

Potable Water Project

Chamhawi, Dodoma Region, Tanzania



ENGINEERS WITHOUT BORDERS USA
BOSTON PROFESSIONAL CHAPTER

Project Cost
\$50,000-75,000

Background

Chamhawi (pop. 600) is a rural community located in the Dodoma Region of Tanzania.

The community encompasses an area of 75 square kilometers.

Structures are predominantly red mud brick and thatched roof. There is currently very limited accessibility to electricity. Wood fire is used for cooking. The village currently retrieves water from a river 300m away. Farming is largely subsistence, with sunflower seeds and some nuts grown as a cash crop.

This project is multidisciplinary and collaborative, integrating public health and technical approaches.

The planning, development and implementation of this initiative will be community-driven, and the resultant water system will be community-owned and operated.



About EWB:

Engineers Without Borders-USA (EWB-USA) was founded in 2002 with an exceptionally powerful mission. EWB-USA builds a better world through engineering projects that empower communities to meet their basic human needs and equip leaders to solve the world's most pressing challenges. The Boston Professional Chapter of EWB-USA was founded in 2005 with the goal of further executing this mission statement utilizing engineers and non-engineers alike in the Boston area, and has since performed work in Tanzania, Honduras, Colombia and Costa Rica.

Need

The community of Chamhawi, Tanzania suffers from high incidence of water-related illness, including dysentery, associated with limited access to potable water.

Project Initiation

In the summer of 2019, the EWB-Boston Professional Chapter initiated a partnership with Trinity Episcopal Church (TEC) in Canton, Massachusetts to begin the planning for this important potable water project. To improve livelihoods through sustainable development solutions. TEC has raised funding thus far to drill a well and outfit the well with a hand pump, so that the village members can begin to access potable drinking water. EWB-BPC has provided engineering and hydrogeological technical assistance in the review of a groundwater investigation study and the development of a bid package for well drilling. The village hopes to have a well drilled

by mid-October 2019 when the growing season begins.

Next Steps

The next steps in this project this fall will be to assist the Village in forming a community owned water service organization (COWSO) to manage the water supply in rural areas, developing a sustainable business plan, and conduct training on water system usage, maintenance and operation of the proposed potable water system.

An initial assessment trip to the Village is planned to take place in January 2020. The purpose of the first assessment trip is to gather sufficient information to allow the chapter to: a) assess the economic, social, environmental, and technical viability of the project b) assess project sustainability; the potential for the project to last long-term, c) enable future design and analysis of the proposed infrastructure at the site, and d) serve as baseline data for monitoring and evaluation of the project in the future.

Following the assessment trip, EWB-BPC will initiate design of a solar water pump, controls and solar panels, water storage tank and distribution system. Following design, EWB-BPC will work with TEC and the Village to construct the water system.

Sustainability

EWB-BPC will continue this partnership with the Village of Chamhawi and TEC over the course of the next 3-5 years to ensure the financial and social sustainability of the water project.

Photo (right): in August 2019, Village representatives show EWB-BPC proposed well location. A hydrogeological study has already been completed to identify a proposed well location.



To learn more about this and other projects:

Visit the EWB-BPC website

<https://ewbboston.org/projects/>

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