

Attention ASCE! The Syracuse Professional Chapter of Engineers Without Borders (EWB) is looking for volunteers to participate in a project in Guatemala (see attached project description). EWB-Syracuse Professionals is partnering with EWB-Syracuse University and is in need of volunteers from the engineering community!

Participants need not be able to travel (although there is a definite need for those that can travel as well). There are roles for those who want to travel as well as those who cannot travel.

They will be discussing the project further at the next chapter meeting. The meeting will be held at:

12/12/12 at 6:00 PM.

Dewitt Community Library
3649 Erie Boulevard East
Syracuse, NY 13214
(315) 446-3578

Please contact Lawrence (Carey) Healy if you are interested in participating:

Lawrence.Healy@arcadis-us.com
315-671-9338



ENGINEERS WITHOUT BORDERS-USA
SYRACUSE PROFESSIONAL CHAPTER

Date: November 9, 2012

To: EWB-Syracuse Professional and Student Chapter Members

Re: **Palajunoj Valley, Guatemala Project**

Introduction

Primeros Pasos runs a small, primary care health clinic which provides a variety of services including community education and outreach programs within the 10 rural communities of the Palajunoj Valley, located just 15 minutes from Xela. Primeros Pasos works with 10 primary schools as part of a Healthy Schools Program, which provides students with free annual clinical care accompanied by education aimed to encourage lifelong healthy habits. However, most of the schools do not have sanitation infrastructure to practice the healthy habits that we teach, such as washing hands and brushing teeth. The schools serve children ages 7 to 16 and range in size from 35 to 1,200 students.

The Development Director, Megan Peyton, is a returned Peace Corp volunteer. Primeros Pasos regularly has medical professionals and student groups from American universities volunteer with them.

Community

Quetzaltenango, or Xela ("Shayla") as it is locally known, is the second largest city in Guatemala with a population of 250,000 urban inhabitants. The city is situated in the heart of the Sierra Madres Mountains about 125 miles northwest of Guatemala City at an altitude of 8,000 feet. Quetzaltenango is home to several schools and universities, and is very important economically, not only for agricultural production, but also for the industrial and commercial activity it develops.

The Palajunoj Valley is home to more than 15,000 people spread throughout 10 communities. The majority of the population works in the production of corn, vegetables, and flowers for home consumption and market supply. Others make their living in quarry work or domestic care. Guatemala's overall population is 60% indigenous, primarily of Mayan decent. However, in more rural areas such as the Valley, over 98% of the population identifies as indigenous.

Despite the large population, the Valley is home to only one public health post that employs one doctor and one nurse. Like most public health centers in Guatemala, they often do not have enough resources and many patients must wait hours to be seen. Without the means to travel to receive health care, many residents of the Valley are left without many options to access care. Worst affected by the lack of healthcare are the indigenous Mayan population, who tend to live in rural areas, are extremely poor and have little education. Many use home remedies to treat themselves and have never seen a doctor.

The top two national causes of morbidity are acute respiratory infections and intestinal parasites. Unfortunately, these treatable illnesses can mean fatality for many as the two main causes of death for Quetzaltenango are pneumonia and diarrhea. Malnutrition is also a very serious problem across Guatemala. According to USAID, the overall chronic malnutrition rate in Guatemala for children less than five years old is 50 percent, higher than any other country in Central America and higher than many African countries. Consequently, death during childhood is all too familiar, as infant mortality accounts for almost 25 percent of all deaths in Guatemala.





Possible Projects

Primeros Pasos has contacted schools in all 10 communities to assess their needs (info provided on the last page). Basically all the schools have an insufficient ratio of handwashing stations to students, and many of them have water supply problems and could use either holding tanks or rainwater harvesting tanks. Two of the schools are located in an isolated area of the Valley about 30 minutes from Xela; these schools have an inconsistent water supply and need improvements to their handwashing stations and possibly latrines. These schools have the highest rates of parasitic infection in the Valley. The school in Tierra Colorada Alta has no water supply, working bathrooms, or handwashing stations, and apparently it's considered to be at an elevation too high to pump water.

My community contact believes we would receive support from teachers and parents in each area to help construct projects. She believes we could expect unskilled labor and possibly donations of materials from an excavation company that mines gravel in the area. Community support was identified as possibly lacking at Tierra Colorada Alta, however.

Language/Culture

The official language of Guatemala is Spanish; there are Primeros Pasos volunteers that speak English. Residents of the Valley may speak Mayan languages or other indigenous dialects.

Climate

The climate in Xela is considered subtropical highland. The area has a rainy season from late May to late October (afternoon rain) and a dry season the rest of the year where no rain may fall for half a year. Average rainfall during the rainy season is approximately 3-6 inches per month.

Temperatures vary widely throughout the day, reaching daily highs around noon. Average highs are generally in the low 70s with March being the warmest month at 78 degrees. Lows range from the 30s from December through March to the upper 40s the rest of the year.

Travel and Logistics:

Volunteers of Primeros Pasos typically stay in Xela and commute to the Valley each day. It's about a 10-minute bus trip, and the organization is used to coordinating travel with volunteers and could help arrange transportation. There seems to be plenty of inexpensive lodging in Xela.

The nearest hospitals are in Xela, about 10 minutes away. There appear to be several, including both private and government-run hospitals. The CDC recommends taking a prescription antimalarial drug, and typhoid vaccination is recommended for all travelers.

There are no travel restrictions to Guatemala. The State Department warns of the risks of crime and violence typical of developing nations.





Specific School Information

Xepache

- They have water all the time
- Only two water faucets for 206 students
- Very motivated director and community support

Xecaracoj

- The school is separated between different buildings (school grew out of their building, but couldn't afford to build a new one)
- Problems with school collaboration
- Has water, but lacking enough water faucets for 776 students
- Need some repairs for their bathrooms

Chuicavioc

- Has water all the time, but only three water faucets for 465 students
- Very motivated school to improve health of children

Chuicaracoj

- Only 36 students and two teachers (including the principal)
- Has a functional water faucet and water only two days a week (needs a water tank)
- They have two latrines that they use and four flush toilets that are not used
- Motivated teachers

Tierra Colorada Baja

- 260 students
- Has water only three hours a day, two or three days a week (needs a water tank)
- Just has two faucets for washing hands
- Very friendly and motivated

Llano del Pinal

- The largest school with 1,160 students
- Has water all the time, but only has 5 functional water faucets for hand washing
- They need another water tank to have their bathrooms working properly
- They have parent support for water projects

Candelaria

- They have a new building
- The school does not have their own source of water, but the church next door lets them use their water faucet.
- They are motivated





ENGINEERS WITHOUT BORDERS-USA
SYRACUSE PROFESSIONAL CHAPTER

Las Majadas

- Have two water faucets for 419 students
- Lack water all the time
- Bella Vista
- One faucet for 138 students, but has water all the time
- One functional bathroom at school, but two other bathrooms that don't work

Tierra Colorada Alta

- 210 students
- No water in the school or the community
- They have two water tanks but do not use it because there is no water in the community / school
- Only one water faucet in the school
- Potential problem with community support

