

PROJECT REPORT · PHILIPPINES

Safe Drinking Water in Mariveles, Philippines

Our first Philippine community system, at a local church in Mariveles, Bataan, passed its bacteria test and serves 100 to 200 people a day. This report covers the design, results, running costs and the next system for an indigenous Aeta school.

SYSTEM ONE RUNNING

UPDATED

September 28, 2026

PARTNER

Local church hosts; Biaan Aeta Integrated School

PREPARED BY

Clean Water Help volunteers

WEB

cleanwaterhelp.org/projects/ph-villages

Clean Water Help is a 100% volunteer-run 501(c)(3) nonprofit (EIN 99-0765687). Founders cover all operating costs, so 100% of public donations go to projects. Numbers are current as of September 28, 2026. Photos are shared by partners with permission; names of private individuals are withheld. impact@cleanwaterhelp.org

At a glance

LOCATION

Mariveles, Bataan

HOST

A local church

TECHNOLOGY

Prefilters + UF + UV

REACH

100–200 people a day

COST

\$533

NEXT

Biaan Aeta Integrated School

100–200

people a day

\$533

system cost

0

coliform detected

~500

people a day planned next

1 Executive summary

KEY FINDING

A \$533 system of prefilters, ultrafiltration and UV, run by church volunteers, now gives 100 to 200 people a day safe drinking water, and passed its post-installation coliform test. The same design, simplified, is next for an indigenous Aeta school that could serve about 500 people a day.

Clean Water Help's founder scouted Philippine communities in 2024 and 2025. Mariveles, about two hours from Manila, was chosen because water there is available but not safe, and a local church offered to host and operate a system.

The system was designed in September 2025, and the equipment was bought and installed in March 2026. A total coliform test after installation was negative, and a statement of proficiency was issued in May 2026. The system now serves about 100 to 200 people a day.

Local officials have shown interest in a follow-up system at the Biaan Aeta Integrated School, a last-mile school for indigenous Aeta children and low-income families. Its system is in design.

What happens next

1. Finish the design for the Biaan school (passive UF + UV, no booster pump or break tank).
2. Raise about \$700 and build the system with school staff.
3. Train two caretakers and leave a maintenance schedule and spare parts.
4. Test water after installation and again after six months.

THE ISSUE TO WATCH

Maintenance over years, not months. These systems stay safe only if prefilters, membranes and UV bulbs are changed on schedule. Each host needs trained caretakers, a simple log and spare parts.

Key numbers and how solid they are

Each number is labeled by its basis: **MEASURED** counted or tested, **REPORTED** reported by a partner or a document, **RECORD** from our own payments, contracts and correspondence, **ESTIMATE** a calculation or assumption, **PLANNED** a plan or target, not yet done.

ITEM	VALUE	BASIS	SOURCE
People served per day (system one)	100–200	REPORTED	Local operators and CWH, 2026
System cost	\$533	RECORD	CWH project tracker
Post-installation coliform test	Negative	MEASURED	Statement of proficiency, May 6, 2026
UF capacity	about 1,000 L per hour	RECORD	Equipment specification
Biaan school target	about 500 people a day	PLANNED	CWH plan
Biaan school cost	about \$700	ESTIMATE	CWH plan

2 Background and progress

Why Mariveles

Mariveles is on the southern tip of Bataan, about two hours from Manila. Water is available, but not safe to drink, so families buy purified water, and some choose unsafe sources to save money. A local church offered to host a system and provide volunteers to run it.



Installing the system



The finished system

What we built

We measured the church’s water line in August 2025 and designed a compact system that fits in a cabinet between two rooms, with a tap through the wall to the street. Equipment was bought in March 2026 and installed with local volunteers.

The next community

The Biaan Aeta Integrated School in Sitio Biaan, Barangay Maligaya, is a K–12 “last mile” school serving indigenous Aeta children and low-income coastal families. Its water line crosses erosion-prone ground and cracks, letting in mud and bacteria.

Timeline

2024–2025	Founder-funded scouting trips.
Jul 7, 2025	Philippines fundraiser launched.
Aug 21–23, 2025	Mariveles site visit.
Sep 2025	System design and project plans.
Mar 12, 2026	Equipment purchased.
Mar–Apr 2026	Installation.
May 6, 2026	Coliform test negative; statement of proficiency.
Jun 8, 2026	Local officials show interest in a system at the Aeta school.
Next	Build the Biaan school system.

3 Technical foundation

System one design

STAGE	PURPOSE	REPLACE
Booster pump	Steady pressure from a low-pressure line	As needed
Washable sediment prefilter	Removes sand and rust	Clean as needed
5 micron cartridge	Fine particles	6–12 months
Activated carbon	Taste, odor, chlorine	6–12 months
1 micron cartridge	Protects the membrane	6–12 months
Ultrafiltration, 0.01 micron	Removes bacteria and parasites	1–2 years
UV lamp, 25 W	Second barrier; inactivates germs	2–3 years

Why ultrafiltration, not reverse osmosis. Reverse osmosis wastes water, needs more pressure and strips minerals. Ultrafiltration removes germs while keeping minerals, and the UV lamp adds a second barrier.

School system concept

For the Biaan school, a passive manifold of prefilters, ultrafiltration and UV mounted on the incoming line, with no break tank or booster pump, to keep it simple for school staff.

Decisions and the options we set aside

DECISION	OPTIONS CONSIDERED	WHY
UF + UV, two barriers	UV only; reverse osmosis	Two independent barriers; keeps minerals; low water waste.
Host at a church, then a school	Household filters	A trusted host and volunteers keep a shared system running.
Keep designs standard	Custom design each time	Easier to train caretakers and stock spare parts.

Risks and how we respond

RISK	LEVEL	RESPONSE
Missed maintenance	Medium	Trained caretakers, log sheet, spare parts.
Power outages stop the pump and UV	Medium	Passive design at the school; auto shutoff.
Line breaks let in mud	Medium	Prefilters sized for turbidity; flush after breaks.

4 What we learned and what is still open

- **Bring a spare.** We broke a UV lamp during commissioning; spares are now standard.
- **Hosts make systems last.** A trusted local host with volunteers is as important as the equipment.

Open questions

- How many people use the church system on weekdays versus weekends?
- What is the best power backup for school systems?
- Which of Tarlac, Mindoro and Palawan is ready for the next build?

5 How you can help

Bring safe water to a school

About \$700 builds a system for the Biaan Aeta Integrated School.

- Give: gofundme.com/f/philippines2025
- Contact: impact@cleanwaterhelp.org

References and sources

1. Clean Water Help. Statement of Proficiency, Mariveles system (May 6, 2026).
2. Clean Water Help. Community Water Initiatives in the Philippines, project plans (September 2025).
3. Clean Water Help Philippines team meeting (June 8, 2026).