In many parts of the world, obtaining safe drinking water is difficult. This is especially true in Guatemala, a developing nation just south of Mexico. The situation can be improved through engineering; constructing safe, modern water supply systems can greatly improve conditions. To this end, a team from the University of Missouri-Rolla has lead the construction of several water supply projects in the central highlands of Guatemala. The latest project, which we are excited to begin, will help supply water to a medical and dental clinic which serves a substantial population. The project stands to benefit the entire community by allowing the clinic staff to see patients on a more regular basis.

Salud y Paz: a clinic in need of water

Salud y Paz is a medical and dental clinic located in Camanchaj, a town in the central highlands of Guatemala. The clinic treats approximately 60 people per day. Many of its patients devote an entire day to their visit. They must travel considerable distances and wait in line before they can be seen. The demand on the clinic is persistent. One medical doctor and one dentist permanently staff Salud y Paz, and surgical teams visit several times a year.

Although the staff at Salud y Paz tries to keep the clinic open daily, it is often not possible due to the availability of clean water. The clinic obtains its water through the community water supply. The water system only runs for two days per week, and during those days, the clinic must fill its water tanks. If the clinic uses that limited supply of water before it can refill, it must close and deny its services to those who need them. Without sufficient water for sanitation, the clinic cannot function. The efforts of the clinic are often hampered by this lack of water. A reliable, safe water supply would greatly enhance the operations of the clinic and would in turn help to improve the health of the neighboring communities.
Providing a reliable water supply to the Salud y Paz clinic

Dr. Phil Plunk of Salud y Paz approached the University of Missouri-Rolla about improving the clinic’s water supply. As a result, UMR plans to supervise the drilling of a modern deep water well for the clinic. Previous research shows that a deep well should provide the clinic with an adequate, safe and continuous water supply. The clinic’s existing infrastructure, which consists of piping, pumps, and storage tanks would nicely complement the new well.

The well will cost approximately $40,000 to construct, which is equal to about $50 per foot. Once the funding is obtained through private donations, drilling of the well can begin. The target date for the beginning of the project is Spring 2005. UMR is collaborating with two nonprofit organizations, Salud y Paz and Samaritan Hands, on the project.

In 2003, a team from UMR constructed an extension of a deep water well supply.

Previous work in Guatemala

UMR has completed several projects in Guatemala. The first occurred in the spring of 2002 with the design and construction supervision of a deep well to supply the Hogar del Niños orphanage in Lemoa with water. A 800 foot well was successfully drilled. The well yielded so much water that in March 2003, a team returned to extend the orphanage's system to provide water to the entire community.

UMR’s work in Guatemala has a number of benefits. First, and most importantly, it helps promote the welfare of those in the underdeveloped nation. In addition, it provides UMR students with a valuable educational experience which includes international travel, research, and service opportunities.

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