

# Overview of AguaClara

AguaClara is an Engineering Project Team at Cornell University dedicated to creating high-reliability, low-cost solutions to global water problems. This site contains documentation for all of our past & present research activities, as well as our goals for the future. To learn more about the project, visit our website at [aguaclara.cornell.edu](http://aguaclara.cornell.edu).

## The AguaClara Difference

Despite functioning on the same basic process, there are major differences in design between what is effective in the developed world and what is feasible in the Global South. Almost all of the plants in the developed world rely on large amounts of electricity to monitor and operate. However, in the developing world, access to a reliable source of electricity is both doubtful and prohibitively expensive. AguaClara plants use gravity instead of pumps, and mechanical devices instead of electrical monitors, to run the plant. Since the plants are designed to be constructed using almost exclusively locally-available materials and labor, AguaClara communities also avoid the risks of failure or shut-down that plague other projects dependent upon overseas expertise and supplies. Up-to-date plant designs are freely available and customizable using the [open-source AguaClara Automated Design Tool](#), accessible via our [online interface](#).

## AguaClara at Cornell

AguaClara at Cornell is a center for [Research](#) and [Design](#) of sustainable engineered processes to provide clean drinking water for communities everywhere. As opposed to point of use devices that provide water to individuals, AguaClara systems provide drinking water at the municipal scale. Cornell student research teams focus on Researching, Inventing, and Designing using state of the art [process control](#) to automate parametric testing. Experimental automation makes it possible to explore a wider parameter space per unit time, allowing student teams to thoroughly test their ideas and to quickly adapt their hypotheses to respond to new results. The research teams generate new knowledge that is used to improve AguaClara designs and create new treatment processes. An important incentive to students in AguaClara research teams is that they get to see the results of their work built and used to benefit people. [Click here to see student reflections from the most recent trip to Honduras.](#)

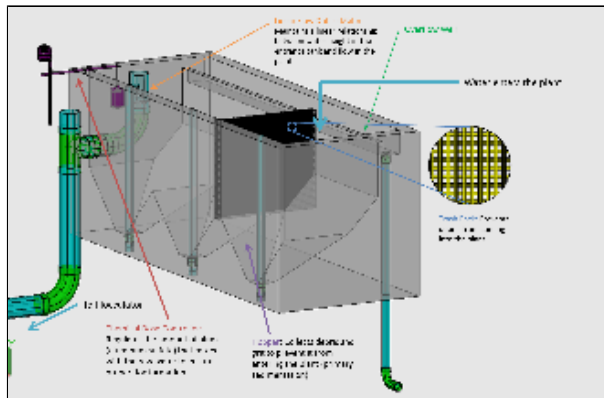
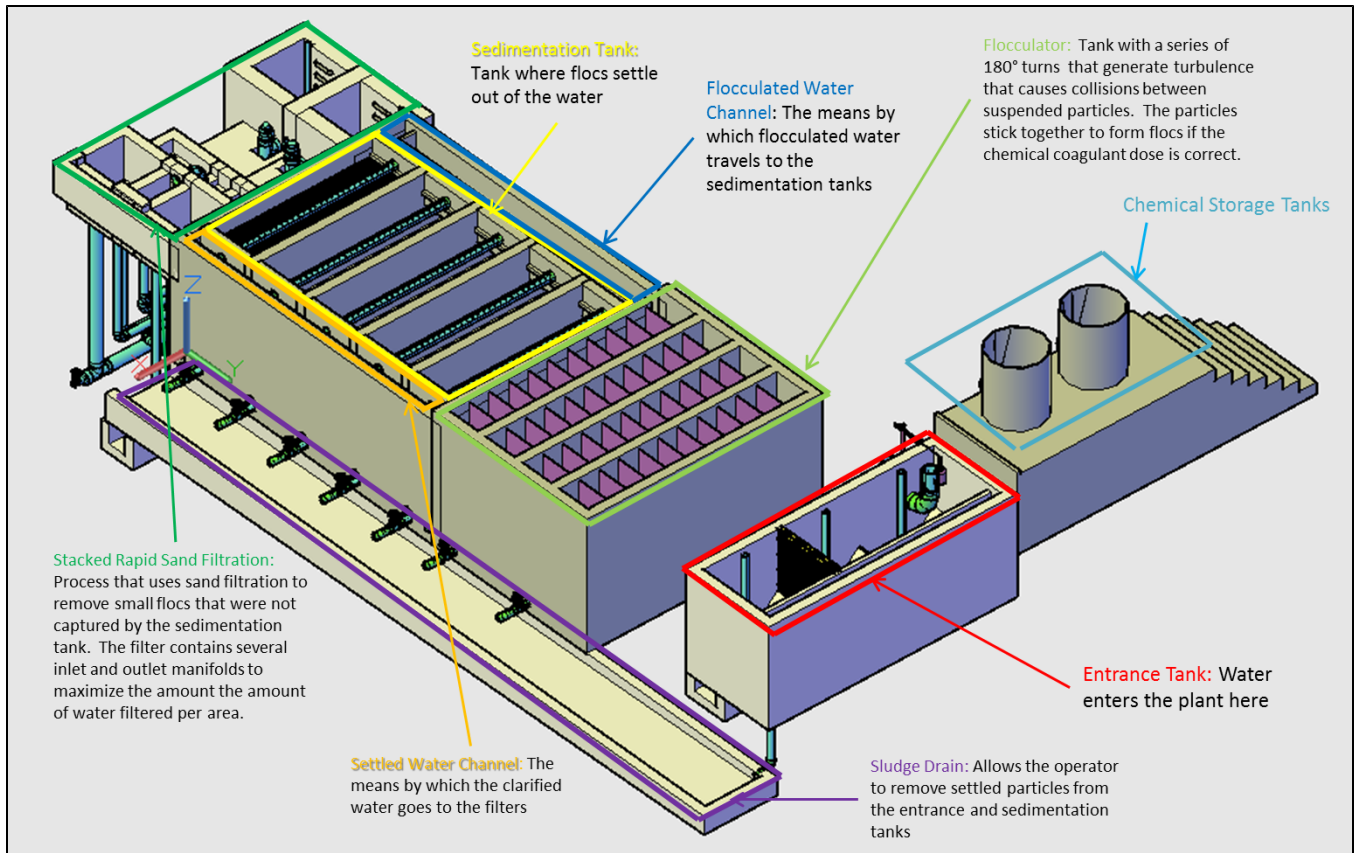
### 20 L/s Plant Model

To get a downloadable Fusion 360 file of the 20 L/s Plant, visit this link: <http://a360.co/2e0MtZK>

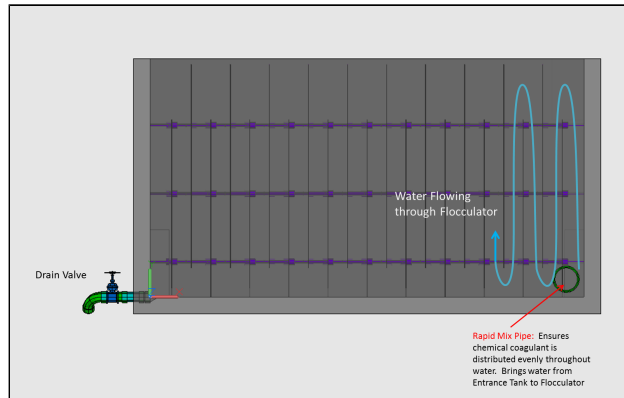


Up-to-date news about our project is available on our Facebook, Twitter, and blog pages.

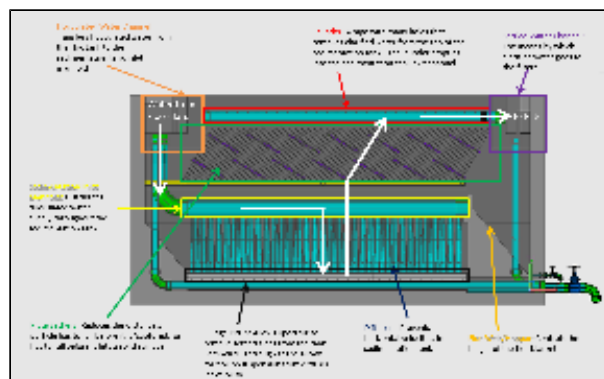
## How Water Flows Through the Plant



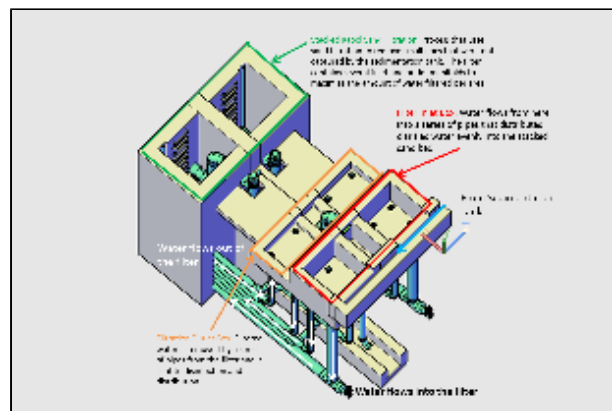
Entrance Tank



Flocculator



Sedimentation Tank



Stacked Rapid Sand Filter

