THE
CrossFit JOURNAL

DISPATCHES FROM AFRICA

Thomas Crubaugh writes from Dzendereni, a small village in southeastern Kenya, where CrossFit HQ is working to improve the quality of life.

February 2012 // In this part of Kenya, there are two rainy seasons and two dry seasons every year. Even in the best of times, many villages send their women to the closest water, which may be four kilometers from their home. In severe times, the distance can be twice that. The search for water becomes an all-consuming daily concern for whole villages that are without a water source.

A woman in the village walks to water twice each day, once at dawn and once at dusk. A woman can carry 40 liters of water on her head over all this distance and the water she brings is the water her family will have for the day along with their goats and chickens. It will have to do for all of their drinking, cooking, and washing needs. At dusk, she will bring another 40 liters that will be there for cooking, drinking and washing until morning.

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com

Taking the time to carry water takes away from everything else, like using that water to bathe her children and clean their clothes and homes, cook and tend their livestock and vegetable gardens. The quality of this water is a matter of chance. All of the water in this area is surface water. There are only a few latrines in the villages. Most people in the bush go behind a bush. Water that washes over the land collects everything in its path before it is stopped in surface dams or rolls on to flow through the rivers.

All of the animals (including humans that leave their waste on the land around here) end up drinking surface water that has passed over those droppings. The inevitable sicknesses from this circumstance abound. The animals have worms and other parasites that come from this close contact with their own and others feces. The longer the water stands and the scarcer it becomes, the lower its quality becomes as well. Every few months, we hear of a child who has had some bad water and in a matter of days is dead from dehydration.

Comprehending that women's hands do the work over a period of months is hard to fathom until you see the process in action.

Despite the dangers, hand-dug surface dams are a wonder to see. Comprehending that women's hands do the work over a period of months is hard to fathom until you see the process in action. All of it is dug from a depression with primitive hoes and picks and shoveled into 40 liter plastic buckets or woven baskets carried on their heads to the rising walls and dumped at the top.

One alternative to these surface dams is the dams across the riverways that can back up large amounts of water behind them. These dams have their problems. They must be built quickly, between rainy seasons. If not built strongly, the dam itself may not stand up to the torrential currents that can be running over it in the high rainy season.

Another alternative is to drill borehole wells from which subsurface water can be pumped to the surface through a pipe. The biggest advantage of this subsurface water is that it has a good chance of being clean and free of the contaminants that surface water carries. Water here is generally found

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com

between 70 and 200 feet down. One disadvantage in this region is that there is a good chance the water found will be far too salty for any use but cleaning.

When a proper dam is completed, the rains will come, fill the dam and the women will have a shorter walk to better water than they have ever experienced before in their lives.

In Dzendereni, the geology indicating a nearby aquifer is promising but the chances of the water being too salty are pretty high. We are not inclined to drill multiple holes to find no water or salty water when there is a good chance that a suitable site for a riverbed dam is nearby. Even though the water will have the contamination problems discussed above the water will be usable for most purposes.

Considering all of these things, the Dzendereni village council has supported having a good engineering study to select a location and design a dam. The locals will collect the needed materials that are available and help pay for the cement and steel that will need to be purchased. And they will provide all of the unskilled labor. When a proper dam is completed, the rains will come, fill the dam and the women will have a shorter walk to better water than they have ever experienced before in their lives. If a good enough site can be found, the water will last through the driest of dry seasons needing only to be refreshed by the seasonal rains.

Tonight, Dallin is going to present a slide show to the villagers about what the dam project specifically entails. In school, the kids will be learning about some of the science and engineering that goes into making a dam.

✦

Subscription info at journal.crossfit.com
Feedback to feedback@crossfit.com
Visit CrossFit.com