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Why We Travel

By Brooke Weeks

Part of EWB-USA’s mission is to **develop globally aware and internationally responsible engineers, students, and professionals.** The importance of travel is clear in the words of our professional and student members:

“Inter-cultural collaboration is crucial to the development of socially conscious individuals. Through shared experiences and knowledge transfer, people of very different life circumstances are able to mutually highlight and embrace the good things in each other's lives and empower each other to objectively identify and change the obstacles that hinder their personal progress.” - **Erin Carroll, EWB-PDX Professional**

“EWB travels to connect people. It broadens the experiences of us who have a calling to use our skills in a direct manner to do good as well as the awareness and skills of the community we're assisting.” - **Kathy Grantz, EWB-PDX Professional**

“Our acts in the developing world, affect more than just a locality, they initiate a ripple of action that spreads into the community at large and beyond. When we return home the results of our actions again radiate out from our locality as stories and experience. It's a two for one, like dropping the same pebble into two separate ponds.” - **Seth Moody, EWB-PSU President**

“When developing solutions where none existed previously, the first step, and every step, is about knowing the local community.” - **Aaron Poresky, EWB-PDX Professional President**

“Travel provides context to our projects, our education, and our lives. Without travel, our service projects cannot truly be ‘context sensitive’.” - **Alex Bigazzi, Civil Engr. Undergrad Senior, PSU**



Brooke Weeks is an environmental engineer with MWH Global

President’s Letter

Greetings All,

As I look back on 2008, I find myself inspired by our accomplishments and excited about the opportunities to come. In Ecuador, our team designed a sustainable sanitation solution for the community school, oversaw its construction, and in the process may have created a model for rural schools around the country. Our goal of “working ourselves out of a job” is a long way off, but we’re moving in the right direction!



Meanwhile, our Haiti project team remains committed to the community of Les Anglais as it rebuilds after a year of strife and disaster. Despite the difficulties of working in Haiti, the team retains the firm belief that they can help build a better a better quality of life out of the ruins. They will finally get the chance to start in January.

As our members will attest, the work we do takes a sincere commitment and a desire to grow into the challenges we face. Having a chance to work with so many who’ve taken this challenge is a true source of inspiration.

Thanks, as always, for your interest, involvement and support!

Happy Holidays!

Aaron Poresky, President

Member Spotlight



Contributed By Kathy Grantz

Tom Ferrell is a dedicated member of the Bua, Ecuador team among other things. Tom is an avid runner, bicyclist, and adventurer. After staying in one place for four years and receiving a BS in Aerospace Engineering in 2001, Tom went out to see the world. He volunteered at an AIDS hospice in Jamaica, followed by travel through South and Central America, volunteering and learning Spanish. He collected water samples and helped provide medical care to locals as a member of the NSF International K2 Geological and Medical Research Expedition in Pakistan, and then went to Beijing, China as a member of an NSF team developing testing methods for arsenic behavior in paddy rice soil.

Of these experiences, Tom quickly dispels any associated glamour by relaying some of his mishaps. Yes, he has seen the Northern Lights and the Southern Cross, but he gave himself a concussion at an orphanage in Guatemala by pulling a basketball hoop down on himself.

Tom has survived his adventures, and the Ecuador team is the beneficiary. In his everyday world, Tom has had a variety of jobs, from ones he loved, such as working at a homeless shelter in Anchorage, to ones he despised, such as selling vacuums door-to-door. Currently, Tom works for PACE Engineers designing water distribution, disinfection, and treatment systems, and is working on an MS in Environmental Engineering. And I'm sure on those long bike rides to the Ecuador meetings, aside from a few altercations with drivers, Tom is also working on what his next EWB adventure might be.

EWB-PSU Reach Out for Gov't Support, Bilwi, Nicaragua

By Erin Carroll

In contrast to community based projects, the project that the Portland State University (PSU) student chapter has initiated at the regional hospital in Nicaragua's Northern Atlantic Autonomous Region is political. Since the hospital is an entity of the Nicaraguan Ministry of Health (MINSA), it is vital that EWB-PSU work cooperatively with them to resolve the water supply and sanitation problems facing this emergency care facility.

PSU engineering students Matt Jordan, Mandy O'Hara, and Jennifer Gillenwater accompanied by their professional mentor, Erin Carroll, had a chance to evaluate these concerns firsthand upon arrival at the site on June 18, 2008. The issues facing the hospital include a water shortage that is dramatically heightened during the dry season (January – May), degraded water quality in their existing excavated wells, exacerbated conditions due to frequent inundation during tropical storms and/or hurricanes, inadequate wastewater management, and a non-functional septic system due to a vandalized sludge pump. The hospital is also strewn with medical waste, dispersed by feral dogs.

EWB-PSU arrived with a preliminary design in mind for rainwater catchment combined with improved drainage to augment the potable water supply and help with flood control. However, it was quickly apparent that the hospital's needs were greater than our means of support. By establishing lasting relationships



The Project Team at the Hospital de Nancy Bach



Matt and Erin performing water quality tests



Project Team with children hospital patients

with the MINSA, the regional government, in-country NGOs, and the local community we were able to gather comprehensive data to support the design of a phased environmental management plan that will meet the hospital's water supply and sanitation needs. The phases of the plan include the installation of a deep perforated well to provide water in the summer months; flood control and improved water quality in the wet

EWB-PSU Nicaragua Visit, cont'd from Page 2.

season through rainwater catchment; and wastewater and solid waste management strategies. EWB-PSU is planning to implement the first phase of the project in March 2009. The hospital staff and MINSA have agreed to seek financial support for the other phases of the project.

For questions, commentary, suggestions, or to contribute to these efforts please email Erin Carroll at erincarroll@ewbportland.org

Erin Carroll is a Staff Hydrogeologist with GSI Water Solutions



The Ecuador implementation trip team

Composting Toilet Implementation Trip In Bua, Ecuador

By Ada Banasik

Following an intensive summer design schedule, a team of Portland Professionals traveled to the eastern slopes of the Ecuadorian Andes to construct composting toilets at a school that was previously plagued with an overflowing septic system and limited water resources. The team lived and worked in the Bua community, one of the few remaining enclaves of the indigenous Tsachila culture, primarily subsistence farmers, famed throughout Ecuador as curanderos and shamen.

EWB partnered with the Yanapuma Foundation, an Ecuadorian organization that works to promote sustainable development in Bua. The school currently serves over 250 children and anticipates expanding in the near future. The school sanitation facilities were designed for 50 students and the septic tank frequently overflowed onto the school soccer field. The flush-toilets also strained the scarce water supply, a hand-dug well that often runs dry.

Following a site assessment trip in March, the team spent several months going through various design options, including engineering plans and a bill of materials. The design evolved further in the field to better fit local building practices and available materials. The EWB team was assisted by a local contractor and volunteers and



Tom Ferrell wheel barreling sand, with much help from the students

Ada Banasik is an environmental engineer with Maul Foster and Alongi.



Teamwork or the "making of" perforated pipe, with eager help from the students

constructed a six-stall reinforced-concrete structure that will accommodate the school's current and future needs. Yanapuma and the local contractor finalized the project. The project generated attention from the provincial government interested in implementing sustainable sanitation facilities at other schools in the area.

It was a great learning experience and the team looks forward to returning to Ecuador to complete future phases of the project.

Pictures of the trip can be viewed at www.ewbportland.org/bua2. We thank you for your continued interest and support of our project. In the next few months we'll be updating you about recommended design solutions and our upcoming plans.

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Aaron Poresky at aaronporesky@ewbportland.org

EWB-USA West Coast Regional Workshop

By Aaron Poresky

In early October, students and professionals from around the west coast convened at Cal Poly in San Luis Obispo for the fourth annual regional workshop. It marked the largest workshop yet, providing a variety of opportunities for training, collaboration and fun.

The program started with a keynote presentation by Henry Hatch of the US Army Corps of Engineers, and state of the organization address by EWB-USA Executive Director, Cathy Leslie. The weekend went on to include a variety of technical and non-technical sessions including:

- Low Cost Sanitation,
- Water technology,
- International Design Goals and Standards
- Chemistry and Data Quality
- Low-volume Road Construction,
- Solar Photovoltaic Design and Construction
- International Sociology
- Volunteer Management, and more.

Maybe the best parts of the weekend were the shared experiences and the connections that were made. The workshop was organized by Portland Professionals member Mauria Pappagallo for the second straight year. Thanks Mau!

To download workshop presentations visit www.ewbwestcoast.org.

Announcements

- Members of the Haiti team will be in country for an assessment and partial implementation from January 29th through February 9th. Keep them in your thoughts for a safe and successful journey. More info in the next newsletter.
- EWB is looking for volunteers to help out in local schools. There are a variety of programs available, from presenting about your work in classrooms to providing mentorship. Contact Justin@ewbportland.org.
- Portland Professional member Mauria Pappagallo has just been elected to serve as the President of the West Coast Region. Congrats Mau!
- EWB-Portland polo shirts are ON SALE. Please contact Kelly Deaver at kellydeaver@ewbportland.org to get yours today.

Upcoming Events Calendar

January 14—Chapter Mtg: Afghanistan Water Resources Development and Management: Challenges and Opportunities, Azad Mohammadi

February 11—Chapter Mtg: Joni Kabana, Photographer and Humanitarian

March 26-29—EWB-USA Int'l Workshop in Milwaukee, WI, *Registration Open*

Our chapter's activities are funded through donations and sponsorships. Donations are tax-deductible and can be made online at www.ewbportland.org/donate, or can be mailed to EWB-USA, Portland Chapter, P.O. Box 14734, Portland, OR 97293 . Thanks!

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