

Nicaragua Rehabilitation Well Projects

Organization: Living Water International

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Duration: 6 months

Start/End dates: July 2010 to December 2010

Amount Requested: \$ 12,000

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Summary

The LWI Pump Repair Program has been established to meet the needs of communities who have wells that had once provided fresh potable water but are no longer functioning, or communities who are utilizing hand-dug, open-top wells that can be rehabilitated. There are thousands of wells around the world that have the ability to provide clean water through a simple procedure such as chlorination or the installation of a new hand pump, cylinder or pipe. More than 40% of the world's population lacks access to basic sanitation and more than 1 billion people are still using unsafe sources of drinking water. Our vision is to continue to work with and train nationals to maintain and repair/rehabilitate the wells in their own countries. It is more cost effective to rehabilitate a broken well than it is to drill and install a new well.

Living Water International is requesting \$12,000 from the Ann Campana Judge Foundation for the rehabilitation of 6 wells in Nicaragua. This project will respond to the needs of six communities in Nicaragua who are currently utilizing unsafe water from open water sources due to an incapacitated hand-pump or open hand-dug well. The six communities that have been identified as needing rehabilitation to their current well are: Villa Jerusaluem- Leon, San Francisco- Somotillo/Chinandega, San Antonio- Leon, Las Palmas #4- La Paz Centro, San Pedro #1- Las Chacaras/Leon and San Pedro #2-Las Chacaras-Leon.

Living Water International has been drilling wells along the Pacific coast of Nicaragua since 2001. Living Water Nicaragua has an established team of trained nationals currently drilling wells and repairing existing broken wells for communities in need. In 2005, volunteer teams began traveling into Nicaragua to drill wells and conduct hygiene education in these areas. More than 250 water projects have been completed since operations began in Nicaragua. Mission teams drill wells of 80 feet or more that are capable of producing clean, safe water for villages of 150 to 200 people. Living Water Nicaragua hopes to continue to increase drilling production in the future, with 20 new wells and more than 90 rehabs projected for the coming year.

Well reports are submitted by the field office to the LWI corporate office in Houston, Texas. Under normal circumstances a point person or committee is established or strengthened within the community to oversee the project. Additionally, Living Water

has established a monitoring and evaluation team that will schedule a revisit to the community to ensure continued operation and development of the project.

The Problem

According to the 2008 UNDP report, Nicaragua is ranked 124th out of 182 countries in the United Nations Human Development Index. Nicaragua is the second poorest country in the Western Hemisphere (after Haiti), with almost half of the population living below the poverty line. Approximately 40 percent of the population has no access to health services. Nearly one quarter of the population lacks access to sustainable sources of drinking water, a figure that rises to 53 percent in rural areas, while 52 percent of the country is without adequate sanitation services. Efforts toward poverty reduction, including advances in health education in rural areas, have been slow.

With over 75 rivers, 32 lagoons, and two lakes, fifteen percent of Nicaragua's surface is water. Still, more than 20 percent of Nicaraguans lack access to a source of clean, safe water, and more than half do not have access to adequate sanitation services. One out of every three Nicaraguan children is chronically malnourished; approximately 40 percent of the population has no access to health services, with the remaining 60 percent covered by low-quality services.

The Solution

Living Water International is a registered NGO in Nicaragua and has been actively working since 2001. LWI will generally work with local government officials or community leaders to determine areas of greatest need. LWI also works with and trains nationals with the long term goal to have the nationals take over the leadership in developing water solutions in their own country.

The goals of this project include:

- To increase the level of access to sustainable, safe water among poor and vulnerable communities through the rehabilitation of six broken water wells.
- The six communities identified as: Villa Jerusaluem- Leon, San Francisco-Somotillo/Chinandega, San Antonio- Leon, Las Palmas #4- La Paz Centro, San Pedro #1- Las Chacaras/Leon and San Pedro #2-Las Chacaras-Leon.
- To ensure sustainability of the water resource that will be made available through the rehabilitated water wells.
- To decrease the prevalence of water-related diseases in these communities.
- To promote basic sanitation and hygiene within the community.

Living Water International always visits with a community prior to a water solution being implemented. The goal of this interaction is to foster a relationship with the community. The first thing that the LWI Nicaragua team does is obtain permission to work on the broken hand pump, or hand-dug well. They will then come together and assess the

situation. During this assessment they will survey the condition of the well, pull the pump and all of its parts (if applicable) out and then figure out what part(s) of the well need to be repaired or replaced. Depending on the condition of the hand pump, the team will then make sure they have the proper replacement parts and tools.

Once the team installs the new pump equipment in the well, it is chlorinated to kill any harmful bacteria that was introduced during the repair process. The village is asked not to use the hand pump for 24 to 48 hours after the repair is completed. This allows the chlorine to do its job properly. Once the repairs are completed, the community is gathered together for a dedication ceremony to celebrate new community access to clean, safe drinking water.

Sustainability

LWI also makes every effort to ensure the life-long provision of safe, clean water in each community we serve.

Our organizational approach is in response to the communities we serve, but also to our commitment towards the global alleviation of the water crisis.

- Train
LWI conducts the most comprehensive training in integrated water solutions available to community development volunteers and professionals. Trained participants go on to train others globally resulting in a greater impact on the global water crisis.
- Equip
LWI provides trained national teams with all the components needed to provide integrated water solutions. LWI supplies capital outlay and logistic support while growing national teams move toward independent, self-sustaining status. LWI hires nationals and purchases in-country supplies whenever possible. As nationals are trained and empowered, they are equipped by LWI to serve, and continue to serve, communities as needed.
- Consult
Consultation is natural follow-up to training and equipping – and is a practical, ongoing way that LWI can walk alongside other organizations that wish to include a water component to their in-country work. Efforts have been multiplied as LWI acts as a consultant to other organizations desiring to meet the global need for clean, safe water.

Community involvement plays a major role when Living Water International is working in country. LWI teams always seek to create and/or strengthen a water committee in each community served. This committee is trained on how to care for the water well and to contact the LWI Nicaragua team when a repair is needed. Additionally, Living Water utilizes a monitoring, evaluation and repair team to revisit the community periodically.

Expected Results

Success of the project is determined by the reduced incidences of death and diseases and acceptance of the project by the community.

Other intended results from rehabilitated well projects:

- Provide potable water for daily use for people, their livestock and agricultural use.
- Provide education on hygiene and instruction for the care of and maintenance of the water well.
- Reduce the burden for women and children to collect water from contaminated sources.
- Advance the education for children who can now attend schooling because they are no longer sick or they do not have to collect water all day.
- Advance the economy and break the cycle of poverty due to adults being able to work because they are no longer sick.
- Encourage community economic development with the provision of water for agricultural and livestock use.

Project Budget

Labor	\$590
**Mobilization/Demobilization	\$284
Hand-Pump, Installation	\$450
**Program Presence, Sustainability	\$200
Reporting and M&E	\$250
Contingency (3%)	\$40
**Fixed costs (in-country presence)	\$181
USA Administration	\$359

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<i>Total Costs of Rehabilitated project</i>	<i>\$2,354</i>
<i>*Cost share from LWI</i>	<i>(\$354)</i>

Proposed per project cost **\$2,000**

**Mobilization/Demobilization- includes costs associated with getting to/from the project site with our fleet of vehicles and equipment and use of that equipment. This also includes the site survey, as well as the later implementation. The fleet of vehicles includes two trucks and a compressor along with fueling the trucks and oil and fuel for the compressor.

**Program Presence, Sustainability- refers to the costs associated with the actual in-country operation. This includes tele-communications, office, etc. Important to have in country presence so that communities can contact the office if their well is in need of a repair, etc.

**Fixed costs- was incorrectly labeled with (in country presence). The fixed costs of \$181 represents the direct program oversight offered by our VP of Operations and team in our Houston office. This includes reporting, logistical support for the ordering of supplies, etc.