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David Buck's Individual Contribution Page

Fall 2012

I worked on the Chemical Dose Controller (CDC) team with Rudy Koul and Andrea Castro. Together we created, refined, and tested a prototype of the chemical dose controller with the latest technologies. The new design for the lever arm assembly included a two sided lever, dual dosing system, and aesthetically pleasing counter weight. Also, we had the lever anodized and engraved with a scale and AguaClara logo to add a polished look to the CDC design. We also tested this system for linearity and verified that the new design does in fact provide a linear relationship between coagulant flow and driving head in the system. The AguaClara design now has a sleek piece of equipment to include in new plants that will not only function well without electricity but look good too.

Winter 2013

In January of 2013 I traveled with the team to Honduras, where we toured water treatment plants, interacted with community members, attended community meetings, and overall had a great time. As a graduate student I was able to attend a conference with various water and sanitation organizations in Honduras in the country's capital Tegucigalpa. While in Honduras I was able to practice my Spanish and learn about Honduran culture.

Spring 2013

In the Spring of 2013 I worked on the Full Scale Floc Breakup Team. Based on previous data, we designed a device to be placed in the flocculator in Atima to break up flocs and improve performance. This was a great team to be apart of, because the idea is new and innovative. I got the chance to work on design that nobody has worked on before, and got to work on a team to invent a new product. The device was a simple plastic sheet with holes drilled in it. It is amazing to me that such a simple device has the possibility of increasing flocculator performance. I'm excited for it to be tested and find out if it works.