

EWB SPRING NEWSLETTER

SHUNGUBUG GRANDE, ECUADOR

Spring 2024

Engineers Without Borders-USA WPI



CONTINUING OUR WORK WITH SHUNGUBUG GRANDE, ECUADOR

As a club, we have been focused these past two terms on brainstorming and researching potential solutions that will address the concerns raised from our Fall assessment trip in the community of Shungubug Grade. There were two main problems that we found the community facing: contaminants in their water that negatively impact health and landslides that disrupt their water collection and distribution system. To address their water quality struggles, we began to build a biosand filter to test whether various combinations of filtration techniques can remove the contaminants in the community's water.



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TECHNICAL UPDATES

Currently, we have just finalized construction of our prototype biosand filter! As biosand filtration is a solution our club has experience with from working in prior communities, we know that it is a great way to filter out fecal coliforms. However, we struggled to find literature on its effectiveness at filtering nitrates and phosphates, the two biggest contaminants we've identified in the community's current water supply. Therefore, come the Fall semester, we plan on continuing to research and conduct testing with additional solutions.



We are currently researching and comparing alternative methods to filter out nitrates and phosphates in order to find the most promising one. Some of the solutions we have been researching have been the efficacy of adding plant ash, zeolites, or denitrifying bacteria to our biosand filters. We are also looking into the feasibility of implementing a well in the community, as the access to potentially cleaner groundwater may reduce the need to filter out contaminants and eliminate the need for the community to clear out their existing water system after landslide events.

The NGO in Ecuador we are working with, Engineers In Action (EIA), traveled at the end of April to Shungubug Grande to gather more information about the water system, conduct more tests on the water, and get input from the community on some of the solutions we are considering to address the apparent problems. We will use the information from this trip to broaden our understanding of the situation of the community and help in our solution decision making process.

FUN EVENTS



CRAFTS + COMPLIMENTS

For Valentine's Day, we did our annual Crafts and Compliments! Members designed boxes that were then filled with notes from other members of EWB. This was a great GBM where members got to know each other better and destress around midterms!

POTLUCK WITH BRASA

For the last GBM of C term, we partnered with BRASA for a potluck! We enjoyed food from Latin America and some of the members of the most recent Travel Team made food that they ate while in Shungubug Grande, Ecuador.



DISCUSSION WITH ARNOLD LANE

During one of our GBMs, we met with Arnold Lane of the Office of Diversity, Inclusion, and Multicultural Education for a conversation about the consequences of our trip and how they relate to white saviorism and the Race to Innocence.

TABLESITTING

We had a blast getting to meet the Class of 2028 at the Accepted Student's Day Club Fair! We also table sat at the Climate Action Fair alongside Green Team, Outing Club, Habitat for Humanity, and many more WPI clubs!



CONFERENCES 2024

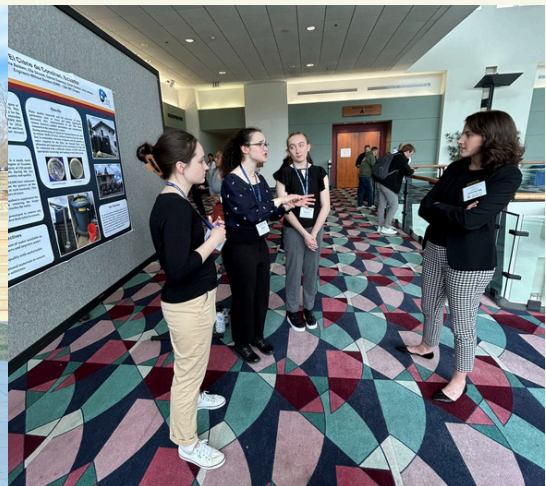
NERC

On March 24th, we attended NERC, a Northeastern conference that allows other chapters to mingle together. At this conference, we learned a lot about career goals, as well as technical details that will help us with our current project. At the end of the conference, there was a poster competition, which Sophie Gross, Ella Devault, and Sarah Gardner won 1st place and won \$300 for the club!



NEWWA

On April 3rd, a group of students attended NEWWA, which is a regional conference on water conservation. Gemma Baldwin, Ella Devault, Gabe Espinosa, Sarah Gardner, and John Lemieux did a presentation to the judges about the project work we have done in EL CISNE.



CELEBRATING OUR SENIORS



ABIGAIL HOLMES

Abby first joined EWB when she was a freshman at WPI, and will be graduating with her bachelor's in Biomedical Engineering and her master's in Operations & Supply Chain Analytics. During her time in EWB, she was the Treasurer, Project Communications Liaison, and was our President for the 2023 calendar year. Abby's favorite memory in EWB was the NEWWA Conference in 2022, where she "had so much fun bonding with club members and... won the poster session!"



COLE PARKS

Cole first joined EWB when he was a freshman at WPI, and he'll be graduating with his bachelor's in Robotics Engineering and Computer Science. During his time in EWB, he was the Technical Project Lead, Technical Lead, Vice President, and Membership Development Chair. Cole's favorite memories in EWB were the calls that we had with the community, and paint nights that that exec did together.



GABE ESPINOSA

Gabe first joined EWB when he was a sophomore at WPI, at he'll be graduating with his bachelor's in Mechanical Engineering. During his time in EWB, he was the technical lead, technical project lead, and he was the health and safety officer on the most recent travel team trip that we had in Ecuador. Gabe's favorite memory in EWB was everything! He loved going on the travel trip and getting to bond with the team, but says that the best thing was all of the friends that he made through EWB.



JACK PERRIELLO

Jack first joined EWB when he was a sophomore at WPI, and he'll be graduating with his bachelor's in Environmental Engineering. During his time in EWB, he was treasurer and the funds chair. Jack's favorite memory in EWB was helping start our relationship with the Rotary club to help us start out the rotary grant! Jack has also been an active member of Habitat for Humanity during his time at WPI.

STARRY NIGHT SOCIAL

On April 5th we had our annual Starry Night Social. We celebrated EWB's accomplishments from this year with presentations, authentic Hispanic food, and a silent auction. Through our ticket sales and silent auction, we were able to raise over \$500 to be put towards our current project.



We kicked off the event with our guest speaker, Dean Sheller from the global school. She discussed the ethics of community based engineering projects like ours. We then heard presentations from Ella about general EWB updates, travel team about the recent travel trip, and project team about next steps for our current project.

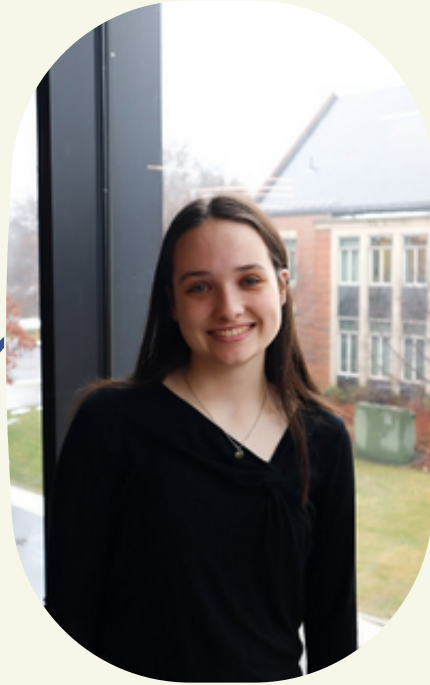


MEET THE EXEC BOARD



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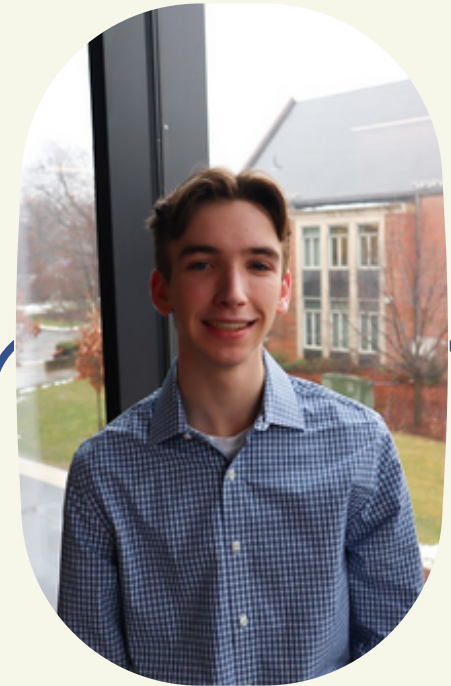
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