

Lifewater Tidbits



Liberia - Glenn Stronks and Jim Gehrels, *Lifewater* Canada, write and share good news about the continued success of the *Lifewater* team in Liberia. They tell us, "the guys in Liberia keep drilling more wells!" Jim and Glenn raised enough funds through letter writing, and school presentations to ship a truck to the team last year.

Braimah Apambire, longtime friend and *Lifewater* volunteer, has joined the staff at *World Vision* as Director of Water and Sanitation. We congratulate Braimah on his new appointment! Contact him at: bapambir@worldvision.org.

Haiti - In March Ray and Daniel Newmyer are working in Haiti on a cable tool drilling machine in association with the Methodist Church. Loring Green returned to Haiti to make repairs to a hand pump he designed, which is currently being tested.

Uganda - An organization called "Friends of the Needy" in Wantete, Uganda asked us to support a drinking water well for the village. We have a special commitment to them and unfortunately our drilling equipment cannot drill deep enough to reach water. Would you please help us raise \$8,500 toward the gift of clean, drinking water for this village?

Nigeria - Zakara Grace Farms/Grace Evangelism and Missions Institute

Paul Peterson and Bill McHargue teamed up in early March to support two Action Agencies on one of those wonderful follow up trips. Their training agenda includes advanced well drilling, small business development, reporting and project administration.

Southeast Asia - Ray and Rosemary Miller along with Bill and Delores Godwin are tentatively planning a follow up trip to Southeast Asia in April 2002. They will be building on the well drilling and hygiene/sanitation work begun by the Proby's and Schofields in February/March. *Lifewater* has many opportunities for work in Asia; we look forward to seeing what God will do through these new Asian teams.

Upcoming trips

China - David Tuohey-Mote will join staff members, Troy and Trudy Harper, on the first phase of this project scheduled for March 18-31st David and Trudy, both registered nurses, will teach the Action Agency staff hygiene and sanitation training techniques. David hopes to return later this year to assist in implementing a community health program. Troy will be laying the groundwork for future sanitation and well-drilling projects, as well as finding locally obtainable equipment and supplies.

Burkina Faso - In May, Bill and Nadege Armstrong, Rusty Shuping, and Patrick Montgomery will return to Burkina to repair wells and drill with the cable tool.

LIFEWATER

INTERNATIONAL

March /
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Train A Few, Impact Many



In February, *Lifewater* volunteers Kathy Borland and Susan and Garon Harris, departed for Bangladesh. For two weeks, the team traveled with a Korean medical group to minister to the Shantal Tribe in the Northwest.

Rev. Park is a Korean missionary living in Dhaka and was the organizer for the trip. He leads churches that minister to the Shantal Tribe. The Shantal population is between 350,000 and 500,000; about 5% are Christian. The team traveled to four different villages, spending one day in each. Kathy and Susan taught health and hygiene classes, while Garon tested tube wells for arsenic and bacteria contamination.

Each day, Rev. Park and his staff hand-picked people with education and leadership abilities for the health and hygiene classes. The people were very receptive to the teaching. Participants investigated the root causes of sickness and disease through interactive demonstrations. Spiritual principles are the foundation of the teachings. "We reinforced the importance of making lifestyle changes and sharing with their village what they had learned," commented Kathy and Susan.

Over the four-day period, about 120 students attended the hygiene seminars, representing 300 villages. As people return to their villages and share their knowledge, we estimate 30,000 people can learn ways to improve family health and sanitation. The

"The poor and needy search for water, but there is none; their tongues are parched with thirst. But I the Lord will answer them; I, the God of Israel, will not forsake them." Isaiah 41:17

Lord is so good at taking a few and multiplying it into many. One woman named, Renuka, was given all the teaching materials, so she can continue the classroom training.

Garon tested drinking water wells in the villages, where the team ministered. Of the wells tested for arsenic, three wells tested between 25-35 ppb, within the Bangladesh limit of 50 ppb. Approximately 35% of the wells tested positive for bacteria contamination. Since the majority of the wells tested were shallow, arsenic contamination was not a problem. It appears that filtration techniques, such as a slow-sand filter, can be used to remove the bacteria from the wells. Garon set up this filter for Rev. Park to use at his main mission compound.

The Korean medical team was extremely supportive of *Lifewater* as they saw the lasting effect of the work that was done. Over 2,500 people received medical care from the team. Praise God for His divine planning.



"Kathy, Susan, and Garon with their new Shantal friends"



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A Warm Welcome

"Usoga children at school"

"They were encouraged by the training and constructed their very own "tippy taps", . . ."

In February, Marvin and Mary Ellen Friesen, *Lifewater* volunteers, took their first trip to Kenya with seasoned team leader Alden Dupont. The three volunteers returned to work with the GWAOKO, "Groups of Women in Agriculture- Kocheing", near Kisumu. Alden conducted training in advanced drilling techniques. Marvin and Mary Ellen, trained by *Lifewater* in health and hygiene techniques, conducted a two-day seminar on hygiene education.

The team traveled to the villages of Usoga and Kadibo where they hosted another hygiene seminar. These seminars are designed to equip our national partners with simple tools to teach good hygiene practices to others in their villages. Many of the people who attended were teachers, health workers, and other professionals along with housewives and farmers. They were encouraged by the training and constructed their very own "tippy taps", a water-saving, hand-washing contraption made from a plastic jug and string.

The team of Kenyans, led by Benjamin Oyoo, was able to drill two wells in the villages of Usoga and Kadibo with help from the "foreigners". The Kenyan team was very enthusiastic about their accomplishment of reaching clean water.

The Friesens were able to show the villagers how to use drip irrigation kits for their community gardens. These kits, which use five gallon buckets, will enable people to grow vegetables during the dry seasons. Currently, they carry water from the lake or river two or three times a day to fill the buckets. "They were able to install five of the kits before we left. Peppers and kale are already growing!" remarked Marvin.

There are still many needs in these villages, especially the plight of the many widows and orphans who have little or no income. "We need prayer and discernment to know how to respond to the many needs and requests, which can become overwhelming," comments Mary Ellen. "We were appalled to see the condition of two primary schools that had dirt floors, no running water, few desks and hardly any books." The need is great, but God knows and loves the people in Kenya. He is challenging us to be available to help meet their needs.



"Quichua children pose for a picture"

Partnering Faith and Technology



Lifewater staff, Troy and Trudy Harper, recently spent time in Ecuador as guests of *Servants in Faith and Technology (SIFAT)*. They were invited to train Ecuadorian pastors and leaders about pump installation and hygiene training techniques. While there,

they also visited several *HCJB* water projects with *Lifewater* volunteers, Cesar Cortez and Bruce Rydbeck. Cesar and Bruce are also full-time *HCJB* missionaries.

After a two-hour canoe trip in the Esmeraldas Coastal region, Cesar introduced the Harpers to a well-drilling team comprised mostly of local pastors. For about \$700 per well, with the river communities paying a portion of the cost, the crew has drilled about 40 wells and installed locally manufactured India Mark II type hand-pumps. The Esmeraldas

team is praying for an upgraded drilling machine that will handle more difficult terrain. They also need a truck to better reach further inland with the Gospel and safe drinking water.

Following narrow, winding roads 12,000 feet into the Andes, Bruce gave the Harper's a birds-eye view of spring development. Bruce and his team isolate the springs and funnel the clean water down the mountain. *HCJB's* water team has assisted over 30 Quichua Indian communities in building potable water systems. The communities provide all the labor and build latrines for every home before a water project is initiated. Thanks to the commitment of mission groups like *HCJB*, many in these communities have made a decision for Christ.

This *HCJB* well-drilling team needs help with advanced drilling techniques and a more advanced drilling machine. In response to these needs, from the Coast to the Highlands, *Lifewater* is putting together teams for beginning and advanced LS-100 training and hygiene training. Contact *Lifewater* to find out how you can join a team or support these trips from home.



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Eureka Rig Evaluation

"Lifewater volunteers testing the rig"

In the fall of 2001, *Lifewater* staff was very pleased with the mud rotary performance of the Eureka Port-a-Rig drilling machine after drilling 80 feet in soft, sandy formations. The next step was to determine if this rig could drill through hard rock formations. On February 7-10, 2002, a team of ten *Lifewater* volunteers and three *Lifewater* staff members got together to evaluate the Eureka drill rig, this time specifically for its air-hammer drilling capability.

The Eureka drill rig is similar to the LS-100, but has the added design benefit of conversion to air-hammer drilling. Air-hammer drilling is necessary when hard rock formations preclude the use of drill rigs designed for soft formations. "We, at *Lifewater*, increasingly find ourselves in situations where hard rock formations prevent us from providing safe drinking water," Troy Harper explains.

The evaluation team soon discovered that there is no such thing as "easy" air-hammer drilling with small drill rigs. With over 500 CFM and about 120 PSI, the rig's best

penetration rate was four feet per hour through fresh granite. "It was slow going, but all things considered, we found that we could use this rig for air drilling," Troy said. However, the team learned that only under the best circumstances, with the right team, would air-hammer drilling be practical overseas.

Lifewater trusts the Lord to reveal another way to provide clean drinking water in places where hard rock drilling is necessary. Thank the Lord for those ten *Lifewater* volunteers and their willingness to give their time and expertise for this important evaluation of new drilling equipment.



New Beginnings for Refugees

A *Lifewater* team from Alaska (Bob Tsigonis, Carl Cady, Dan Holmgren, and Robin Rader) traveled to Indonesia in February for the second phase of a drinking water project in a refugee resettlement. An Indonesian non-governmental organization working with local churches, has purchased land and is helping refugees clear the jungle, plant gardens, build homes and churches, and restart their lives. A year ago,

Lifewater funded the drilling of a well, and on this trip the well was connected to four water storage tanks, each at a different elevation. The tanks make water available during periods when the electricity is off.

The team, working with numerous refugees hired for the project, laid 2,000 feet of supply and distribution piping, built a 3,000-gallon concrete storage tank, installed two 1,100-liter plastic tanks, and five watering points. Two hundred people live at the site, and more development is planned.

God blessed the relationships that developed as the team worked alongside the refugees. Strong bonds were formed and there was not a dry eye in the jungle when the team held prayer with the refugees on their last day together.

The next project is to provide engineering assistance to the provincial government at a site housing 500 refugee families. The families, who live in 10-foot by 20-foot concrete brick homes, are hauling water from a spring and creek at the bottom of the hill. If you have expertise with water distribution systems and want to help with this project, please contact *Lifewater*.



Financial Update

As we all know 2001 presented financial challenges to many organizations. Your giving raised \$788,199 and was 96% of our budget. Thank you for your generosity and compassion.

The Board of Directors has set our 2002 Budget at \$853,000. In addition to the various projects overseas, *Lifewater* operates the headquarters office in Morro Bay with 10 full-time staff. Some of the headquarters' responsibilities include managing the requests for assistance, coordinating volunteers, improving our training programs and materials, communicating with

our overseas partners, raising funds, and the typical administrative duties. Our fundraising goal for our Morro Bay office is \$20,000 per month. Would you consider helping us with these costs by becoming a regular, monthly supporter? Your investment in the Morro Bay operations allows us to continue to meet the many needs for safe, clean drinking water around the world.

Great news - the Barney II Challenge grant has been met. Since December 2001, over \$50,000 has been raised to generate a \$25,000 gift from Bill and Sabra Reichardt of the Barney II Foundation. We thank them and all of you for your contributions.