

WATER BRIGADES PROJECT FOLLOW UP: PALO VERDE

DATE OF FOLLOW UP VISIT: July 31, 2014

System Background

Palo Verde has a gravity-based water system was completed on April 12, 2012. The system connects 30 houses and 1 school to a centralized water system. It consists of a reservoir dam, followed by a conduction line which propels the water into the treatment tank.

Summary of Follow-Up

Water Brigades staff and the students on the 2nd Summer Internship carried out the following activities during the follow-up visit:



- Completed a walk-through of the system including the dam, and treatment tank
- Tested chlorine levels in the treatment tank and 3 houses.
- Held a meeting with the Water Council



Observations

A small intake structure at the dam with control and cleaning valves collects the water and drives it downward towards the tank.

A 5,000 gallon tank collects the running water (low flow rate of 3.5 gallons per minute because of long dry season) gives them consistent water supply every two days.

The visit was only attended by the president of the Water Council.

Technical Follow-up

Dam

- 30 minutes walk distance from tank
- Natural spring water source (little to no water, hard dry season)

Hardness	PH	Chlorine	Nitrates	Nitrites	Pesticides	Lead
0	6.5	0.0	0.20	0.0	Negative	Negative

Conduction line

- Whole section of 1.5 kilometers of 2" PVC to the cistern

Tank

- 5,000 gallon storage capacity
- Chlorine levels = 0.0
- PH of 6.5
- 0 ounces of chlorine allotted to entire system and fed into main tank via drip tank on top

Hardness	PH	Chlorine	Nitrates	Nitrites	Pesticides	Lead
0	6.5	0.0 ppm	0.20	0.0	Negative	Negative

House nearest main tank

Hardness	PH	Chlorine	Nitrates	Nitrites	Pesticides	Lead
0	6.5	None	0.2	0.00	Negative	Negative

The houses don't have chlorine residue in the water, which means they aren't chlorinating the water as they do not want to damage the coffee beans.

The current water council meets once every month because no significant problems have been reported; they also meet with the community's general assembly every 2-3 months.

They do not keep good records nor records of a balances savings account. 90% of users aren't paying the fee, because they don't have money. Thus, they do not have enough funds to repair issues with the

system such as problems with PVC piping. Despite this, the Water Council is not responding nor penalizing those who do not pay.

Recommendations and Response

1. Global Brigades recommends that they use chlorine so their health not to be endangered by harmful bacteria and parasites.
2. It is also recommended that they fill the chlorination tank before releasing the water in it.
3. They should also hold a meeting with the General Assembly to discuss the problems and try to establish a new water council that will work as a functional entity. They also need to meet to discuss the issues of debt, regular payments, and the importance of having a water system in their homes.