Fall of 2019 to provide technical design and project management for the project

After a challenging year of working remotely due to Covid-19, a dedicated team of engineers from EWB-BPC, led by Mike Stover and facilitated by Barbara Piper, successfully implemented the drilling of a borehole well, installation of a hand pump (which was loaned by the community of Mkutani) and a Community-Based Water Supply Organization (CBWSO)

was formed and trained in the village to oversee the operation and maintenance of the new potable drinking water supply. Trinity has recently been awarded an additional grant to move forward into Phase II of this project to install a solar pump, panels, and storage system.

In his down time, Fr. Harry enjoys helping watch his six year-old granddaughter Adeline and spending time exploring nature with her. He enjoys reading and music and all things church.

Member Experience

Brandon M



How did you find out about EWB?

The first time I heard about Engineers Without Borders was at a National Society of Black Engineers Conference in Nashville in 2014. Another attendee was explaining her experience with her student chapter, and I was fascinated by the existence of an organization. After the conference wrapped up, I searched for more information about EWB and learned that a Boston Professional Chapter existed.

How does EWB work?

EWB gathers a lot of information on what they believe to be best-practices in humani-

tarian aid and disaster relief efforts. This is then formalized into processes, requirements, and phases that are required at every stage of a program from its inception through to completion. As a Chapter, we have to perform formal assessments and develop alternatives analyses for the engineering problems that we aim to solve. The proposals, analyses, implementation plans, and other reports that we must produce and submit are usually reviewed by a team of subject matter experts. As an aid organization, we really should make sure that our work is in the best interests of our partner communities. In that sense, the reviewal pro-

cess is an important step in making sure that we don't have negative impacts or completely miss the problems that we are facing. The work that we do is voluntary and funded by grants and donations, but there are requirements that our partner communities fund a portion as well.

How has EWB-BPC grown since you joined?

A lot of the vital groundwork to provide access to clean water happened in the pre-2014 era. A lot of the relationships that have allowed us to continue this work were also established by our founding members pre-2014, especially within the communities and with our liaison in Tanzania. Between 2015 and 2016, there was a lot of turnover in our chapter leadership, and a lot of progress with our projects. The Honduras project was successfully closed out, and we made important strides in Mkutani and Mapinduzi. We also made some new connections with entities in Tanzania and other NGOs. For example, establishing community owned water supply organizations (COWSOs) with the help of an Italy-based NGO al-

lowed those two communities to better coordinate their resources to fund and maintain their wells. At the same time, EWB-BPC continued to build out its executive committee, recruit new members, and established new collaborations with other local chapters. With the progress on the water supply projects, we could now focus on complementary vital efforts like health and sanitation.

What are some of the bigger challenges that the chapter has encountered?

It's not uncommon for us to spend several months planning, researching, writing reports, and then to have some condition change in our partner community or a well-intended-but-difficult-to-understand inquiry from an EWB reviewer set off another iteration of planning and readjustment.

The slow and steady planning can quickly give way to a very short ramp-up to assemble a travel team and to coordinate with vendors in or near our partner communities to ensure that we can begin work almost immediately upon arrival. Coordinating resources among a group of volunteers that have day jobs while trying to syn-

chronize our efforts with our stakeholders on the other side of the globe is a lot to tackle sometimes. Fundraising is another ongoing challenge.

What is it like to travel for an EWB project?

I've mentioned the planning that is a core part of all EWB work. Travel is no different. Once we've identified a travel team, we typically start drafting a day-by-day plan to execute our Implementation



Plan. I should note that there are ALWAYS changes to our best laid plans! For Tanzania, travel is usually a day-long endeavor and there's really no way around it. We tend to run fairly long hours when we are working in the villages so that we can get the most out of each day. It's common for travel team members to build stronger working relationships among themselves during the 2 or 3 weeks away.

The children, young adults, and families that we encounter and collaborate with on these trips are not dramatically different from our families and the people that we've grown up with. These revelations are a key part of being able to work effectively in communities. While there are many similarities, there are also cultural differences to be expected. For example, some nations embrace more conservative norms for fashion.

During one trip to Tanzania, we were ready to attend a meeting with some local government officials and one of our team members had to swap their capri pants for something that covered their calves because that was considered more appropriate formal wear for a business meeting. I've

also had people ask questions about my hairstyle because it is not common for men to have longer hair in Tanzania.

Why is it important to build a positive and collaborative relationship with our partner communities?

As a chapter, EWB-BPC works to establish a truly collaborative dynamic (and not a paternalistic dynamic) with the community members and



stakeholders that we partner with. There are many examples, past and present, of how humanitarian efforts have failed to have a sustained positive impact. I mentioned the importance of collaboration instead of paternalism because I have seen how the latter cause harm.

Advocacy campaigns like @NoWhiteSaviors have done tremendous work in elevating the voices of African professionals, especially women, to combat abusive practices that have been tragic fixtures in the humanitarian aid and development sectors in Africa. Instead of simply critiquing failures in humanitarian efforts, they often cite ways to constructively engage and have positive impact. Angela Y. Davis, activist and brilliant interdisciplinary scholar, has been a vital part of promoting meaningful self-interrogation as a means of deconstructing oppressive

structure in our society. As recently as this fall she cited how important it is for activists and allies to acknowledge their own privilege and be able to accept leadership from the people that are not privileged. Teju Cole, writer and photographer, spoke along the same lines when he highlighted the dangers of NGOs that conflate “doing good work” with “making a difference”. He goes even further and states that it is vital to not only see a problem, but to interrogate how the problem came to be. Failure to do this runs a very high risk of being well-intended but contributing to the very problem that one seeks to solve.

Is it possible to separate activism from humanitarian work?
An oversimplified examination of our partner communities might lead to a conclusion that “there is a lack of access to clean water in some rural areas

in Tanzania”. A closer examination of the situation might yield a different series of conclusions:

1. Clean water is difficult to obtain in Tanzania
2. The lack of access to clean water has implications throughout rural society
 - a. Contaminated water sources fueled outbreaks of waterborne illness
 - b. Travelling long distances to obtain clean water adds more burden to women and children. Women and children that have to travel for long times to get clean water have less time to work, run businesses, attend school, etc.
 - c. These communities would be more susceptible to drought and that could devastate an agricultural economy
 - d. These communities might have more difficulty recruiting doctors and educators to work in their villages and that negatively impacts education opportunities

The former, the oversimplified solution might lead someone to drill a well, install a pump, and point it out to the village and move on. The latter, might lead someone to work with the community to help identify contaminated water sources, learn how to build and repair distribution systems, research

low-cost decontamination technology, promote and emphasize health and sanitation practices...in addition to drilling a well. So maybe you can separate the lesson and best practices that activism have provided from humanitarian aid work, but I doubt that is a better outcome for anyone involved.

What is it like to be a black person working with EWB?

It was originally surprising to see how the aid space is dominated by white people. The people that perform humanitarian work, largely American and European, were almost exclusively white. The people in the partner communities are largely black and brown. There is a series of dichotomies that arise because of this. It is breathtaking to feel like I am more readily acknowledged as an American outside the U.S. than I am within it. It’s hard to capture in words the cognitive dissonance of having a friend ask “Why are you looking for clean water in Africa and we don’t have clean water in Flint?” Even attending a meeting with a senior government official in Africa and realizing they were watching MSNBC brought more puzzlement than comfort. Ultimately, I feel like my presence is important because of my experience as a black person. Being black in America did a lot to prepare me to interrogate the problems facing black communities outside of the U.S.

It’s quite easy to see why access to latrines, for example, is a humanitarian issue and also a gender issue and also an education issue and an economic issue.

What are you looking forward to from EWB-BPC?

To my knowledge, this past year was the first time that EWB-BPC collaborated with the National Society of Black Engineers Boston Professional chapter. I think this is a great opportunity for two organizations with complementary missions to engage each other. We’ve tried some new things for fundraising, there has been some success there. Even our expanded footprint on social media and our slack channel is encouraging for how we can communicate, recruit, and share information about our work.



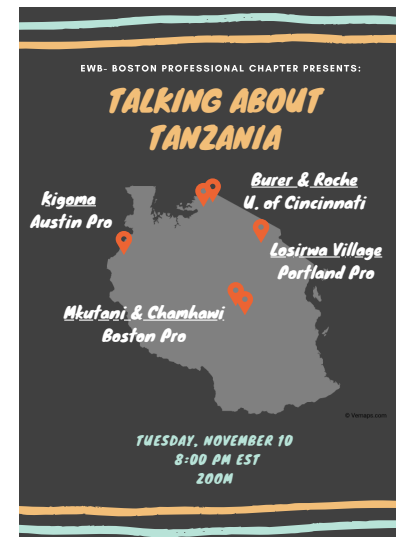
Virtual Events

Talking About Tanzania

In November 2020, EWB-BPC was proud to host the first “Talking about Tanzania” virtual conference to share knowledge and experiences with other EWB Chapters that work on Tanzanian community development projects. Several other EWB chapters also presented on their projects including: Greater Austin, Portland (Oregon) Professionals, and University of Cincinnati. Upwards

of 70 people from ten different chapters across the U.S. attended this first conference, and participated in four breakout rooms on various topics.

The second Talking about Tanzania mini conference was held on Tuesday, January 26 and hosted by Lizzie Wilson of EWB Greater Austin Chapter.



Holiday Cocktail Crafting

EWB-BPC said “Cheers!” to a successful year on December 11, 2020. Two of our members lead a cocktail crafting class, (Ryan Barrett seen right), teaching us how to create a rum manhattan and a delicious coquito.

After the demonstration, attendees were able to try their hand at recreating the festive beverages. At the end, everyone sipped on their creations and reminisced over prior trip memories. We hope to be able to host similar events in the future.



Trivia for Tanzania 2

EWB-BPC hosted our second ever Trivia for Tanzania on February 18th, 2021. Our first virtual trivia night was such a success last year and a great way to stay connected during this

crazy time, so we decided to do it again! We had eight teams competing for the prize of various gift cards to local Boston businesses. Congrats to Team House of RuPaul on their win!

A big thanks to the attendees and generous donations we were able to raise \$500. Hopefully everyone had as much fun as we did!

Meet Our Executive Committee



President
Róisín Floyd-O'Sullivan



Vice President
Alyssa Stavola



Director of Development
Alice Aguiar



Treasurer
Charles Conley



Secretary
Bruce Jacobs



Membership Coordinator
Ryan Barrett



Tanzania Program Manager
Barbara Piper



Local Programs Manager
Cassandra Schwartz



Chamhawi Water Supply Lead
Mike Stover

Thank you to our generous sponsors

Get Involved

Here are a few tips on what to do if you are new to EWB-BPC or if you want to be more involved:

- Join our Slack channel! We use Slack for project and fundraising discussions, in addition to general announcements and meeting reminders. It is the easiest way to stay up to date on EWB-BPC activities. Email president@ewbboston.org if you would like to be added, or scan the QR code!
- Join our mailing list! You can subscribe to our mailing list via our website, on the "Subscribe" page. This will ensure that you will receive our monthly bulletins that are sent out on the 1st of each month. Email bulletins include monthly up-to-date project information, groups that need assistance and EWB-BPC meeting/event information.
- Come to our meetings and events! If you are not on our Slack or mailing list, our meeting information is listed on the calendar located in the "Events" page of our website.



New Website!

On February 1st, 2021, EWB-BPC launched our brand new website! With our updated user interface, we hope it is now easier to find information on all of our projects, information on our meetings and to stay up to date with our blog. Go check us out at ewbboston.org!



SMMA



Interested in becoming an EWB-BPC sponsor?! [Email development@ewbboston.org](mailto:development@ewbboston.org) for more information.

BRONZE
\$1,000+

- ▶ Logo or name on signage at fundraising events, in newsletter, and on website

SILVER
\$2,500+

- ▶ Presentation at company event
- ▶ Logo or name on signage at fundraising events, in newsletter, and on website

GOLD
\$5,000+

- ▶ Three tickets to On Tap for Tanzania
- ▶ Pictures of travel team in Tanzania wearing your logo
- ▶ Presentation at company event
- ▶ Logo or name on signage at fundraising events, in newsletter, and on website

PLATINUM
\$10,000+

- ▶ Short video made in Tanzania OR logo displayed on cups of annual On Tap for Tanzania event
- ▶ Six tickets to On Tap
- ▶ Pictures of travel team in Tanzania wearing your logo
- ▶ Presentation at company event
- ▶ Logo or name on signage at fundraising events, in newsletter, and on website

