

Water Supply & Purification Development Project

Tingo Pucara, Ecuador



Engineers Without Borders™-USA (EWB-USA) is a non-profit organization established in 2000 to partner with developing communities worldwide in order to improve their quality of life.

Website: www.ewb-usa.org
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Project Cost

Site Assessment:
\$4,500
Implementation:
\$70,000(est)

Project Time-line

Site Assessment:
September 2008
Implementation :
Summer 2009

Chapter

Pittsburgh
Professional Chapter
(EWB-PPC)

Background

In August 2007, the University of San Francisco de Quito contacted EWB for assistance in providing a water supply system for the community of Tingo Pucara.

The implication of the University in the development of these poor Andean communities inspired volunteers from the EWB-PPC to adopt this challenge as its first project.

EWB-PPC is currently designing a sustainable solution to fulfill the community's needs and is planning to return to Tingo Pucara in the summer 2009 to implement the project.



The Need

Over 150 residents of the Tingo Pucara community do not have a water supply in the proximity of their houses, which makes them travel an average of 3-6 hours/day on steep land in order to get water from nearby springs. Water is stored in open containers in the village and is contaminated through its contact with animals and waste, creating serious health problems among the villagers. The community requires a water distribution system in order to bring water closer to the users while isolating it from animals and wastes to avoid contamination.

A Public Health professor at the University of San Francisco de Quito introduced the project to the EWB-PPC team and has assisted in compiling the necessary information for the design.

The EWB-USA Response

Site Assessment

EWB-PPC studied the request and conducted an Assessment trip in September 2008.

The trip was successful, as all the pre-planned tasks were accomplished:

- Community and Health assessment.
- Identification of primary needs and definition of the scope of the project with the community.
- Mapping, sampling and characterization of the existing water sources.
- Evaluation of land profiles and house distribution.
- Visiting similar projects in the area.
- Meeting with local suppliers to obtain cost and availability of equipment and materials.
- Meeting a local NGO that agreed to collaborate in the project.

Following up

With the information collected during the assessment trip, the team is studying the options for supplying water to the community of Tingo Pucara, which will require pumping water from the source to a series of storage tanks and the distribution points situated strategically among the village houses. Because of the pumping requirements, the team is evaluating the most adapted alternative energy production to supply the needs of the system. The construction project will be complemented by training the community on the need and importance of water health habits as well as water system maintenance.

Moving Forward

EWB-PPC will stay in contact with the local NGO and the university of San Francisco de Quito to evaluate other needs of the community to complete the sustainability and public health aspects of the water supply project, such as providing the village with additional and improved latrines.



To Learn more about this project:
www.ewb-pltt.org

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