

First Semi-Annual Progress Report – School Garden Irrigation Grant for St. Michel School, Saltadere, Haiti

May 2nd, 2010



The Saltadere River, where people bring their animals for water and take water for home use, photographed near Saltadere, Haiti, February 2010

Prepared by the Bi-Parish Haiti Committee – Charlottesville, Va.

Please see our web site www.Saltadere.org for more information

PROJECT PLAT

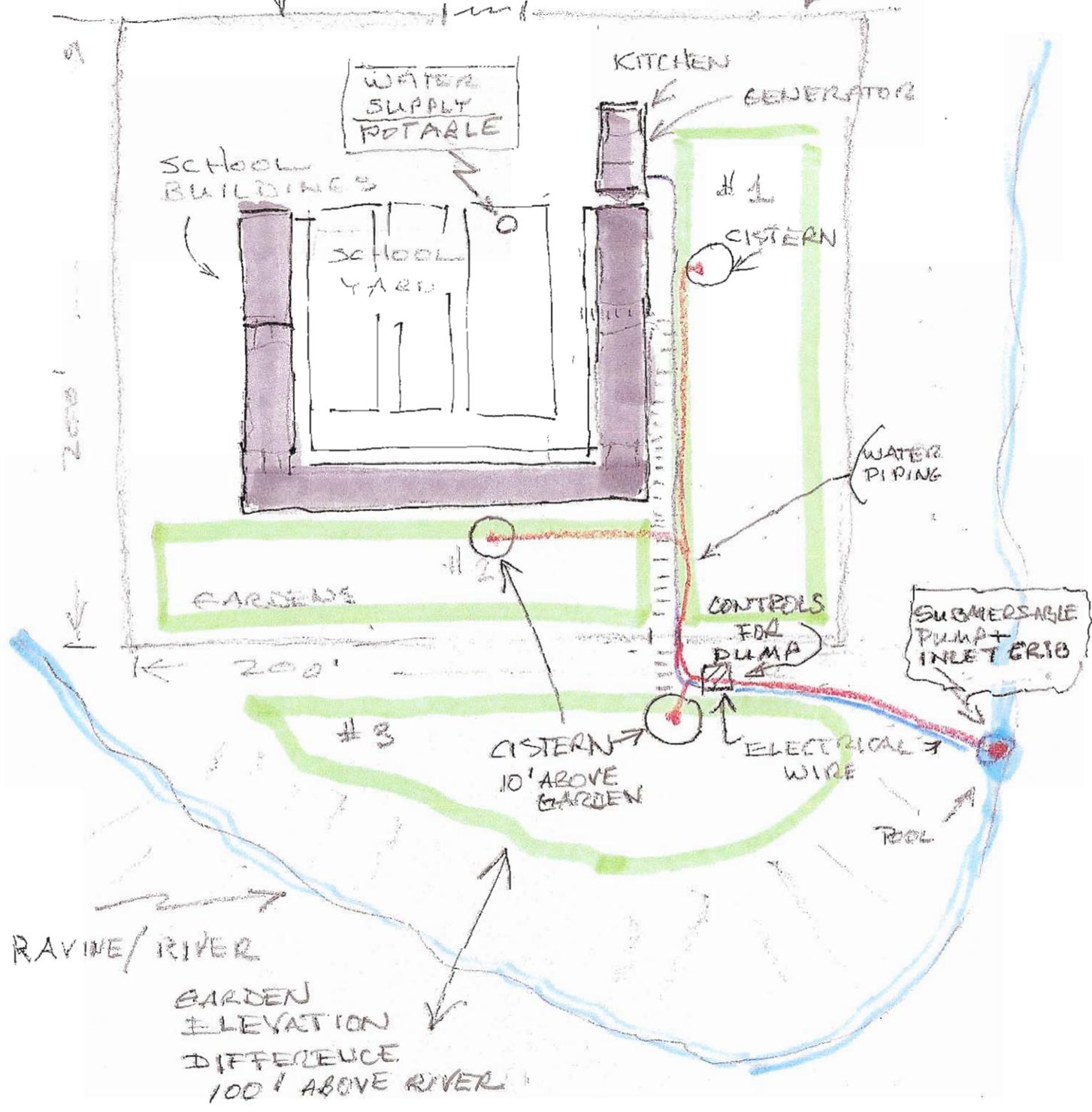
IRRIGATION PROJECT 4/2010

TOWN
ST MICHEL SCHOOL
SALTAGE, HAITI

TOWN

STREET

COMPOUND WALL



WATER SUPPLY POTABLE

SCHOOL BUILDINGS

SCHOOL YARD

KITCHEN

GENERATOR

#1 CISTERN

GARDENS

#2

CONTROLS FOR PUMP

SUBMERSIBLE PUMP + INLET CRIB

#3

CISTERN 10' ABOVE GARDEN

ELECTRICAL WIRE

POOL

RAVINE/RIVER

GARDEN ELEVATION DIFFERENCE 100' ABOVE RIVER

200'

200'

Water/Agriculture/Nutrition/ Health - all linked

Water is one of the most abundant substances on earth's surface yet it is also one of the most valuable. Water – clean and clear – is the key to enhanced agriculture in semi-arid areas such as Haiti, and hence to



better nutrition. Clean drinking water is essential for health. Most rural Haitians have only river water for cooking, bathing and other essential uses.



The village and region of Saltadere, in rural eastern Haiti offers an example of what is a common condition in third world countries. Limited clean potable water, limited water for irrigation: both restrict human development. Our project is a prototype for straightforward sustainable solutions to the water issue appropriate for areas such as Haiti.

The situation today in Haiti is dire– yet the Haitians are resilient and capable

Haiti is considered to be the poorest country in the Americas. Most Haitians live on less than \$2 per day and 80% live in poverty. Historically, Haiti has been disadvantaged by poor government, poor economic choices, unfriendly international relations and weather events. Imported food supplies drove down the value of indigenous production. Hurricanes in 2008 devastated the major agriculture center in the west of Haiti. Then the global food inflation of 2008-9 made the cost of food unaffordable. The earthquake of January 12th, 2010 destroyed the very heart of Haiti in many ways. Despite all this, the Haitian people are making every effort to regain their footing and to improve their lot.

Against these forces what can we do in one village?

For ten years, our Haiti Committee has worked with the community of Saltadere, Haiti. Our committee solicited the funds for the building of a new elementary school



and subsequently added secondary classes that now serve over 500 students in this remote eastern region of Haiti.

Now that St. Michel's School has been recognized as a top-rated elementary school according to the Government Educational Ministry, our recent focus has shifted to providing sustainable agriculture to the school and its community. We believe adding an irrigation system in the school garden is a necessary step to ensuring food production in the tough climate of Haiti.

Recent Developments in Saltadere

As you know, January's horrible earthquake severely damaged the western provinces of Haiti. Many of the surviving refugees have fled to the eastern, rural provinces, including the Saltadere community. The local community is estimating that the population of the village in Saltadere has increased by 20% in accommodation of the refugees. With 50 more students from refugee families already enrolled in the school and food shortages across Haiti, the garden at St. Michel's School has become even more important

The Garden at St. Michel is Addressing the Need for Self-Sufficient and Sustainable Agriculture

The garden is already having a tremendous



impact on the community. It was started a little over a year ago to augment food supplies for school lunch. The garden

currently produces crops such as tomatoes, potatoes, banana, mangos, sugar cane & corn.

Having a nutritional lunch, the only substantial meal of the day for many of the children, gives students the vigor needed to learn throughout the day

Installation of an Irrigation System will Increase Production and Reliability of the Garden

Haiti's climate is very dry in the winter months, when the school is in session. Growing conditions would allow year round production if water could be obtained. However a non-irrigated garden is very limited and unreliable in its production. The best way to provide water to the garden is by irrigation, using non-potable water sources such as river water and rain water. The irrigation system will directly result in:



Increased Production - Irrigation could triple the food output by allowing crops in

dry weather, hence would be a real benefit for the food situation in Haiti, and be a model for other groups to follow.

Reliable Production – By having an irrigation system, the school is much less dependent on sporadic rain to guarantee crops. We are paying for the first year of the agronomist's salary as part of this project in order to ensure production.

The increased production is more important now than ever. The rising food prices and increasing population of Saltadere as a result of the earthquake have put the garden in a significant position to help the village.

Increased, Reliable Yields will have a Tremendous Long Term Impact on Haiti

The project has been planned with the idea of not only providing increased production but also with the potential to have a long lasting effect on the community. The garden will be self-sufficient so that its benefits will continue once funding is completed. The long-term benefits include:

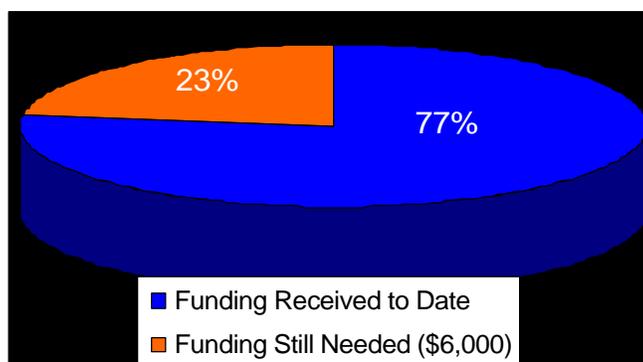
Better Nutrition of the Students – The extreme poverty of Haiti results in poor nutrition for the youth. The lunches given to students at the St. Michel School provide nourishment that the children can not find in other places. This promotes the health of students and is essential to their ability to learn.

Agricultural Education of the Community – The garden at St. Michel's will set a precedent for the community. A successful example of our project would encourage local farmers to use more irrigation, and perhaps prevent the use of potable water for irrigation. Also, students will learn at an early age from the agronomist. The agricultural techniques taught to students will be used and shared throughout their lifetime.

Re-investment of Profits from Sale of Produce – It is very likely that extra produce will be available from the garden once an irrigation system is installed. The excess produce and seeds can be sold and profits can be re-invested into the school, the garden and the community. These profits will ensure the garden maintenance costs can be covered once initial funding is expired.

The Expenses of Installing an Irrigation System are still only Partially Funded

Our committee is working to raise funds for the installation of an irrigation system. Currently, we have raised about \$14,000 through grants and cash contributions. We are currently working to raise the final \$6,000 needed. Contributed funds will be allocated to the salary of the agronomist, the cost of materials and installation fees. Also, University of Virginia students may be given stipends to travel to Haiti in order to engineer and construct the irrigation system.



The Haiti Committee has worked alongside the Saltadere community for many years. We are very grateful for the difference the school is making and for the relationships we have built. One of the men in charge of the school, Father Rene Blot, has asked that we expedite the funding for the irrigation system because of the recent earthquake. Our committee is working very hard to fund and install the irrigation quickly. We

believe that the benefits provided by this project will be immense and encourage you to support our efforts.

Benefits include these:

- Enhancing the local self-sufficiency movement among the citizens
- Providing a model for better agriculture practice
- Improved nutrition and better chance for healthy life style

Political Situation

While one must be cautious about Haiti after the earthquake of January 12th, 2010, the recent outpouring of sympathy and funding from the world community is encouraging. The remnants of the Haitian establishment are coming to grips with the immense efforts and hard decisions needed to rebuild their nation. Our efforts will be welcome and will sow seeds of hope and possibility to a traumatized nation.

The Planned Irrigation System will provide needed water to the garden

Our initial concept is for a submersible pump to be installed in a small river that lies in a ravine about 100' below the school property. The pump can be run from electricity produced by the school generator. Electrical wiring and water hose will be installed linking the pump at the river level to the garden. At the river level a "crib" with screening to prevent debris intake into the pump, and a security cage to prevent tampering with the system will be needed. It appears that the dry season flow and depth are only marginally able to provide adequate water, and experimentation will have to be done to assure reliable water supplies. At the garden, raised cisterns will hold the river

water, which will be used to gravity feed the garden as needed. Rain water from the school roof will be collected in addition, in a similar manner. We expect a flow of about 20 gals/minute at the river level in the dry season. The pump will be sized at about 1 to 3 gal per minute initially, so as to not greatly disturb the down stream flow that others may utilize. If the flows average greater amounts we can augment the pump with a larger capacity one. The larger one would allow filling of the cisterns at a more rapid rate, cutting down on the time needed in the pumping operation.



The cisterns will be either 500 or 1000 gallon capacity and would take 4 to 8 hours to fill. The garden area is about 2.5 acres, with up to one additional acre potential to add later. In order to pump the equivalent of one inch of rain per week, for the whole garden, then one needs to spray irrigate about 68,000 gal per week for the 2.5 acre garden. We would have to pump 10 gal per minute for most of the week to achieve this rate. Hence initially we will start with a smaller section of the garden, and have the students irrigate the plants with water cans, greatly improving the effect of water use, essentially drip irrigating the plants.

The initial system would need about 500' for pipe and wire, some concrete and rebar to make the crib, and stands for the cisterns,

and an adequate pump. This comes to about \$10,000 in materials and an equal amount of local labor to install, for a total budget of \$20,000.

A plan of the gardens system is attached. we intend to try out the system in prototype here in Charlottesville so that we can work out any issues before installation in Haiti.

Please see www.saltadere.org for more details.

Progress to Date

2009

Through 2009, we responded to the request from Pere Blot and the community at St. Michel Parish in Saltadere, Haiti for an irrigation system to pump river water to the garden of the school. A site visit in February confirmed the overall situation and engineers inspected the river bed and garden in March for feasibility. We were given the go ahead from the Haiti Committee subsequent to these reports and an Agriculture/water Project was set up. The first task was to establish a concept system and approximate budget. This resulted in the idea of a submersible pump, cisterns and drip irrigation for the crops. A budget was established and a plan for fundraising was made. The fundraising plan was to have two steps. Step one was to approach on a one-to-one basis, large donors and foundations for support. This began mid-2009. The largest effort involved a grant application to the Battaglia Fund of the Diocese of Richmond, which was presented in September 2009. The grant was not accepted initially, and was revised in the Fall of 2009 and was awarded in December 2009. It was a matching grant and required us to raise \$5000 from other sources to be eligible for the \$5000

grant. By 1/1/2010 we had raised another \$2000 from additional sources.

2010

We continued fundraising, and a brochure explaining our project was circulated to a larger group of potential donors, resulting in our reaching a total of \$11,000 by the end of January 2010. Thus we had matched the initial grant, a major fundraising milestone.

The earthquake of January 12th, 2010 devastated the capital of Haiti and its political, and intellectual infrastructure.

Unsure of the consequences, we revisited Saltadere in February 2010 to reassess the situation. While Saltadere is about 100 miles from Port-au-Prince and was not damaged, a flow of refugees soon began to arrive putting a great strain on the limited food, and medical resources of this rural village. Nevertheless the local community emphasized to us the even more urgent need for the irrigation project, and we were able to make a survey of the garden, and nearby ravine and river bed to more accurately determine the situation for pumping.

Upon returning, we redoubled efforts and went on to the second step of the fundraising, an approach to the parishioners and general public. A revised brochure indicating the post earthquake situation, and a revised budget to account for the increases in prices of goods and services due to the disaster were produced. A large display of the project and the funding to date were made for display at churches and other venues.

In March we attended the Diocesan Haiti Gathering and presented information about our irrigation project. About 30 people attended the presentation and we made

good contacts with others who share our goals of improving the agriculture of Haiti.

The Rotary Club of the Blue Ridge Mountains responded very generously with a \$2000 grant, and gave us an opportunity to present our project to its Members in March. After the presentation the Club invited us to submit application for a larger grant, a process in which we are now engaged. Through contacts from our parish, we learned of the Sisters of St. Joseph of Carondelet, and their Fund for the Systemic Transformation for the Economically Poor (STEP grants). We applied also for a \$5000 grant from this organization and it is in review at their headquarters at present. Our financial leaders report we have now \$14,000 in hand.

Additional efforts are still underway. A very generous group at a church in England (through contact by members of our committee) has donated to our cause. St. Joseph's Church in Stockport England after hearing a report from one of our members took up a collection of approximately \$3000, which we anticipate to arrive in June. Hence we have about \$17,000 in hand or promised, and a grant request for \$5000 pending. To date no funds have been expended.

As we approach our goal of \$20,000 for the pumping system, we also realize that until the project is self sustaining we will need of on the order of \$2000 to \$3000 annually for maintenance and supplies to keep the system running. Any overage from the initial construction monies will be applied to a maintenance fund for the project.

Next Steps

Shortly we will finalize the design and begin to develop a prototype for testing here in Virginia. We anticipate sending engineers to Saltadere in May for further checking and refinement of our plans. This will include discussion with our Haitian partners about the project and their opinions and ideas. If all indications are positive we will then begin the acquisition and construction phases.

Future Plans in Saltadere

We are already laying initial plans for those things we ought to be doing if the initial project is a success. Possible approaches include a portable pump system that could pump river water and deliver it to small farmers. Another approach would be to investigate drilling wells into aquifers for dependable water supply.

We also want to investigate the sale of produce and training local farmers to better agriculture practices, including irrigation.

An attached document shows some of our proposed ideas and their potential impact on the community. As always, we will listen and only move forward when the local people's need and interest in this project is evident.

Our Continued Commitment

The Bi-Parish Committee continues to operate such that our expenditures go solely and directly to the Haitian people or for their direct benefit. There are no overhead costs levied on our project and committee members' costs and travel expenses are funded by those individuals, and do not come from the funds raised.

Our thanks go out to everyone who has contributed time and funding for this project