

Requirements for an AguaClara Project

- ✓ A community identifies a problem with their water quality, especially turbidity, and is motivated to solve it.
- ✓ The community is willing to participate in the planning, design, monitoring and sustainability of the project.
- ✓ There is enough flow, land to build the plant, and hydraulic pressure to lift water two meters above the water tank.
- ✓ The proposal involves a long term water source, in other words, there is no risk that these sources are going to be replaced by others of greater quantity or quality.
- ✓ Physiochemical and heavy metal tests are conducted and their findings show no parameters that an AguaClara plant is not designed to deal with.

AguaClara Project Cycle

- ✓ Identifying the problem of water quality, its causes, and its effects on the community
- ✓ Project planning with the community, the AguaClara program of Agua Para el Pueblo, and others
- ✓ Community awareness
- ✓ Financial management
- ✓ Design of the treatment plant
- ✓ Training in operation, maintenance and plant management
- ✓ Independent operation of the plant by the community
- ✓ Monitoring and evaluation

Support AguaClara

Donations go to fund the unique research being conducted at Cornell University, support the annual educational exchange trip to Honduras, and finance AguaClara internships with partner organizations.

How to Donate

Check

Address check to Cornell University,
Write AguaClara in the memo field.
AguaClara
220 Hollister Hall
Cornell University
Ithaca, NY 14853

OR

Online

<http://aguaclara.cornell.edu/donate/>



Contact Information AguaClara Cornell

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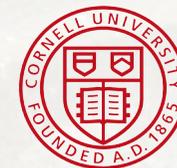


AguaClara

Community Water Treatment Plant Program



Researching, designing, and implementing sustainable water treatment technologies for Honduras



Water and Health

In Honduras, waterborne diseases rank first in morbidity and second in causes of infant mortality.

The consumption of poor quality water causes diseases such as diarrhea, cholera, typhoid, hepatitis, and skin rashes.

The existence of these diseases is the result of a microbiological contamination of drinking water.

What is water quality?

Water for human consumption, or drinking water, must meet national and international standards to ensure quality of health.

Raw water generally requires treatment to meet these quality standards.

Turbidity and Disinfection

The basic measure of water clarity is called *turbidity*, and is measured in units known by the acronym NTU. The Honduran standard for turbidity is less than 5 UTN, and the suggested level is 1 NTU.

Chlorine is a universal disinfectant that is applied to water to kill bacteria and other microorganisms that cause diseases. However, as much turbidity should be removed before chlorine is added.

The Technology



An AguaClara treatment plant is an efficient and effective solution for reducing turbidity and disinfecting water from surface sources in those communities with piped water systems. The AguaClara plant:

- Produces clear and disinfected water
- Requires no electricity or machinery, working only with the force of gravity
- Is built with local materials
- Creates jobs in the community for community operators
- Is highly economical (\$15-30 per person to fund construction and \$2-5 per person/year for operation and maintenance).

Plant Operation

AguaClara technology utilizes the universal principles of coagulation, flocculation, sedimentation, and disinfection to ensure a water supply that meets drinking standards.



1. Water entering the plant is dosed with a chemical coagulant that will adhere to suspended particles.
2. The water flows to the flocculator where suspended particles stick together and form "flocs".
3. The flocs settle out in the sedimentation tanks leaving the water clear.
4. The water is disinfected with chlorine and then sent to a distribution tank.

AguaClara Plant Locations

Location	Partner Org.	Inauguration Date	Pop. Served	Design Flow (L/s)
Ojojona	APP	January 2007	2,000	6
Tamara	APP	June 2008	3,500	12
Marcala	IRWA	July 2008	9,000	30
Cuatro Comunidades	APP	March 2009	2,000	6
Agalteca	APP	June 2010	2,160	6
Marcala El Chiflador 2, La Paz	APP/ACRA	May 2011	6,000	22
Alauca, El Paraiso	APP	February 2012	3,600	12
Atima, Santa Barbara	APP	June 2012	4,000	16

