

The **Rotary**
Club of FishHawk-Riverview



- Club Fellowship
- Community Leadership
- World Stewardship

Clean Water Projects **2016 & 2017**

100 BioSand Water Filters Engineered "Latrines"

Comayagua, Honduras



COMAYAGUA, HONDURAS

- 18 “states” in Honduras, called departments
- Population of Honduras = 8 million
- Population of Comayagua = 150,000
- 80% of land in Honduras is mountainous
- Unemployment rate = 28%
- 50-60% of people earn less than \$1.50/day
- 2/3 of children leave school by age 12
- 70% of people – no access to sanitation facilities



Left & above: Typical outdoor water collection. Right: Common bathroom facilities—a shielded hole in the ground.



HYDRAID BioSand Water Filters

- *\$125 per filter, delivered & installed*
- *Serves family of 8-10 for 10 years or more*
- *Removes 99.8% of deadly parasites*
- *Dramatically reduces other leading causes of death and disease*

- *Filters carried water from outside source*
- *Flow rate approximately ½ - 1 qt./min.*
- *Easy to install, no replacement parts*
- *Easy maintenance, cleaned in place*

- *El Ayudante Honduras mission in Comayagua stocks, stores and assists with distribution of filters*

- *Mission works closely with village Leaders to determine community and individual needs*



Water Filter DELIVERY

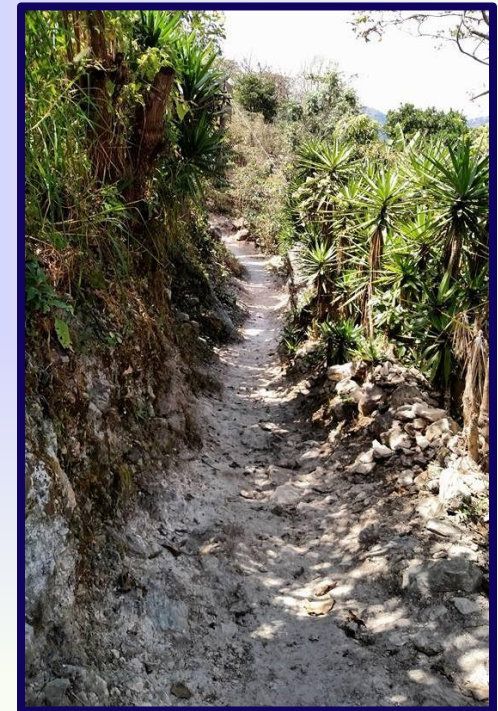


The truck is loaded with filters and supplies in preparation for the journey into the mountains of Comayagua



Homes are often set back from the road on steep, winding, rocky, mountain paths

Supplies must be carried where vehicles cannot navigate, including the 110 lb. bags of filter sand



Water Filter TESTING



STEP 4: Filters are tested for sufficient water flow – between ½ and 1 quart per minute. Rapid flow requires addition of silt to the sand layer. Slow flow means the sand isn't clean enough. (Michigan Rotaractors fill a measuring cup while timing the flow of water through the filter)



Operating the new filter is as easy as pouring water from a bucket – the system is gravity fed, usually dispensing into a 5-gallon jug



Engineered LATRINES

- ***\$300 per latrine, built, delivered & installed***
- ***Serves family of 8-10 for 10 years or more***
- ***Helps remove refuse from ground water***
- ***Adjacent “septic” hole serves as leech field***

- ***Fabrication in El Ayudante workshop***
- ***Provides dignity to family members***
- ***Easy operation (bucket flush)***
- ***Easy cleaning, minimal maintenance***

- ***El Ayudante Honduras mission in Comayagua builds, stores and assists with distribution of latrines***

- ***Mission works closely with village leaders to determine community and individual needs***

Custom built latrine structure fabricated in El Ayudante shop, then transported and installed at recipient's home



12-foot deep “septic” hole, adjacent to latrine, in dense, root-laden clay



Latrine INSTALLATION

STEP 1: Cement is mixed and poured on site. One slab covers the 12'-deep hole, the other is a foundation for the toilet & structure. (Families render great assistance)



STEP 2: El Ayudante employees fabricate the steel-frame latrine structures in their workshop, minimizing on site assembly and ensuring consistency. (Comayagua resident, Salvatore, does most latrine fabrication)



STEP 3: After the slabs have been given two days to cure, the team loads up structures and remaining supplies to deliver and complete the latrine installations.



STEP 4: With the modified PVC fitting in place, final connections are made to the latrine drain line (that leads to the 12' septic hole).

Latrine COMPLETION



Hondurans lack access to PVC fittings that match ceramic bowl outlets. The standard installation involves heating the PVC elbow to fit the toilet bowl (yes, that's how it is done!).

STEP 6: The prefabricated steel structure is placed over the bowl and secured to the concrete slab (homeowners are delighted with their new and improved latrine).



STEP 5: The bowl is leveled before being permanently set in place. Note: There is no seat or cover. Toilets are “flushed” simply by pouring a bucket of water into the bowl; still a significant improvement over existing systems that are little more than a hole in the ground.

For More INFORMATION



FishHawk-Riverview Rotary is seeking participants for this life-saving, hands-on Global Grant project. Travel dates to Honduras will be approximately September 15-25, 2017, with work in Comayagua scheduled September 16-23.

***Ed Odom
(813) 351-9723
EdOdom01@gmail.com***

***Richard Lindstrom
(813) 382-3787
LindstromRick@aol.com***