



WELL REHABILITATION PROJECT REPORT: HONDURAS APRIL 2009

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SUPPORTING DATA



Population: 7.2 million
Population younger than 15: 39.3%

Urban population: 47%

Birth rate: 2.8%

Death rate: .5%

Under-5 deaths: 4.1%

Infant mortality (deaths per 1000 live births): 25
(compared to 7 in the U.S.)

Life expectancy: 67 years

GNI per capita: \$1,200
USD

Population living below the poverty line: 50%

Population living below \$1 USD a day: 15%

Population growth (annual): 2.1%

HIV prevalence: 1.8%

Population with improved drinking water: 87%

Population with adequate sanitation facilities: 69%

[1] World Bank

[2] United Nation

[3] USAID

[4] IFAD



PROJECT OVERVIEW

This project was completed in April 2009 and it consists of rehabilitating six (6) broken wells at six (6) communities in Honduras. This project was completed by Living Water International Honduras whose goal is to provide clean, safe water to the people of Honduras through the installation of new wells, rehabilitated wells and health and hygiene education.

These communities at one time had a safe water source through a water well. The community leaders indicated to the team that once the well broke, they had to walk long distances to the river to collect water for their daily needs. The students at the school had to return to using the open hand dug wells when the school well broke. When the community returned to collecting water from hand dug wells or rivers they become sick again with diarrheal illnesses. As the LWI Honduras team surveyed these broken wells, they noticed that some of the communities tried to repair the pumps themselves by wiring and roping the pump together thus causing more contamination to the well water. Other issues they noticed were parts of the well and pump had rusted out causing the well water to have a rust odor and taste. Once these wells had been flushed out, cleaned, repaired and a new hand pump installed, the well water became clean and safe. The communities help contribute in the form of manual labor, providing a fence around the well to protect the site and attending health and hygiene classes.

Health and Hygiene component: Abraham, one of the hygiene teachers discussed the major issues of hygiene, sanitation and well maintenance with the community. Topics included disease transmission, proper water collection and storage, keeping the well site cleaned and how to properly use the pump handle so that it does not break or wear out easily. The community was receptive to the information.

ACCOMPLISHING OBJECTIVES

The primary objective of the project was to restore clean, safe water to the communities that had once had a clean water source. This was accomplished by identifying six communities where the water wells were non-functioning and in need of repair. Some of the communities that the team served were originally a squatter's area after hurricane Mitch. Concrete block homes with tin roofs were constructed after the hurricane through non-profit groups. There are many of these communities in Honduras where people squatted on the land anywhere that was available to them without regard for where they would find water. Most of the well sites that the LWI Honduras team worked on consisted of repairing pump cylinders that were badly degraded, rusted or eroded and no longer able to draw water.

Most of the locations where the wells were repaired were in schools where the students and community relied on this source of water. At one location in Rosita, the LWI Honduras team surveyed the well and discovered that the cylinder pump had rusted out pretty bad and the water was starting to taste like iron. Also, there was a buildup of sediment in the screen. When the well broke, the people in the community had to resort to collecting water from a river or stream nearby or the hand dug well that they had once used before the new well was installed. This contaminated water was the source of their diarrhea and intestinal problems. The well was cleaned out, chlorinated and a new India Mark II hand pump was installed. The water regained its clarity and iron taste disappeared. After the well repair was complete, the students tested out the new pump and expressed to the team gratitude for fixing the well.



The pump and cylinder rusted



The cylinder pump and riser main are shown as being rusted.



Hand dug well at school that students had to go back to using when the well broke.

ACCOMPLISHING OBJECTIVES

In other communities, before they had a well, they would collect their water from a small stream that would dry up in the hottest part of the summer. The children were sick in the stomachs most of the time from the water. When the well was installed, the illnesses went away. However, when the well broke, the community had to go back to the stream for their water needs or travel even further to other communities that had LWI wells in them. The LWI Honduras team flushed out the well thoroughly and installed a new India Mark II hand pump. Now that the well has been repaired, the children are starting to get healthy again and the community is so thankful to the donor for sponsoring this repair and the team for repairing the well.

Since most of the pump parts were rusted out jeopardizing the quality of the water, the repair team took out the old pump, cleaned and flushed out the well (chlorinated the well, if needed), fixed the pump base and concrete pad and installed a new India Mark II hand pump. When the well rehabilitation was complete, the team gathered the community around to explain how to properly use the pump handle so that there is minimum wear and tear on it and also suggested that the community builds a fence around the well to keep the site protected from animals. All of the communities were very grateful to the donor and the LWI Honduras team for restoring clean, safe water to their community.



This is the stream where they collected water when their well broke.



The new India Mark II pump base inserted into the concrete.



LWI Honduras repair team putting the India Mark II pump together and installing it.





Tightening up the hand pump and testing the handle.



Communities and schools with clean water once again!



HOW THE ACJF AND NGWREF FUNDS WERE EXPENDED

Each rehabilitated well for Honduras is \$2,911. Living Water International covers the cost of \$911 from general funds to cover the administration cost.

Well Rehabilitation Project- 6 wells

Pump	\$600 per well
Supplies	\$300 per well
Mobilization	\$400 per well
Labor	\$700 per well
Administration	<u>\$911 per well</u>
Total cost per well	\$2,911
Total spent for 6 wells	\$17,466*

**LWI costs \$5,466, ACJF and NGWREF funds \$12,000*

Summary- Through the donation, six (6) existing broken wells are now functioning once again and are providing clean, safe water to 847 people in Honduras. These six (6) communities now have a safe water source and no longer have to worry about water borne illnesses or face the burden of collecting water from a river. Children are able to go to school and women can focus on their families' needs. Living Water International is grateful to the funding and support from the Ann Campana Judge Foundation (www.acjfoundation.org) and the National Ground Water Research and Educational Foundation (NGWREF; www.ngwa.org/ngwref/index.aspx).