

Water Supply for Drinking and Irrigation

Zuncallo, Bolivia

Project Cost

Phase 1 - \$4,475
Phase 2 - \$21,525

Funds Needed

Phase 1 - \$2,975
Phase 2 - \$21,525

Chapter

Colorado Springs
Professionals

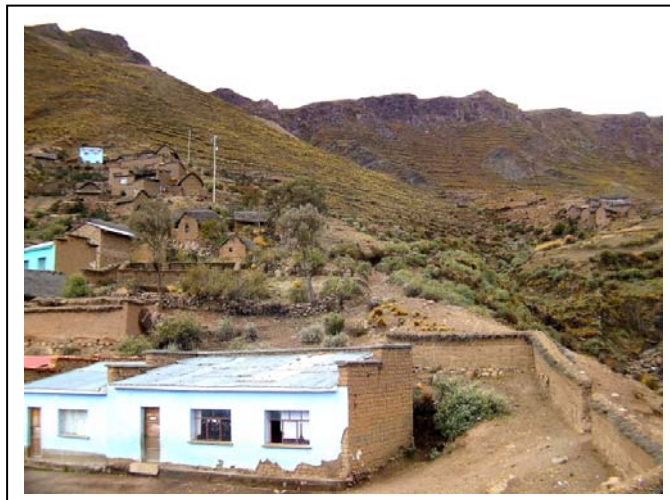
Background

Zuncallo is located in the Altiplano (high plain), the largest plateau in the Andes, with an average altitude of 4000m.

It is here that 100 families struggle to extract a livelihood farming this high, dry, cold land. It is a difficult task; the area has the least fertile soils, the least rain, and Bolivia has the least advanced farming technology in South America.

The rugged terrain creates significant challenges for agricultural production and natural resource management. Yet, opportunities exist as well. Construction of a water-storage and distribution system will capture enough water during the rainy season to irrigate these small farm plots throughout the long dry season.

High-value off-season fruits or vegetables that are likely to have sustainable market demand can then be grown successfully.



The Need

Two-thirds of Bolivia's people, many of whom are subsistence farmers, live in poverty. Nine percent have access to potable water, six percent have electricity and twenty percent have access to basic health care. These conditions sustain the second highest infant mortality rate in the western-hemisphere. It is nearly ten times the rate in the U.S. The primary culprit is diarrhea caused by contaminated water.

Life is not easy for the inhabitants of Zuncallo. People survive primarily through subsistence farming. Their main crops are potatoes and assorted vegetables. Zuncallo farmers at times send extra crops to be sold for small earnings in La Paz, a 16-hour round trip. Arable land is scarce; most families in the area survive on only one hectare. Maximizing productivity and capitalizing on economic opportunities is of the utmost importance.

The EWB-USA Response

The Colorado Springs Professional chapter (EWB-COS) along with support from the Air Force Academy Student chapter is prepared to provide social, economic, and engineering assistance to this community for a period of at least five years. The initial project involves designing and constructing an aqueduct system from a nearby water source to the village and distributing the water to serve the village's irrigation and drinking water needs. We anticipate some sort of water purifying system will be required and that the aqueduct system will be gravity-fed.



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
Phone: 303-772-2723

Immediate funding is needed to support the site assessment trip. The assessment trip will allow us to initiate a relationship with the community and begin collecting engineering data to more accurately define the scope of the project and commence with design activities. The site assessment will also address community needs in other important areas such as; healthcare, agriculture, sanitation, and energy.

Moving Forward

Though the initial trip will be to assess the solution to the water issues of the community, EWB-COS will discuss with the local religious and community leaders what other obstacles must be addressed and in what way EWB-COS can help the community overcome them.

Future activities may focus on improving agricultural techniques to increase crop yields, identifying potential micro-enterprises, and expanding markets for product sales. The desired goal is to provide better living conditions and economic opportunities for the families living in this area.

Funds will be needed to construct the irrigation and aqua duct system during the Phase 2 implementation trip in Summer 2009.

To Learn more about this project:

EWB-COS Website: www.ewbcos.org
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