CLEAN WATER PROJECT: Saltadere, Haiti

Support, Sustain, Survive.

Introduction

The Clean Water Project is an effort to provide potable water to the community of Saltadere, Haiti. This project is a collaborate effort between several groups including:

- The community of Saint Michel in Saltadere, Haiti
- The Bi-Parish Haiti Committee
  (Saint Thomas Aquinas, Holy Comforter Catholic Church)
- The University of Virginia
- Members of the Greater Charlottesville community

The current water situation in Haiti is dire.

- Haiti has the lowest coverage levels in the Western Hemisphere for both water supply and sanitation.
- Of these “covered” areas with access to water, many depend on systems that are of poor quality or unusable.
- Many other access points are too far for people to reach on foot.

Current Water Situation in Saltadere – Rain

- Seasonal variation in rainfall means the river near Saltadere is consistently low.
- Women walk up to five miles to fill their buckets in the river.
- Those who can afford chlorine tablets use them to purify the water.

Current Water Situation in Saltadere - Mountain

- The mountains on either side of Saltadere contain bountiful springs.
- A simple gravity-fed pipeline brings the water from the mountain to the city.
- The pipeline fills cisterns and blue barrels like the one used by St. Michel.
- The water quality is fair but available to only a small percentage of the population.

Our Goal

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Each access or secondary distribution point must be less than an average round-trip walk time of forty minutes (about one mile each way).

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There are approximately 20,000 people in and around Saltadere. Our goal of 200,000 gallons is more than enough to fulfill the common development benchmark of 1 gallon per person per day.

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Each method must also include some system of purification, whether at the source or an in-home system.

There are four solutions currently under consideration

-Rainwater collection
-Trucking
-Extending the pipeline
-Well drilling

Rainwater collection, through the construction of low dams, could provide enough water to irrigate 40 acres and provide a weeks worth of drinking water for 2,000 people.

- The dam would be constructed in the dry gorges around Saltadere.
- A dam 50 feet wide and 10 feet deep would cost around $100,000.
    - Pumps, purifies and piping would add to the cost
- The main shortcoming is that this solution is dependent on seasonal rainfall. During the dry season the dam would most likely be dry.

Water trucks, four-wheel drive pickups with a water tank and pumping equipment, would transport water from the river to town.

- Trucks increase accessibility to residents in remote areas.
- Each truck would cost about $50,000 and could provide 8,700 gallons of water per week.
- There would be additional maintenance costs and the truck is still dependent on the variability of seasonal rain.

Extending the current pipeline is one of the more effective possibilities in terms of expense and yield.

- Pilot work on this has already been done.
- A cistern and the appropriate permits would cost $1,000.
- Extending the pipeline would cost $10,000 per mile.

Well drilling is a high risk, high reward option.

- A sustainable well must be drilled to a depth of at least 100 feet.
  - Shallow wells of 30 feet barely reach the water table and dry out soon.
- The cost of a well would be between $25,000-$50,000.
- Wells drilled in the surrounding areas have yield positive results only 10% of the time.

There is no silver bullet.

- A combination of some or all of these
- possible solutions will most likely be used.
- Each has its strengths and weaknesses.
- Together, they will create a clean water eco-system.

We are qualified to take on this project.

- Over 10 years of experience, and over one person year in-county we have made many fiends, and learned many lessons
- We work on Haitian requested projects, using local labor and supplies to the extend possible
- We have built a 500 child primary school and are building a secondary school
- Our first water project to irrigate the school gardens in well under way
- Our team sources talents from across Central Virginia and locally in Saltadere.
- Team members include:
  - Mike Fitzgerald, lawyer and principal advisor
  - Robert Fromm, physical scientist and large site construction analyst
  - Robert Niehaus PE, chemical engineer and MBA
  - Peter Benedetto, forester and land conservation manager
  - Pere Rene Blot, pastor of St. Michel Church in Saltadere
- (Detailed biographies of these and other team members in appendix)

Garden Irrigation Project

- Based on extensive in country evaluation of local Haitian request
- Fundraising phase - $20,000 from three foundations and community support – 9 months
- Design phase – 3 months by professional engineers
- Installation phase – now under way

Hallmarks of our approach

- Sustainable projects
  - Local labor and supplies utilized
  - Training and education provided as well as equipment

- Cost Effective
  - Multiple sources of funds multiplies each donors gift
  - All US work is volunteer, goods and services – no overhead
  - Rapid deployment of monies and supplies
- Efficient execution
  - Use of volunteer experts
  - Modern techniques used, such as 3-D Computer aided Design, and satellite imagery

We are requesting a $75,000 planning grant.

- This grant would allow us to:
  - Continue to conduct research on local geography, terrain and population to solidify our strategy.
  - Identify donors for future sustainable funding.
  - Prepare in-depth draft budget plan.
  - Finalize project timeline and completion date.

For more information

www.saltadere.org

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