

Potable Water System for Caserio El Retiro Las Canoas, Chimaltenango, Guatemala 2006

Ann Campana Judge Foundation Project Final Report

PAVA Foundation

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This project, completed in September, 2006, consisted of the installation of a water delivery system for the rural population of El Retiro Las Canoas, in the Department of Chimaltenango, Guatemala. This project was initiated by the residents of this small community, and designed, supervised and fostered through PAVA (Aid Program for Highland Communities), with the collaboration of local and municipal labor and donations, and a generous grant from the Ann Campana Judge Foundation.

The community of El Retiro Las Canoas has long recognized the need for clean water delivery to its population and last year purchased the rights to three springs about two miles from the proposed water distribution site for the realization of this goal. Previously, water had been carried in plastic containers from a small spring located below the village of El Retiro Las Canoas. Mostly village women and children performed this time-consuming daily work which left them with much less time to devote to other important tasks, including education, childcare and attention to crops. Substantial effort was required to haul available water to homes for drinking, food preparation and bathing. The objective of this potable water project was to improve the health and hygiene of the residents in this community by eliminating contaminated water sources and providing reliable, consistent water delivery to their homes.



Hauling water up the hillside

Project Accomplishments

PAVA with the assistance of the village of El Retiro Las Canoas, its adjoining aldea of El Jocote, the municipality of San Martin Jilotepeque, and the Ann Campana Judge Foundation, constructed a 6,360 meter, spring fed, water delivery system to over 300 people from 48 homes and a local school. A single cement encapsulated spring box was constructed at the beginning of this system, and PVC/galvanized pipe lengths, including a suspension length across the Quisaya River, extended into a catchment/distribution box above



New home site pila inauguration

the river valley. From there, two separate delivery lines continued to cement basins (*pilas*) with water taps at each of the homes serviced.

Although the pledge of local volunteer labor by the community was a prerequisite for this project, PAVA staff remarked that the community involvement with its labor and materials was inspirational. When 20 workers were expected to dig ditches or haul materials, 40 showed up for work. In forty days members of this community had excavated and connected a total of 6.36 kilometers of tubing, constructed a 20 cubic meter distribution tank, a hanging bridge for the water pipes to cross a river, a spring box, two pressure break tanks, and distributed water lines to 48 families and a school. This local, community involvement not only expedited the project to the point of early completion, but reinforced PAVA's philosophy of empowering local groups to accomplish their own goals. Through the implementation of this system, basic public health practices such as frequent hand washing, bathing, and sanitary food preparation can be accomplished as a matter of daily routine.

Overcoming Obstacles

Initially, the community purchased the rights to three springs for this water delivery system. At the time of the construction of the spring boxes, it was determined that the flow from two of the springs was inadequate for the time and investment, and a single, year-round spring was utilized for the spring box segment of this system. Due to increases in worldwide oil prices, the price of materials to complete the project rose significantly, and the difference in budget was covered by PAVA. In addition, the distances from the catchment tank to the individual homes were underestimated, and this also contributed to an increase in the actual cost of the system. This disparity was again remedied and paid for by PAVA.

ACJF Fund Expenditures

The generous grant from the Ann Campana Judge Foundation of \$5,000 was incorporated into the general materials fund for this project. The following is a cost breakdown for this water project in Las Retiros Las Canoas, noted in U.S Dollars.



Hanging bridge for water pipe



Catchment/distribution tank

Total Cost of Materials/Transportation	\$ 25,872
15% Sales Tax	\$ 3,881
Donated Labor	<u>\$ 3,125*</u>
TOTAL COST	\$ 32,878

*This is the very low valuation placed on labor by the municipality and/or the community itself, and equates to substantially more manpower than this dollar amount would indicate.



Extensive negotiations for rights of way through many privately owned plots were completed prior to the onset of pipeline placement.