**Research Assistant position:**

**Sustainability of solar-powered drinking water systems**

**15 December 2016**

# Position Description

The Water Institute at UNC is seeking student research assistants for the summer of 2017. The students will assist a Water Institute graduate researcher assistant in monitoring and evaluating the sustainability of solar-powered drinking water systems in rural areas of Ghana, Kenya and Zambia. Research assistants will have the opportunity to assist in designing the study, carrying out field work, and using data for a thesis or publication. This is an unpaid position. Only research expenses and health insurance will be covered (e.g. visas, work permits).

# Project Background

The majority of individuals without access to improved water sources live in rural areas and only 33% of the rural population has access to piped drinking water (WHO & UNICEF, 2015). There is a need for systems that can sustainably and reliably deliver water to these rural populations. Additionally, much of the global rural population lives in tropical and sub-tropical zones, which are the areas that are the most suitable for solar technologies (World Bank 2015). Advances in solar panel technology have made solar powered water systems a viable option for developing countries. Solar pumps are particularly attractive to rural populations that do not have access to electricity and/or must travel long distances to collect fuel for a diesel generator.

In 2014, World Vision announced a plan to install 1000 solar pumps in sub-Saharan Africa (World Vision 2014). This large-scale implementation provides an unprecedented opportunity to evaluate the suitability of solar-powered water systems. The Water Institute at UNC has partnered with World Vision to implement a monitoring, learning, and evaluation (MEL) framework to the factors that promote sustainability and influence the water service level of households. Solar projects will be evaluated through technical surveys, interviews, focus groups, and structured and unstructured observations.

# Project Duties and Responsibilities

## Spring 2017

* Participate in the study design process, including helping to develop research tools
* Contribute to writing student funding proposals
* Comply with UNC standards for research conduct, including obtaining and maintaining required certifications (e.g. Institutional Review Board approval) and managing IRB requirements
* Completing all necessary UNC pre-requisites to travel in summer 2017
* Participate in project training workshops prior to departure for field work
* The student will be expected to average 5-10 hrs/week of research throughout the spring 2017 semester; this position is unpaid but students will be able to receive research credits

## Summer 2017

* Travel to a country in sub-Saharan Africa (Ghana, Kenya, or Zambia) and live in remote rural study communities for 2-3 months.
* Conduct water system assessments with assistance of a fellow UNC student, translators and World Visionstaff
* Report back to a Water Institute researcher throughout the summer

## Fall 2017/Spring 2018

* Assist in analysis of the data
* Assist in the preparation of presentations, posters, reports, and manuscripts as necessary
* Review, edit, provide feedback, and quality control for manuscripts, reports, and deliverables

# Position time frame

This position is for the spring semester 2017 (research preparation) and summer 2017 (field work). The position may extend to fall 2017/spring 2018 (data analysis and writing) depending on the availability of the student and the discretion of the Water Institute research staff.

# Desired characteristics of candidate

* UNC sophomore/junior or UNC master’s student with interest in water, health and development
* Desired majors: environmental sciences, public health, sociology, anthropology, or related field
* Highly motivated to complete demanding deliverables in a timely fashion
* Ability to work independently without significant oversight from lead researchers
* Ability to spend summer 2017 in a remote rural developing country context
* Strong writing and editing skills
* Strong communication skills
* Prior field experience in a developing country
* Strong interest in writing a publication or honors thesis

**International field research course**

Students will be strongly encouraged to take ENVR 789 (International field research) in the Spring 2017 semester. Topics in the 2-credit course include ethics, logistics and planning, international development and cultural sensitivity. The course will feature guest lectures from industry leaders offering insight and real-world experience. There are no course prerequisites.

For more information about the Water Institute at UNC, please visit: <http://www.waterinstitute.unc.edu/>.

If interested, please submit a resume/CV and a writing sample to Meghan Miller (millerm1@live.unc.edu). Please include a list of relevant coursework on your resume/CV, in the email, or as a separate attached document. A cover letter is not required but a statement of interest in your email is desired. Competitive applicants will be contacted for an interview.