

Design Philosophy

The AguaClara Design Philosophy is based on our [Philosophy of Empowerment](#):

Affordable for the Community

AguaClara plants must...

- be constructed using local labor.
- be constructed using locally available materials.
- use generic suppliers rather than specialized components.
- operate without electricity.
- minimize use of valves to reduce costs.
- minimize use of moving parts.
- be robust and resilient.
- be optimized for low-cost and high-performance.
- be easy to construct using low precision construction techniques
- use high rate processes to minimize construction costs and facility footprint

Operator-Friendly

Designs must...

- use unit processes that are observable whenever possible (no sealed reactors).
- be possible to operate without doing math.
- use chemical dosages that are set directly.
- be maintainable by one person.
- have a direct-reading indicator of plant flow rate.
- have a chemical dosing control point close to flocculator.
- have no small parts that can be easily lost.
- have removable parts for inspection and maintenance.
- be enclosed in a building to provide protection from sun and rain.
- be sized so that all tanks are accessible by a human for inspection.
- include provisions so that the operator can receive appropriate feedback for every step of the treatment process