
SAFE WATER PROJECT PROPOSAL

Community: **Víctor Raúl Haya De La Torre**

Region **Huanchaco/Trujillo- Peru**

GPS: **W 79°4'16.7" S 8°4'22.4"**

Number of Families: **300**

Approx Population: **1,500**

Total Budget: **\$ 44,332 USD**

The community of **Víctor Raúl Haya De La Torre** is not unlike the millions of communities across the world that lack access to safe water. The regional government lacks resources to tackle these problems and promote development which leaves the community with underdeveloped infrastructure. Children are constantly sick and missing school. Parents are trapped, desiring more for their families. Progress is stunted. Without help, there is little hope for this forgotten community.

Contaminated water is a primary factor perpetuating the continuous poverty cycle plaguing this community. Currently, diarrheal illness, cholera, and malaria are prevalent in Víctor Raúl Haya De La Torre and members of the community know that their existing ground water source is contaminated.

From our assessment, we know that the majority of the community obtains their household income working in construction, transportation services, agriculture, and general labor. Their average household income is \$230 USD per month and there is reliable electricity in the community available for those who are able to pay the required fees. The community and local municipality have agreed to partner to provide the treatment system enclosure and help promote health and hygiene education. The community also understands that safe water fees will be collected for sustainable operation of the water treatment system.

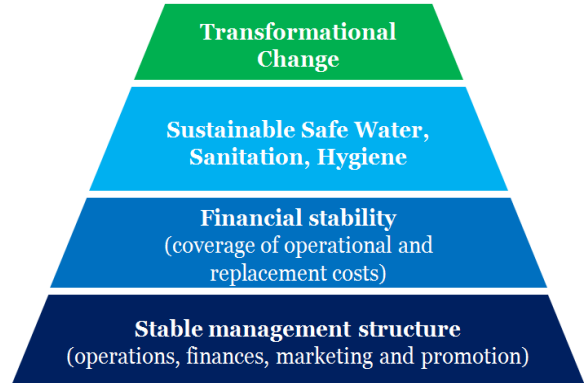


What's THE PLAN?

Community-based, sustainable safe water solutions.

Community Managed Safe Water Project

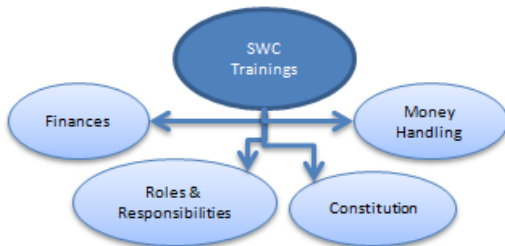
Misiones del Agua Peru's Community-Managed Safe Water Project Model facilitates transformational change in a community while attacking relational strongholds of the poverty cycle. This transformational change occurs through sustainable safe water, sanitation and hygiene education practices. The long-term **sustainability** of the safe water project is supported by a financial plan that accounts for ongoing operational costs and savings for equipment replacement costs. The foundation for all of these components is a stable management structure, which is embodied by the **Safe Water Committee (SWC)**. The major focus of community development efforts in the community is concentrated on the development and support of this SWC. The Community-Managed Model's implementation process is specifically designed for community-led involvement, community equity contribution, and capacity building. Misiones del Agua Peru's indigenous community development staff help support and guide the community through the process. There is no definite timetable for the process because each community's path will be different.



The Building Blocks of Success

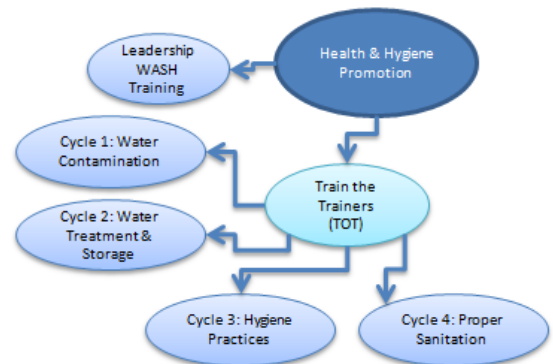
Three Key Community Development Components

Community Mobilization: This community-led meeting is the formal introduction of Rotary and Misiones del Agua Peru to the entire community. The project objectives and the expectations of each party are discussed and documented in formal memorandum of understanding (MOU). The concept of the Safe Water Committee and member roles and responsibilities are also discussed so that the community can elect their own committee.



Safe Water Committee Trainings: Our Safe Water Committee training is broken into different sessions. The first session concentrates on roles and responsibilities and the formation of a constitution to establish the governing principles of the Safe Water Committee. The second session concentrates on the financial sustainability aspects of the ongoing operation, money handling and accountability. Committee readiness is evaluated during the final session.

Water, Sanitation and Hygiene Promotion: Leadership WASH (water, sanitation and hygiene) awareness training is conducted for all local leaders to further engage their support for the project. Community leaders and the SWC are tasked with identifying volunteer WASH promoters for the community. The **Train the Trainers** technique is used to equip WASH promoters to conduct (4) promotion cycles in the community: Cycle 1: Water Usage & Contamination, Cycle 2: Water Treatment & Storage, Cycle 3: Hygiene Practices, Cycle 4: Sanitation. During these cycles, WASH promoters visit each household in the community to discuss key messages.



Community Provided Sweat Equity



Community equity is required for every project because it is an indicator of investment that directly correlates to ensuring long-term sustainability. Only after the community's investment is confirmed, during the community development activities and infrastructure construction, will Misiones del Agua Peru bring water treatment equipment to the community for installation.



There are opportunities in every project for the community to invest. The time commitment made by the SWC and volunteer WASH promoters to train and ready community members are leading investments of equity. Other equity investment opportunities are specific to communities depending on project needs and available skills and assets. Examples of community equity include supplying materials for construction, financial investment, and the provision of skilled and unskilled labor support during construction activities.

Installation of Water Treatment Equipment

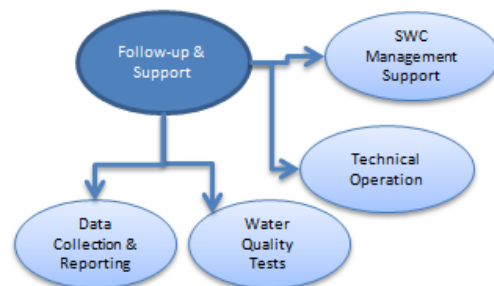
Once community equity is confirmed, WMI brings in water treatment equipment specifically selected or designed for the community. Operators chosen by the SWC and community members will assist in the installation. Once installed, WMI conducts a detailed operator training, including pump controls, filter backwashing, chlorine disinfection adjustment, residual chlorine level testing and daily operator log documentation. After successful equipment installation, operator training and confirmation of functioning SWC, the water system is commissioned. At this point, safe water flows for the community.



Post Commissioning Follow-Up & Support

Work in the community does not end once a project is commissioned as communities still need support to begin what will be an ongoing operation. Misiones del Agua Peru provides a minimum of one year of follow-up and support for recipient communities. During this time we monitor the technical operation and verify water quality through physical, chemical and microbiological analysis.

Just as important as the technical operation is the SWC's leadership. During the follow-up period, we monitor the reliability of the committee, re-engage in additional trainings and track the financial accountability of the project. Misiones del Agua Peru documents the data collected through our remote monitoring devices and the reporting of our field staff of all technical and social aspects of the project. Logged and stored on Misiones del Agua Peru's Reporting Database, this data is vital for measuring performance and developing best practices.



For further detail of complete project activities, an in-depth flow chart can be found at the link below. Please note that no specific time values are represented. A typical project's implementation period can last three to eighteen months.

Sanitation Component

Sanitation is virtually non-existent for more than 2.5 billion people – 38% of the world’s population. People are forced to defecate in open places and rivers, contaminating their drinking water source. This devastating lack of sanitation perpetuates the endless cycle of waterborne disease, sickness and death. Lack of proper sanitation represents more than half the sources of gastrointestinal diseases caused by waterborne bacteria, viruses and worms. Inadequate sanitation is yet another inhibitor for the developing world, stripping people of their dignity and ability to lead productive lives.



The community of **Víctor Raúl Haya De La Torre** is no different than millions of communities across the world that lack adequate sanitation facilities. The regional government lacks resources to tackle these problems and promote development. Children are sick and missing school. Parents are trapped, desiring more for their families. Without help, there is little hope for this forgotten community with underdeveloped infrastructure. The majority of this community obtains their household income as agricultural laborers, and in transportation services. The average household income is \$230 USD per month. The community has agreed to provide their own sand material, provide labor for digging individual seepage pits and mixing concrete.

Misiones del Agua Peru is uniquely positioned as a trusted organization in the region with experienced indigenous engineers and community development staff in the lead. Misiones del Agua Peru staff will work with the community to install 35 [Healthy Latrine™](#).

THE HEALTHY LATRINE™ [INTENTIONAL DESIGN]
a sustainable sanitation solution for developing countries

DESIGNED TO LAST
A fiber reinforced structure eliminates the need for rebar, making the structure easy and quick to construct without compromising structural integrity and strength.

DESIGNED FOR HEALTH
The modern toilet in the latrine is easy to clean and the 'pour-flush' design utilizes one gallon of water to flush waste.

DESIGNED TO EMPOWER
With a mold-construction design, the latrines can be made from local materials by beneficiaries as they invest sweat equity.

fiber-reinforced concrete structure

local materials, quick construction

wooden door, allows for dignity and privacy

modern toilet, pour flush design

sanitary seal, prevents disease transmission

concrete pit cover slab

deep, lined pit, construction varies by soil at site

Communities unite to help those without the physical capacity to construct their own Healthy Latrine™. Giving comes full circle when neighbors help neighbors construct latrines. This empowering opportunity also establishes unity that bolsters the sustainability of the safe water project. Safe water, sanitation, and health and hygiene promotion are all integral to creating transformational change in a community.

Opportunities for Rotarian Involvement

There are opportunities for volunteer Rotarian involvement in every project. The in-country host Rotary club's (RC) involvement is desired for identifying communities in need. During implementation, the host RC's involvement is sought for the initial community mobilization meeting, the leadership WASH awareness meeting and the commissioning ceremony celebration. The host RC's support is valuable in these specific areas because of its ability to be a positive influence in the community, especially with leadership, in helping to promote the project.



The International RC's involvement is needed for project monitoring, financial accountability and data reporting. Volunteer opportunities during project implementation will be considered for Rotarians with specific skill sets. Project field visits for Rotarians without specific skill sets can coincide with the commissioning ceremony and/or follow-up visits as they provide an opportunity to evaluate the success of a project.

It is important to understand that there are no specific timetables with any project activity. This is a community-led process which moves according to the community's pace. This makes it difficult to schedule trips for Rotarian travel, especially internationally. Coordinating an international trip with a project commissioning months in advance is difficult. WMI will not push a commissioning to take place before the community is ready in order to facilitate a Rotarian visit. Likewise, we would not hold off commissioning or delaying safe water, in order to facilitate a Rotarian visit. We are careful not to jeopardize the sustainability of any project, in order to facilitate non-essential volunteer engagement.

Project Budget: Victor Raul Haya De La Torre

Phase 1: Assessment	\$ 0
Phase 2: Design & Engineering	\$ 1,045
Phase 3: Construction & Installation	\$ 35,847
Phase 4: Community Development	\$ 3,334
Phase 5: Follow-up & Support	\$ 4,107
Total	\$ 44,332

For more information about our five areas of focus to ensure sustainability and the specifics of this project, please see page 5. Additionally, refer to the attached Project Schedule of Values, Material & Installed Equipment List and Scope & Responsibility Matrix for further detail.

About Misiones del Agua Peru

Misiones del Agua Peru is the Peruvian affiliate of Water Missions International. Misiones del Agua Peru was formally recognized by the Peruvian government in 2013, but has been working in Peru since 2006 and has installed over 45 community development and disaster response projects throughout the country.

About Water Missions International

Water Missions International is a nonprofit Christian engineering organization providing sustainable safe water and sanitation solutions for people in developing countries and disaster areas. Using state-of-the-art technology and engineering expertise, the organization has provided access to safe water for more than 2.4 million people in 49 countries on five continents since 2001. Water Missions International implements customized solutions through a comprehensive community development model in its nine permanent country programs in Africa, Asia, Latin America and the Caribbean. Notably, Charity Navigator has awarded Water Missions International their top rating six years in a row, a distinction shared by only three percent of the charities rated by the organization.

Water Missions International

www.watermissions.org

843.769.7395 (phone) | 866.280.7107 (toll free) | 843.763.6082 (fax)

Safe Water Sustainability Plan

— five areas of focus —

Misiones del Agua Peru is uniquely positioned as a trusted organization in Iquitos, Peru with experienced indigenous engineers and community development staff in the lead. Explore the five areas of focus for sustainability below.



A SUSTAINABLE SAFE WATER SOLUTION. This is a **safe** water project, meaning we meet World Health Organization standards for safe water that is free of all microbiological contaminants. We won't settle for simply 'improved' water, which may still contain these harmful contaminants. This means our treatment technologies implemented in a community must be specific to the individual community's needs. *There is no one-size fits all solution. Misiones del Agua Peru has conducted a preliminary community needs site assessment with a water quality analysis. We anticipate using a Living Water™ Treatment System (LWTS™) for this project. The LWTS™ provides filtration and chlorine disinfection.*

A SUSTAINABLE SUPPORTING INFRASTRUCTURE PLAN. Quality matters for projects that need to last, which is why we're committed to investing in infrastructure. The supporting infrastructure investment must consider life cycle costs. Investing in low quality materials, equipment and inadequate construction in an effort to minimize the initial investment cost (price tag for a project) is not a recipe for sustainability. Inferior equipment and construction quality ultimately increase operating and replacement costs to the community, becoming an obstacle to their success. If we invest well on the front end, we'll ensure long-term sustainability. *The preliminary site assessment for Víctor Raúl Haya revealed the need for using an existing borehole, a solar powered pumping system with required electrical components and a permanent enclosure to support the solution. A detailed list of all items can be found in the attached Schedule of Values and Material and Equipment List.*

A SUSTAINABLE COMMUNITY DEVELOPMENT PLAN. Equipment and construction are the easy parts of the project. Community development requires considerable investment in the community by Misiones del Agua Peru's indigenous staff. By community development, we are referring to the process of engaging community leadership, in order to form and train a Safe Water Committee (SWC). This committee will lead community ownership, project operations and financial management as well as equip and mobilize volunteer leaders in WASH (water, sanitation and hygiene) promotion. Community development also includes training system operators and engaging the entire community in health and hygiene education.

A SUSTAINABLE FINANCIAL PLAN. Like any kind of utility, there will be expenses related to ongoing operation and equipment replacement (depreciation) costs in the future. Addressing these costs, specifically the financial burden placed on the community to maintain their project, is too often overlooked. Misiones del Agua Peru will equip the Safe Water Committee with financial tools to plan for these future costs. We'll also work with the SWC to instill the value of safe water in the community and ensure affordability according to World Health Organization standards, as this is an issue of access.

A MONITORING AND EVALUATION PLAN TO ENSURE SUSTAINABILITY. Once a project is commissioned, meaning the safe water is flowing, the need for further community engagement is still required. Misiones del Agua Peru will continue to monitor both the Safe Water Committee and the technical components of the water projects for a minimum of one year. Follow-through is important to us and vital to ensuring sustainability. We're committed to seeing projects succeed for those we serve, so we continue to check in with the community after the tap is turned on to ensure that the system is running properly and that they are equipped to operate and sustain their project.

Project Schedule of Values

Community Name: Victor RaulEstimator: BJGCountry: PeruProject Number: 00.029.51

	WMI Labor Expenses	Project Travel Related Expenses	Materials & Installed Equipment	Subcontract & Rented Equipment Expenses	Freight, Duties & Customs	Project Management	Total Expenses	WMI Man- days	WMI Site Visits
Phase 1.1 Assessment	-	-	-	-	-	-	-	0	0
Phase 2.1 Design & Engineering	693	248	-	-	-	105	1,045	6	3
Phase 3.1 Water Source Development	-	-	-	-	-	-	-	0	0
Phase 3.2 Structures	385	231	550	-	-	130	1,296	4	2
Phase 3.3 Electrical	193	116	760	-	-	119	1,187	2	1
Phase 3.4 Pumping Equipment	193	116	1,572	-	-	209	2,089	2	1
Phase 3.5 Water Storage Tanks	193	116	550	-	-	95	953	2	1
Phase 3.6 Water Distribution Taps	154	-	3,520	-	-	408	4,082	2	0
Phase 3.7 Water Treatment	193	116	7,610	-	-	880	8,798	2	1
Phase 3.8 Piping	154	99	683	-	-	104	1,040	2	1
Phase 3.9 Sanitation	1,502	957	11,303	-	-	1,529	15,290	18	3
Phase 3.10 Other	77	99	825	-	-	111	1,112	1	1
<i>Phase 3: Construction & Installation Sub Total</i>	3,042	1,848	27,373	-	-	3,585	35,847	35	11
Phase 4.1 Community Mobilization	347	314	-	-	-	73	733	4	3
Phase 4.2 Safe Water Committee Education	308	231	-	-	-	60	599	4	2
Phase 4.3 Wash Promotion (Health & Hygiene)	462	594	330	-	-	154	1,540	6	6
Phase 4.4 Operator Training	58	83	-	-	-	16	156	0.5	1
Phase 4.5 Living Water Program	-	-	-	-	-	-	-	0	0
Phase 4.6 Commissioning	193	83	-	-	-	31	306	2	1
<i>Phase 4: Community Development Sub Total</i>	1,367	1,304	330	-	-	333	3,334	16.5	13
Phase 5.1 Follow-Up & Support	2,310	1,386	-	-	-	411	4,107	24	12
Project Total	7,411	4,785	27,703	-	-	4,433	44,332	81.5	39

Materials & Installed Equipment List

	Item	WMI #	QTY	Cost
1	Solar Panel Support Rack	0	1	\$ 550
2	Electrical Grounding Kit	012600	1	\$ 118
3	Omega LVU-A701 Ultrasonic Solid State Liquid Level Switch	001929	1	\$ 195
4	12/2 w/12 GR Flat Jacketed Heavy Duty Type-THW	001222	400	\$ 211
5	18/2 Sprinkler System Wire (signal Transmissions Wire, 30V)	001213	100	\$ 15
6	Pump Main Disconnect Switch	0	1	\$ 220
7	Grundfos 11 SQF-2 Helical Rotor Solar Submersible Pump (50/60Hz)	001903	1	\$ 1,572
8	2,500L Treated Water Storage Tank	0	1	\$ 550
9	Tap at Enclosure	0	1	\$ 220
10	TriMotor Cart Distribution System	0	1	\$ 3,300
11	Two-High Molded LWTS with LG ABSTR558A1 (Base Unit including filters plumbed to valve assembly)..does not i	011113	1	\$ 7,610
12	2" Sch. 80 PVC Pipe	002903	300	\$ 518
13	Misc. Pipe Fittings	0	1	\$ 165
14	Cement/Mortor for pit lining	0	70	\$ 1,155
15	Block Pit Lining	0	35	\$ 770
16	Cement for pit cover slab	0	35	\$ 578
17	Rebar for pit cover slab	0	35	\$ 385
18	2" PVC pipe for pit vent	0	35	\$ 385
19	2" PVC nipple for pit vent	0	35	\$ 154
20	Cement for latrine floor slab	0	20	\$ 330
21	Rebar for latrine floor slab	0	70	\$ 770
22	3" PVC pipe for waste pipe	0	70	\$ 539
23	3" PVC elbow for waste pipe	0	70	\$ 308
24	Cement for latrine housing	0	140	\$ 2,310
25	Latrine mold lubricating oil	0	35	\$ 77
26	Poly fiber for latrine housing	0	70	\$ 385
27	Wood door	0	35	\$ 539
28	Hinges and door galvanized hardware	0	35	\$ 693
29	Tankless Toilet with seat and cover	0	35	\$ 1,348
30	5 gallon bucket	0	35	\$ 193
31	Plastic toilet brush	0	35	\$ 193

	Item	WMI #	QTY	Cost
32	Plastic toilet plunger	0	35	\$ 193
33	Equipment transport allowance	0	1	\$ 825
34	WASH Posters, Training materials, etc	0	1	\$ 330
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