

WWFA SITE INSPECTION REPORT 2014

Kurt Dahlin Monday, July 21, 2014

Our team for the annual WWFA site inspection tour left LAX on June 9th and returned on July 10, 2014.

This summer 2014, WWFA had the opportunity to catalyze the installation of 10 new boreholes in areas that have never had a sustainable clean water source. We wanted to finish the water projects begun in Phalome 2013 and begin our new work in the mountains above Mangochi near the southern end of Lake Malawi.

PHALOME DISTRICT

Last year in June 2013, I scheduled time to observe the drilling of four new boreholes in Phalombe. While I was at the first drilling site at Hapara Village I had a chance to walk down the road and meet some of the people that were so excited to have a water well. One man told me, “It was a dream come true.” He never imagined that they would have a clean sustainable water source in his village. However, after four days of drilling at two different sites in Hapara Village the muddy layer of underground structure made it impossible to continue. Each day the drilling team worked long and hard but the soil after 9 meters was muddy clay. They traveled back to Blantyre to get some reinforcing casing. Yet to no avail. They would need to return with special mud drilling equipment and wider and stronger barrier casing. The “dream” was unsuccessful and a huge disappointment to everyone including me. A decision was made to go to the second drilling site in Lupiya Village and continue with the current water well projects slated for Phalombe. Everything was going great. A quality water source was found at 33 meters. All that was needed was to clean out the dirty water from the casing with compressed air and do the final pump installation and cement work. In the process of clearing the borehole at Lupiya the compressor exploded and our second “dream” went up in a cloud of black acrid smoke. We had to abandon all drilling until an assessment could be made of the damages.

Our long time drilling partners at the CSC determined that they needed an oil cooler, separator, oil filters, oil and something else. The parts will cost \$4,000.00 and months of lost time. WWFA could have given up. However, I was determined

to fulfill that man's dream of clean water in Hapara and the dream of thousands who live in Lupiya. WWFA advanced our drilling partners the money necessary to fix the compressor. It took more research to find a drilling company experienced in mud drilling, more local coordination; more fund raising, and lots of commitment to not give up. This year in June, 2014 our site inspection team was able to go back to those same villages in Phalombe. I was so very happy to find out that our drilling partners had repaired their equipment and finished 3 new water wells last September 2013 in Namalanga, Thuluwa and Lupiya villages.

NAMALANGA VILLAGE BOREHOLE

Installed: September 23, 2013

Namalanga Village has 150 families with an average of 6 people per family. The ladies collecting water told me that each family can now draw 5 buckets of water per day. The small buckets are 25 liters and weigh 45 lbs. The normal size tin bucket weighs over 70 pounds. The yellow jerry cans weigh 50lbs.

The Namalanga borehole yields at least 750 buckets of clean water per day. Even at the minimum size bucket of 25 liters that would equal 18,750 liters of pure underground water. In Blantyre it costs locals 20 Malawian Kwacha to purchase one bucket of water. It would cost MK 15,000 for the residents per day to purchase life giving water.

Chief Namalanga said, "The ladies would wake up at 3am and walk 2km to the Namphende River. If the women try hard they will get three buckets. In July the river goes dry. Then we dig holes to 3 or 4 meters deep. When these dry up the women must walk 4km to the nearest borehole."

The Chief's mother, Esnarth Bonongwe said, "I am very happy with the borehole. We used to go very far for water. Now we leave the river for the cows and animals. We use the well water for washing, bathing, cooking and gardens."

Chief Namalanga informed me, "Now we can make bricks at any time. We don't need to wait for the rainy season. We would fight over water to make bricks. The lines for water would be so long that sometimes we would break buckets. And in the rainy season the rain can wash away the brick. It is better now and the bricks

dry faster. We can sleep well knowing water is close. We can go work in our fields with good rest knowing we have water. We don't need to worry.”

It is interesting that a borehole is called a water well. *Well* also means: **conductive to good health**. It is water that makes you well.

WWFA dedicated the Namalanga borehole to Eddie Braun.

LUPIYA VILLAGE BOREHOLE

Installed: September 21, 2013

Families: 72 families with 5 people on average which equals 360 people in Lupiya Village. There are 7 other villages that will also use this water well. Each family will draw 5 buckets of clean water per day which is 360 buckets. At the least each bucket is 25 liters which is 9,000 liters of really delicious water.

It was a joyful reunion in Lupiya because I assured them last year that we would not give up on them. I pulled up in our old Land Rover to find a group of ladies shucking peas seated in the shade of the eucalyptus grove. There were 11 buckets in queue. They were overjoyed with their new borehole. They had plenty of water to cook, clean and garden. They had more time for their families and fields. They were healthier and at peace. Before this borehole was installed they could only get one bucket of water per day from the nearby NNuzi River. They told me, “It's not a real river. It is dry. We dig holes in the river bed to create water points. We could only get one bucket because of the long lines waiting for water. If you were #24 in line and left the line and came back you would be #104.” They would fight over water at the river. One sweet lady confided in me, “We would even use obscene language.” It was pleasant to see them sitting casually together chatting cheerfully and shucking peas waiting for their turn at the water pump. The ladies told me they can get 5 buckets of clean water each day.

The chief, Mr. Lupiya, came to personally thank me for making “the impossible come true.” I told the chief that the water well was a gift from many people in America. I asked the chief about the health of his village now that they had clean water. He said, “There were on average 10 cases of cholera each year and 3 deaths. Since the borehole was installed (September 21, 2013) there has been no cholera.”

WWFA dedicated the Lupiya borehole to Marvin Stakey.

THULUWA VILLAGE BOREHOLE

Installed: September 22, 2013 CSC# 606

Families: 270

At the Thuluwa Village borehole I spoke with Lizy Lyson, one of the women at the well, she said, “Since the well was installed there has been “*palibe*” cholera.

PALIBE

In each village I asked if there were any cases of cholera over the past year since the water well was installed. In every place they told me in unison, “*Palibe.*”

Palibe in Chichewa means “There is none.”

October is the beginning of cholera season. The rainy season begins in October and so does cholera. Cholera is a severe and often fatal intestinal disease that produces severe diarrhea, vomiting, dehydration, and gastric pain, and is usually caused by swallowing food or water contaminated by feces (with a bacterium *Vibrio cholera*: **Encarta**). Since these three boreholes were installed in Namalanga, Thuluwa, and Lupiya villages there has been no cases of cholera. In every village I asked the chief and other locals that gather at the new water well about the change in health. I asked specifically about the incidents of cholera on average annually prior to the installation of the water wells.

In Namalanga they average 23 cases of cholera a year and 3 deaths.

In Thuluwa they average 25 cases of cholera a year and 5 deaths.

In Lupiya they average 10 cases of cholera a year and 3 deaths.

Now with the clean sustainable water source provided by the partners of WWFA cholera is *palibe*. Let’s just say that over the next 10 years WE WILL SAVE 100’s of lives and prevent 600 cases of cholera misery in just those three villages alone. We have impacted the future for good. We have brought healing waters.

MWANGALA VILLAGE BOREHOLE

Installed: June 18, 2014

Families: 52 in Mwangala village and 48 families in neighboring Likopali Village. The Mwangala borehole will serve 100 families and about 600 local people.

Chief Stephano Nukona told me that “This is the first and only borehole in this area.” The Sombani River is over 1km from the road. We drove down and saw firsthand the difficulty of collecting water. The ladies had sectioned off one place of the slow muddy river for the cows and another for washing, gathering water and fishing. There was a steep shoreline above the washing and cows where water was obtained. The kids helped each other lift the heavy buckets up to level ground and then march home across the savannah.

The cement drainage and the handle would be finished a week later. WWFA was present to do a well dedication.

HAPARA VILLAGE

The new mud drilling contractor was supposed to be on site in Hapara village our first week in Malawi. Then they were going to be there the second week. So on Sunday, June 22 we left Blantyre to observe the drilling at Hapara. We bumped our way slowly arriving at 3pm. The drilling rigs were there and the drilling would begin on Monday. That would be great to see the “dream” drilling begin and then leave since we were scheduled to be in Mangochi that same day. WWFA partners also installed 4 new boreholes in remote villages high in the mountains beyond Mangochi that we wanted to visit and celebrate.

Monday, June 23, 2014

We waited until noon for the Rodu Drilling team to arrive. The work at Hapara was stalled because one hydraulic pump was leaking—like a shock absorber. The mud pump was not working. Last Sunday, June 15th the work stopped. Now our hopes were revived. They told us they would be out on Friday. So we went out on Sunday and now it is Monday. Mud drilling requires much water. Our WWFA team drove to the Sombani River near Mwangala Village to watch the drillers pump river water into a large water tank in the back of a little pickup truck. When

drilling commenced to the joy of the crowds—our WWFA site inspection left around 2pm for Mangochi.

MANGOCHI DISTRICT

It took us 7 hours to get to Mangochi and up to Nsenga village. It was a moonless black night yet the village had been waiting all day for our arrival. They were so happy to welcome us.

Tuesday, June 24, 2014

NSENGA/NNEMA VILLAGE BOREHOLE

It was a beautiful cool morning but promised to become very hot. I asked to see their previous water source. It was a 20 minute walk downhill to the Chileka River which was nothing more than a narrow dribble. The ladies were talking excitedly; “Coming here was a problem. We woke up early and spent hours here in lines waiting to collect water.” Spending so many hours waiting affected their marriage relationships.

Mrs. Makena said, “I had problems with my husband by being away so long. I would wake up at 3:00 am and I would find so many people already collecting water. I couldn’t return home until 7:00 pm.” Then she would do her household chores. At 7:00 pm, she would walk down for another bucket and return at 10:00 pm. She went at dinner time because there were fewer people collecting water, yet the lines were still very long. “Now there is no queue, so I can get all the buckets I want.” Grison Goen said, “The women weren’t telling us where they were going. It is true. We can think the wife is having an affair since she is gone so long.”

We dedicated the bore hole at Nsenga/Nnema Village to Northrop Grumman. There was a constant parade of women and buckets of clean water from this high yield water well in NNema. We celebrated and made Gatorade for 200 people. There were three chiefs present at the dedication.

KALIMA VILLAGE BOREHOLE

At 3:00 pm, Edwin White and I drove to Kalima Village and gave as many hitchhikers a ride as possible including a screaming goat and a little girl carrying a huge bag of peanuts.

At Kalima, we discovered that the new water well was low yield. Edwin summoned the local water committee and showed them how to take apart the pump mechanism and together they extracted all the pump rods @ 12 x 3 meters each. The good news was that there was no “U” seal. Edwin said, “Maybe it has come off and isn’t messed up. I will fish it out and see.” There is a special tool that is given to the water committee to “fish” out the foot valve at the very bottom of the casing. At 3:40 pm, we discovered that the “U” seal had fallen off and stuck on the foot valve. This was good news because we can fix it with Super Glue.

So, I “rushed” back to camp to get the Super Glue while Edwin removed the “U” seal. I picked up all riders on the way there and had six extra people. On my second trip, I picked up a bunch of ladies and girls from the village. They were so happy that they sang songs all the way and shouted at their friends on the road as we passed by.

Wednesday, June 25, 2014 Cool, breezy, blue and warming

Making breakfast. I also saved some encima from the night before and flattened it to make tortillas. The ladies will cook them in oil to make them crispy.

TAWINA/IMMANUEL BOREHOLE

At 11:00 am we drove to Tawina Trust where WWFA installed a borehole on May 19, 2014. It is also called Immanuel Village. We decorated and dedicated it to “Mo Bohsali” and placed the plaque. There is an average of 60 families with at least seven people per household. Before the borehole, each family only drew two buckets of water each day. This was from the “easy place.” The ladies said they would wait all day to draw water. They now can draw six buckets of water per day, per family. Two other villages from the local area will also come here to collect clean water.

Grison Goyer, “These four bore holes are the first and only bore holes in this area.”

Cholera per year – over 30 cases

Deaths per year – at least 15

Everyone in the crowd knows someone who has died of cholera.

At 3:00 pm, we went back to Nnema camp. Edwin and I will go back to Kapululu for “a look see.” It was the fourth water well in the project of ten and was a dry well. It has been a reasonably hot, clear day. No wind.

KAPULULU VILLAGE BOREHOLE

Kapululu has 65 families in desperate need of water. We drove down a very difficult “road” to Kapululu. The drillers didn’t find any water and will need to re-drill in another location. Sometimes of “cost” of a borehole is impacted when a project fails to find water.

Later that evening we returned to the Kalima borehole. We ate dinner in a lovely thatched, fenced yard. It was perfect Africa – a bamboo mat, a little fire dancing in the corner lighting up the mud walls and thatched roof. To the south side, the ladies were cooking and chattering. A true African display of hospitality and charm. I was glad we were able to bring the first clean water supply to such a kind people.

Thursday, June 26, 2014 Hot, clear day

At 10:45 am Edwin White and I decided to drive to Mangochi to buy spare parts for the Kalima water well. We arrived at 12:45 pm. It took 2 hours to go 30 miles. The difficulty of reaching an area like this is compounded by the lack of real roads. At 1:45 pm in Mangochi we bought onions, apples, “U” seals and two centralizers. At 3:15 pm we arrived back to Nnema camp where I had some coffee. From 3:45-5:30 pm we drove to Kalima to repair the borehole and Edwin again organized the removal of the pump rods and replaced the “U” seal we repaired with Super Glue with a new one. Edwin gave the water committee a tutorial on maintenance.

EDWIN CARRIES NO TOOLS

Edwin is fully capable of repairing any water well. However, we want the local water committee to be self-sufficient with knowledge and tools to fix their own water well. I told them that “Edwin is not a repair man. If you want this borehole to last 20 years you must take the responsibility to maintain and repair it yourselves. Edwin is not going to come from Blantyre to do maintenance.” I assured them that other villages have been maintaining their boreholes for 20 years and they can do the same.

KALIMA: pH = 8.0 / alkalinity=120 – no taste=good and no odor=sweet water

At 4:45 pm the installation of the “U” seal was complete. There was plenty of water with the first pump which means the water column is staying up in the casing. Everybody is happy – especially ME!!!

At 5:30 pm, we left for Kapululu Village on a beautiful rough road that required the low gears on the 4x4 Land Rover. We also took 16 riders.

PHALOMBE DISTRICT

Friday, June 27, 2014 Big puff of cotton like clouds; hot-ish and clear.

At 10:50 am, we leave for Phalombe to visit Hapara and Tambalika boreholes. Edwin White announces that there is a “short cut” that will only take three hours to Phalombe. I said, “I doubt it” since it took us seven hours to get here to Nnema Village from Hapara. This is a test of Edwin’s African time frame. What he meant was that the short cut would take us 3 hours longer.

At 2:30 pm, we took the short cut through the forest and saw a family of monkeys. Edwin brought three extra people to Phalombe. We are now in Balaka.

At 4:30 pm we finally made it to Zomba. The “short cut” took us farther north of the Liwonde turn off to Mangochi. Phalombe is south of Mangochi.

SUNUZI SCHOOL PLAYPUMP RETROFIT

At 5:10 pm, we were shopping for some groceries at Zomba. We stopped on the way to visit PlayPump #232 at Sunuzi School that WWFA installed in 2010. Since that time WWFA has removed all our PlayPumps and installed hand pumps. The retro-fit borehole is working great. Two guys were there with eight jerry cans and two bikes filling up with good, clean water. The defunct PlayPump water tower stands as a monument to USAID failure.

At 7:30 pm we finally arrived at Mitondo Foursquare Church. We met Pastor Maotcha one of the local water committee members and gave him rice and popcorn which means we didn't eat until 9:30 pm. In the meantime, we set up camp. Dinner came at 9:30 pm, thanks to Anas, Mrs. Maotcha. We had guinea fowl and rice and burnt popcorn. There is the Milky Way again, in all its unimaginable glory. I stayed up and took pictures.

Saturday, June 28, 2014 Thuluwa Village / Phalombe

At 6:00 am, our three riders from Nnema Village left us. At 8:45 am we are packed up with sandwiches made. We await hot water for coffee, and breakfast of boiled eggs. The plan is to visit Hapara and Mwangala and return to Blantyre.

MWANGALA VILLAGE BOREHOLE

At 10:30 am we visit Mwangala Village water well and discover the borehole is getting plenty of use I did a simple water test: pH=8.0 / alkalinity=180. It no longer smells of sulfur and tastes so much better.

HAPARA VILLAGE BOREHOLE

We went fishing at Sombani River, then at 12:00 noon visited Hapara and saw the blue casing covered in branches and took some photos with the happy crowd. It still wasn't finished yet but before I left Malawi; I am told that the drillers found plenty of good water.

At 12:15 pm we prepare to leave for Blantyre. We stopped at Lupiya for water at the borehole dedicated to Marvin Starkey. It is really delicious tasting water.

TAMBALIKA VILLAGE BOREHOLE

At 12:30 pm we inspect the Tambalika borehole and stop to chat with the drilling team. The drilling rig is here waiting for the compressor to arrive. Tambalika is low yield and must be re-drilled. At 12:45 pm we finished our site inspection tours and left for Blantyre.

BLANTYRE

At 3:00 pm, we arrived in Blantyre. Chris, Daniel and I went to unload our equipment and checked in at the Grace Bandawe hostel. We returned the Land Rover. At 6:30 pm, we finally returned to Grace, totally filthy, in time for dinner. Sleep was very welcomed that night as was a cold pitiful shower. It has already been a very successful drilling year and there is still time to do more. We have a new borehole outside Lilongwe and new water well scheduled to be installed in Kasungu to the far east of Lilongwe. WWFA has 6 more sites selected in Mangochi to bring their first clean sustainable water source.

SITES VISITED

PHALOMBE

1. Namalanga
2. Thuluwa
3. Mwangala
4. Tambalika
5. Hapara
6. Lupiya

MANGOCHI

1. Nnema/Nsenga
2. Tawina Trust/Immanuel

3. Kalima
4. Kapululu
5. Sunuzi School PlayPump retrofit