

Peru Water Quality Project

Team Members:

Hannah Mosheim, Chemical Engineer, third year

Olyvia Raymer, Civil Engineer, second year

Anna Garverick, Biomedical Engineer, first year

Kathleen Campos, Civil Engineer, second year

Networking with the Peruvian community of La Huaylla, we propose to update the current drip based chlorine system to a peristaltic pump because it will increase water sanitation quality, decrease maintenance, and increase long term sustainability. Additionally, we will implement a system of data collection and a database to facilitate communication between our team of engineers and the community's water committee.

We were inspired by the Little Bang's motto: create a solution to a problem that needs solving. The competition challenged us to think like business people and think of a creative solution for the water system in La Huaylla, Peru. An innovative pump could change water sanitation forever. Our goal is to help communities and the poster competition could bring us one step closer to that.

Potential future interviewees are La Huaylla Water Committee Members, community members, peristaltic pump experts and installers, and solar panel dealers in Peru. To reach community members, we ask our liaison, Katie who is a Peace Corp Volunteer station in Peru, to either give us members emails or pass them our questions. We must ask the community members well in advance because it takes longer to receive the responses. We would like to interview peristaltic pump experts to decide what size and kind is necessary for the community.

By Saturday, January 13, we will email Katie, the peristaltic pump expert, and additionally research Peruvian companies that sell solar panels in order to send a list of questions for them to answer. By this time we will have a completed list of potential additional interview sources to contact as well. At our January 13 meeting we will review our submitted poster from session 1, review feedback, and discuss edits as a team. By the following meeting, on January 15, we will have completed the edits and have a new final draft to submit for printing on the 16.

We plan to install the peristaltic pump ourselves this summer when we visit the community. We will contact a local professor or engineer that has installed a peristaltic pump to lead us in an installation workshop. At least two members of the team will attend the workshop and will teach the rest of the team what they learned. At least two people traveling to Peru this summer will have learned and reviewed how to install a peristaltic pump. They will lead the installation in Peru.

The team learned a lot from session one. Some lessons learned were business lingo, technical decisions, and expanding our market. The judges asked us questions using terms like "market research" and "proof of concept." Luckily, most terms were self explanatory. One lesson we learned was to familiarize ourselves with common business terms so we can answer every question to the best of our ability.

One judge asked us a great technical question that sparked some thought. It was referring to where on the reservoir the peristaltic pump would be placed. We had not prepared an answer for this question, but Hannah provided a great response by saying that we would need to discuss it with the community. We can develop this answer for session two and prepare for other important technical questions. For session two, we would like to do a price comparison between different sizes of peristaltic pumps to decide which is best for our target market. We would like to have more data and concrete numbers to share to the judges about the pump.

The first time we install the peristaltic pump will be in the community we have been working with for the past three years. Once the Peru Team and the community find the pump to be a great investment, the mayor will be able to share this new technology with the mayors in the surrounding communities. To make installation easier, we would like to train Katie, the Peace Corp Volunteer how to install the pump so she can install it in other communities for her future service. That way, surrounding communities will only have to pay for the pump and not the installation.