

Engineers Without Borders-USA, Jacksonville Professionals Chapter — Improving Lives through Engineering

In the small village outside Nebaj, Guatemala, many children like 13-year-old Ambrosio do not have access to running water. Ambrosio's family must fetch any water they need from a public washing station. The public water supply, which is neither filtered nor disinfected, runs dry by the early afternoon. Ambrosio and his 220 classmates attend a school with unreliable water supply and no septic system. This basic human need — clean water — goes unmet for the children of Guatemala as well as others suffering a low quality of life in many regions of the world. Engineers Without Borders (EWB-USA) is a non-profit organization that applies sustainable engineering solutions to help meet these basic human needs and improve the quality of life for people in developing countries. In the spring of 2010, a team of young professionals from EWB's Jacksonville Professionals Chapter (EWB-JAX) will travel to Guatemala to install a new hand washing station and septic system at Ambrosio's school.



Ambrosio from Xepium, Guatemala

EWB-USA began in 2002 with only a few members in Denver, Colorado; the organization currently has 300 chapters with over 12,000 active members participating in over 350 projects in 45 countries. EWB-USA projects focus on community needs in some of the poorest areas of the world. Many projects deal with basic human needs, such as access to clean water, wastewater treatment, and electricity. Membership spans across many disciplines, not just engineering. Professionals in health, anthropology, business, and marketing work together with engineers to identify solutions that improve the quality of life for people in developing nations. Through its projects, EWB-USA provides innovative professional, educational, and leadership opportunities that broadens the global perspective of its members provide a global perspective.

In January 2009, EWB-USA founded two new chapters in Jacksonville — the Jacksonville Professionals Chapter and the University of North Florida Student Chapter. Over the last 12 months, both of these chapters have flourished through leadership, project selection, and fundraising.

The 25 professional members of EWB-JAX selected the Nebaj region of Guatemala for the chapter's first project. The project team works with the community, local non-governmental organizations, and the Peace Corps to design and implement sustainable engineering solutions for community-identified needs. EWB-JAX sent two members to the Nebaj region on an Assessment Trip in September 2009. On this trip, they gathered important information about the community needs as well as survey data and soil information for their implementation trip in April 2010.

Dr. Bruce Taylor, CEO and chairman of Taylor Engineering and a leader in the Jacksonville community, has been a paramount supporter of Engineers Without Borders and engineering education. He speaks about the value of EWB-USA's efforts: "You get your education in the classroom, but by going [to developing countries], you are learning the tremendous value of public service, of helping others, of contributing your gifts of intellect and vitality to benefit others, with no personal gain. All of those things, in my opinion, not only make you a better person, but also make you a better engineer. Often the

decisions we have to make as engineers are not technical, they are influenced by other things, by societal needs, social pressures, and there is a whole suite of external influences that will impact every engineering project ever developed.”

This simple engineering project — installation of a hand washing station and septic system — will drastically improve the health and quality of life for Ambrosio and his classmates. With their new facilities, these kids will be free to focus on their education and future.



Students from the “Escuela Oficial Rural Mixta Xepium”, in the village of Xepium



Example of a local hand washing station and water storage tank



Example of toilets before the installation of traditional toilets in Guatemala

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