

A Brief History and Status Report of the Aquaculture Learning Center being Constructed at the Henri Christophe School in Marigot Haiti



Genesis of the Project – In early 2010, while attending a meeting in Haiti focused on development strategies, I had the opportunity to meet and travel with two members of the “Haitian American Engineers and Scientists” (HAES) organization, Serge Fontaine and Max Masacc. Serge and Max (both currently engineers working in the US) grew up in Haiti and are extremely dedicated to sharing their expertise and energy to help Haiti. Max founded the 501c3 group HAES in 1989 and Serge is currently the president. HAES, in addition to being very active in many engineering projects throughout Haiti, has a very keen interest in applying their skills (and ours’) in Marigot Haiti, a small-impoverished town near Jacmel where Serge grew up. Anyone who has ever worked in, or tried to introduce a new concept into Haiti, knows that an intimate understanding of the community you are working with is the key to success. Introducing the concept of fish farming is particularly challenging. Serge and his fellow HAES members have been a valuable asset in helping to help make this project possible; they understand the complicated political and social issues of working in Haiti, are well loved and respected by the residents of Marigot and have helped us gain the friendship and trust required to follow

through with a much needed but very odd project – building a “Aquaculture Learning Center” in a school in Haiti!~

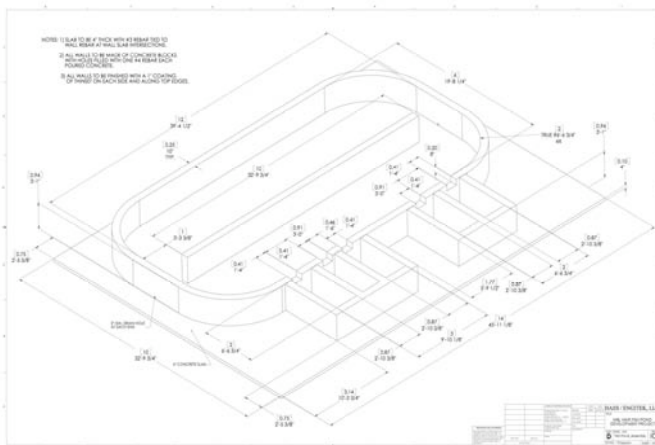
Project Justification and Objectives – The Aquaculture Learning Center (ALC) is designed to address three very important objectives:

- To produce fish as a source of revenue and high quality nutrition for students and teachers.
- To provide a template for a system (or components thereof) that can be easily duplicated by others.
- To provide a training center for people interested in perpetuating these techniques in other areas of Haiti.



Artist's rendition of the “Aquaculture Learning Center”

Haitians teaching Haitians is the ultimate goal. Our experience, over the past 8 years with trying to introduce fish farming into



Haiti has shown us that teaching 4th and 5th generation soil based farmers the concepts of aquaculture is possible but difficult. Young people, especially students, are more likely to accept and implement new ideas. The most successful fish farmers we have trained are in the 18-

24 yr old range. It is our ambition to use this demonstration facility (purposely constructed at a High School) as a platform to teach a

new generation of farmers who can help others launch their own fish rearing systems. Establishing a simple, sustainable, and easily replicated method of producing fish for human consumption is the foundation of our mission. The system being built will incorporate design and equipment to maximize the pounds of fish produced per unit area. People or organizations (hospitals, schools, etc.) that wish to duplicate the system will easily be able to do so; in situations of more limited resources, selected components and methods in this system can be easily adopted.

As the Aquaculture Learning Center begins producing fish, it will also provide a demonstration classroom for lessons in mathematics, chemistry, and biology. Teachers will create a curriculum for students to apply while monitoring the basins



water quality, fish growth rates, and overall yield. We have already provided a dozen laptop computers to the school to use for these lessons (and others). The students will provide us ongoing data via email messaging, which will allow us to track the basin's productivity and troubleshoot as needed. To further compliment the ALC, HAES members have donated equipment and laboratory supplies for an entire "Science Laboratory Facility" at the school (grand opening fall 2011).

During our last visit Serge and I were able to fix the plumbing system at Henri Christophe. For the first time since the school was built two years ago, students and teachers now have flush toilets, working sinks and a working septic system. This project was not on our agenda, but given the rapidly spreading Cholera epidemic, it was particularly important to address. The success of the plumbing refit further bolstered our relationship with our Haitian partners.

Current Construction Status –

Most of the basin's concrete and mortar work has been completed, as shown here in photos. Laborers have been paid and almost all of the materials needed have been purchased. Laborers building the basin have earned over \$4,000 of salary; these are people who otherwise have no income! We have spent \$6,000 to purchase building materials from local vendors, including concrete block, cement, reinforcement bars, pipe and tools. 1.5 KW of photovoltaic panels and associated equipment has been purchased and is awaiting



release from customs in Port Au Prince. When this equipment is released the next step will be to return to Haiti and install the aeration and filtration equipment (the total power requirement to operate the system is approximately 800 watts/hr). When this is completed the system will be filled with water and tested prior to stocking with

fingerlings that will be purchased from a fish farm in Haiti. Our goal is to have the system operational when school starts in the fall of 2011 and hopefully coincides with the opening of HAES's science laboratory at the school.

Current Status of Finances and Collaborators –

To date our expenses have been approximately \$16,000 and our single largest contributor to this project has been Saint Michael and All Angels Episcopal Church, Sanibel FL (\$14K). We are very excited to have recently partnered with Aquaculture without Frontiers (AwF) and Novus International whose financial help will allow us to finish up with the final components of the center. The financial support from AwF and Novus will be used to purchase vital pieces of equipment (and fish feed/fingerlings) in Haiti and provide a beginning "salary" to graduating students who will serve as "aquaculture extension agents" ensuring the system continues to operate when we leave. These extension agents will also serve as in country educators to teach others how to farm fish. Funds will also be used to pay Haitians to create (with our guidance) a fish farming training manual in Creole.