

# jk783

## Ji Young Kim's Individual Contribution Page

### Summer 2014 Contributions

During the summer of 2014, I was a member of the Foam Filtration Team. Our team polished up the structural design of the foam filtration system, added the linear flow orifice meter (LFOM), and verified the safety of the polyurethane foam as the filter. Also, we devised and fabricated a lever arm to replace compress system with a pulley and enable more efficient backwash of foam filter. A pilot station was built in Honduras this January.

### Spring 2015 Contributions

This semester, I participated in Stacked Rapid Sand Filtration Flow Injection and Extraction (FInE) Team. Primary goal was to design new inlet and outlet pipes using gravity sand exclusion theory for the stacked rapid sand filter in order to replace current prone-to-clog slotted pipes. New designs were tested in the lab to find out more optimal specifications. Team concluded to try holes-only inlet pipe design to EStaRs filter and then to full-scale sand filter in Honduras. The most updated version of the outlet pipe was a pipe with one set of wing with a triangular cap on top. EStaRs already fabricated new inlet pipe module and installed the module in the full-scale filter.

### Fall 2017 Contributions

This semester, I am part of Water Quality Monitoring for Diarrheal Pathogens. Primary goal is to find an appropriate method to monitor water qualities and evaluate how AC drinking water plants can remove bacterial, protozoal and viral pathogens that cause Gastrointestinal illness.