

## Sunsetting WL/Sunrising WEFTA-Panama Trip Report 2020

### Prelude:

The WL/WEFTA group met up at the Peace Corps (PC) office in Ciudad de Saber. Most staff had left the office by the time we arrived so there was very little discussion in the office. PC staff Martin Cardenas drove us to Casco Viejo for dinner. Discussion was lighter than in past years with little information on current water project prospects. More focus was placed on PC post growth and the arrival of a new Country Director. Luckily, the new CD is a previous PC/Panama Volunteer and is well aware of the water system challenges – especially in the Comarcas. There is good potential to keep the PC relationship strong and continue the support flowing through this partnership. Some of the challenges in keeping the relationship strong are discussed below.

The standard method for providing technical assistance and funding support to rural communities with the assistance of PC is through the Peace Corps Partnership Program (PCPP). WL set up a revolving fund in 2004 for new water system and renovation/expansion projects that utilized PC volunteers as the design and implementation managers. By providing consistent annual funding to the PC/Panama Water, Sanitation and Hygiene (WASH) program we were able to set standards for water project design, implementation and post-construction follow-through. A process and program that continues today.

Unfortunately, PC is moving away from brick and mortar projects and instead focusing efforts on local training and capacity development. WL through the above-mentioned process has also funded water committee training and development in preparation for water system development and post-construction management. PC will appreciate continued support of this valuable training. This will be an important connection for WEFTA to maintain. By supporting training and developing capacity in local water/sanitation committees we will maintain an important relationship and foothold in the PC deployment of WASH activities in Panama and beyond.

The challenges presented by the new direction of PC WASH programs only working in capacity development will decrease our ability to implement water system development/improvement projects with PC in Panama. What was a \$25K-\$50K/year investment in protected water system development and improvement will fall to near zero (except for supporting water committee training). Two major obstacles are: (1) the addition of a Monitoring, Evaluation and Reporting (MRE) specialist at Post who at this point has said they will not allow PCPP funding over \$1K for PC volunteer implemented projects, and (2) someone at PC HQ has implemented a rule that water projects funded through PCPP must have one year of quarterly water quality results for Total Coliform and Arsenic.

It is an assumption that PC volunteers will look for outside means to work closely with local water committees in water system development despite the new direction to focus solely on capacity development. The need for rural water infrastructure development and improvement is real. The recommendations listed below from our site visits are just a snapshot of the importance of continued support (technical, managerial and financial) to Panamanian people, communities, and agencies. While PC aims for capacity development goals our partnership should be maintained and cultivated as PC volunteers provide an excellent connection to past and future communities looking for health improvement assistance.

**Visits:****Date: Tuesday, January 7<sup>th</sup>, 2020****Location: Alto Mancreek, CNB (Nokribo District)****Service Population: 155 people/22 homes**

<b>Project Details:</b>	
Spring source	1 spring – dry season 22 gallons/person/day, wet season 118 gpcd – will be a low-profile spring-box construction
Transmission Line	0.33 miles with 1 stream crossing
Storage Tank	5,550-gallon block tank
Distribution	2,854 feet of pipe with 22 connections including school and church.
<b>Project Cost:</b>	
WL contribution	\$5,000
Outside donation	\$945.56
Community contribution	\$4,173.74 (labor & tools)
TOTAL	\$10,119.30
Beneficiary	\$65

**Summary:**

WL team arrived late in the afternoon for a water committee meeting with the PCV. The project is funded. They are now starting to plan for materials transport and work groups. 12 community and committee members attended the meeting. We discussed the importance of the project, the PCV contribution and water committee role in putting the WaterSTAR plan into motion. The project will serve 22 homes who in the past were going to a small spring located near the community. A new spring source was found/donated to supply the 22 homes. The PCV and water committee identified a day in the coming week to plan out the project steps. The spring is fairly close to the community (0.33 miles) with near 90 feet of elevation drop. The PCV seems well integrated and eager to start the project. There are other PCVs close by to assist in construction. The community is also mobilized to take this project on in the coming months.

**Follow-up:**

It will be important to return to the community next year to see how the project has progressed, how the transmission line worked out, and how well the water committee is managing the O&M of the new system.

**Date: Wednesday, January 8<sup>th</sup>, 2020**

**Location: Calante, CNB (Nokribo District)**

**Service Population: 530 people/95 homes**

<b>Project Details:</b>	
Spring source	2 springs – dry season 21 gallons/person/day, wet season 120 gpcd – existing low-profile spring-box construction
Transmission Line	1,000 feet
Storage Tank	6,000 - gallon block tank (with an inner support wall creating two 3,000 - gallon interior tanks.
Distribution	2,600 feet of pipe with 95 household connections
<b>Project Cost:</b>	
WL contribution	\$5,000.00
Community contribution	\$7,500. (labor & tools)
TOTAL	\$12,500
Beneficiary	\$24
WL Circuit Rider Project	\$244 to add two branch lines and renovate the original spring box

**Summary:**

WL team arrived before noon for an informal meeting with the water committee VP, Danilo Robinson. There is no PCV in Calante right now, so the meeting was organized with the help of a nearby PCV. We talked about the community growth and overall need to find another spring source and increase the supply (especially for the dry season). We walked to the tank site above town. The tank is now 11 years old and is starting to leak. The tropical climate and heavy rainfall impact concrete and block tanks by leaching the cement out of the aggregate and grout decreasing the overall strength of the tank and ability to hold water. The distribution system was well built and buried, many of the water tap stands are failing or have failed because of cement leaching with heavy rainfall. We walked back down through the community and had a meeting with the water committee and community at large. They expressed their gratitude for the project and described how well the community was doing with a secure water supply. They also talked about their challenges during dry season and with overall community growth – asking for support to tap another source and build a larger supply tank. We congratulated them for keeping the system in good shape through maintenance and reiterated the need to collect fees and continue solid operation and maintenance. As well, the idea of conservation during the dry season and water delivery equity among users was discussed as a strategy to survive the dry season.

**Follow-up:**

This community could use assistance whether from PC or WL/WEFTA to find additional support to expand the system. The community will continue to grow. The pending arrival of the road that connects Kankintu to the Bocas highway will make this community grow even more and put more demand on the water system. For now, an expansion project to add another spring and build a new tank would help the community maintain water supply to the growing population.

**Date: Wednesday, January 8<sup>th</sup>, 2020**

**Location: Kwite, CNB (Nokribo District)**

**Service Population: 191 people/28 homes**

Summary:

This project was funded by the Boquete Rotary Club. It was designed and constructed with the assistance of PCVs. Similar to Calante, this community has grown beyond the supply capability of the water system especially during dry season.

Follow-up:

Like Calante this community could use another volunteer to assist in the development of funding application to MINSA or other entities for source and tank expansion.

**Date: Thursday, January 9<sup>th</sup>, 2020**

**Location: Barriada Guerra (La Soledad), Bocas del Toro**

**Population: 141 people/24 homes**

Project Details:	
Spring source	1 spring – dry season 32 gallons/person/day, wet season 45 gpcd
Transmission line	1,150 feet with one bridge crossing
Storage Tank	3,000 - gallon block tank
Distribution	2,050 feet of pipe serving 24 homes on both sides of the Rio Risco (one bridge crossing)
Project Cost:	
WL contribution	\$1,980
Community contribution	\$2,772 (labor & meals)
TOTAL	\$4,752
Beneficiary	\$33.70

Summary:

The WL team met with the Water Committee at the President's house. Discussion centered around growth of the community and low water supply during the summer months. The committee was proud to tell us that they collect the monthly fee (\$0.50) and have money in the bank. They also have an operator that helps maintain the system. They have multiple new connections coming up with the growth of the community. We talked about the need for a new connection charge to help offset the materials cost and build up emergency funds for the committee. Despite the initial community labor to build the system, new house connections are not charged for the past labor put forth by the community. Another issue the committee brought up is that the hill slope below the storage tank has had a few small landslides making the committee question the stability of the tank site. We noted that the tank overflow is directly below the tank – causing the instability. We provided a potential solution to divert the overflow away from the tank area and stabilize the slope below the tank with grass.

Follow-up:

No follow-up is necessary for Barriada Guerra at this time.

The PCV in the area (located in the Valle Risco) has started a regional water system assistance group. The idea is built off the water committee seminars and allows water committee personnel in the group to share resources. It would be good to follow up with that group on the next visit to see if there is circuit rider program potential of if WL/WEFTA can support the development of that group into something larger with more resources to share.

**Date:** Thursday, January 9<sup>th</sup>, 2020

**Location:** Quebrada Pastor, Bocas del Toro

**Population:** 400+ people/36+ homes/1 school with more than 500 students and staff

**PCV Name:** None

<b>Project Details:</b>	
Spring source	1 spring – dry season 12 gallons/person/day, wet season 43 gpcd
Transmission line	3,500 feet with one bridge crossing
Storage Tank	3 – 500-gallon plastic tanks in parallel (1,500 gallons)
Distribution	1,700 feet with multiple branches
<b>Project Cost:</b>	
WL contribution	TBD
Community contribution	
TOTAL	
Beneficiary	

Summary:

The WL team met with a small group of people connected to the original water system in the center of QP. WL and PC have been active in the area support small gravity flow water systems in neighborhoods of QP (Lopez, Santos, Los Laureles, Carrisal). The group indicated that all those systems are working well. They are requesting assistance for the original water system that serves the center of town and the school. All the students in the area attend the school, but at times there isn't any water in the system so the school director has to cancel classes. The problem is that the original system was built to supply the school but as time passed houses sprung up around the school and connected to the aqueduct. There are so many users on the system now that water often does not reach to school or even supply all the connections. Most of the community is happy with their neighborhood water systems and don't get involved in the issue of the water system in the center of the community despite having children that attend the school. There is growing tension on this issue in the center of the community.

Follow-up:

This community could use immediate assistance to improve the current leaky spring capture, build another spring capture and build larger water storage. The flow from the current spring for the majority of the year is 12GPM and the group indicated there are more springs in the area that could be tapped. With more protected spring captures and flows above 15 GPM, a storage facility could be built in the 10K gallons range to support the growing population in the area and the school. Discussion about a dedicated line to the school or dedicated storage at the school could also help the school water supply situation.

**Date: Friday, January 10<sup>th</sup>, 2020**

**Location: Cerro Brujo, Bocas del Toro**

**Service Population: 300+ people/28 homes**

<b>Project Details:</b>	
Stream source	2 small streams in a protected watershed – flow exceeds demand
Transmission line	5,000 feet with multiple bridge crossings across streams and pastureland
Storage Tank	5,000-gallon hexagonal block tank
Distribution	1,000 feet with multiple small family branch lines
<b>Project Cost:</b>	
Rotary contribution	\$12,140
Community contribution	\$7,040 (labor & meals)
TOTAL	\$19,180
Beneficiary	\$70

Summary:

The WL team met with the water committee and other community members in the casa communal located in the center of the community. Unfortunately, there was a recent death in the community so full community turnout was limited. We discussed the water committee's role and general operation and maintenance of the system. The water operator was in attendance and gave us a breakdown of his daily tasks. They all agreed that the system is working well, and we congratulated them on keeping up maintenance and monthly fee collection. They also see growth in the community and mentioned that there is a new neighborhood in the community that all get their water from one tap (at the end of one branch in the system). They expressed the need to build a larger storage tank or additional tank at the tank site and extend a new distribution line to this new neighborhood. They agreed that they had the funds in the bank to take on extending the line and could charge the new community members for the materials and ask for daily labor per household. They thought they would solicit a new PCV to help them with the tank design, funding application to MINSA and construction.

Follow-up:

The stream source issue still causes alarm, despite the community insisting that people are treating their water and are in good health. This could be a perfect community for the implementation of advanced treatment on the source – even if it were simple filtration. PC is dedicated to this community having had successful projects and PVC support. It will be good to stay in touch with PC in the coming months to see if they place another PCV in the community to support the expansion project.

**Date: Friday, January 11<sup>th</sup>, 2019**

**Location: Bajo Gavilan (Barrio Polverine), Bocas del Toro**

**Service Population: 72 people/8 homes**

<b>Project Details:</b>	
Spring source	1 spring, 5GPM – initial dry season investigation
Transmission line	2,500 feet
Storage Tank	1,000 - gallon plastic tank
Distribution	1,500 feet (two main branches)
<b>Project Cost:</b>	
WL contribution	TBD
Community contribution	
TOTAL	
Beneficiary	

Summary:

We were asked by the Bajo Gavilan water committee to visit this small sector of the community. The community of Bajo Gavilan received a water system upgrade in 2014 with support of WL and PC. The water system is working well, and all is in order there. The sub-sector of BG called Polverine was left out of the WL/PC project because the altitude/HGL did not allow. The sub-committee of Polverine received a 1,000-gallon water tank from the hydro-electric dam company AES when they built the dam on the Changuinola River. The dam is located less than 1 mile east of the community. We hiked the potential transmission line trail and saw the future tank site and spring. The project looks like it would be simple and inexpensive. The challenge is who would complete the WaterSTAR and fund it. PC may place another PCV in the area or they may be able to have PCVs in the region work on the project, but chances are slim for that to happen

Follow-up:

We explained to the sub-committee that it would be a challenge for WL to tackle this project given the sunset and it may be too small for WEFTA to tackle as well. We implored the committee to look to local funding sources through MINSA or even AES. The fact that they have the supply tank, title to the land and spring facilitate the potential to get a pipe donation from an entity in the area. PC could help with the minor design details of tank siting and pipe sizing for adequate flow and pressure.





1

Robert, Nico and Hayden make their way up the trail to Alto Mann Creek, CNB



2



Alto Mann Creek, CNB



3

Talking with the community of Alto Mann Creek about their upcoming water project.



4



Robert, Nico, Hayden and our Peace Corps Guide (MC) upon departure to Rio Mananti (Kwite & Calante)



5

Chiriqui Grande: Port Town for many of the coastal and river communities.



6



Small Ngabe cluster of homes along the Rio Mananti on the way to Kweite



7

Small Ngabe home with inhabitants. Homes are on stilts to stay cool and out of flooding.



8



Kwite water storage tank on the highest/closest hill to town.



9

Calante water tank with Robert and Danilo (Committee VP) checking water level and condition.



10



Waterlines team with Calante water committee members (and future members) at the tank site.



11

Aged tap stand in Calante.



12



Downtown Calante. The population has doubled since the design and construction of the water system in 2009.



13

Community meeting in Calante. The discussion centered on how to expand the storage and add another spring to meet demand of the growing population.



14



The bedroom community to Valle Risco, La Soledad.



15

Meeting with the water committee of La Soledad.



16



The pier at Cerro Brujo, Tierra Oscura. The cayuco is common transport in the islands of Bocas del Toro.



17

Cerro Brujo, Tierra Oscura.



18





Robert testing the water on the tank of Cerro Brujo.

19

The surface water catchment for Cerro Brujo. This source could use some improved treatment as the water contains elevated organics.



20



The hike from community to source to tank often follows the water line.



21

Cerro Brujo community members discussing the future of the water system.



22



Cerro Brujo water committee.



23

The community of Bajo Gavilan, Bocas del Toro.



24



Following the transmission line for the existing Bajo Gavilan system.



25

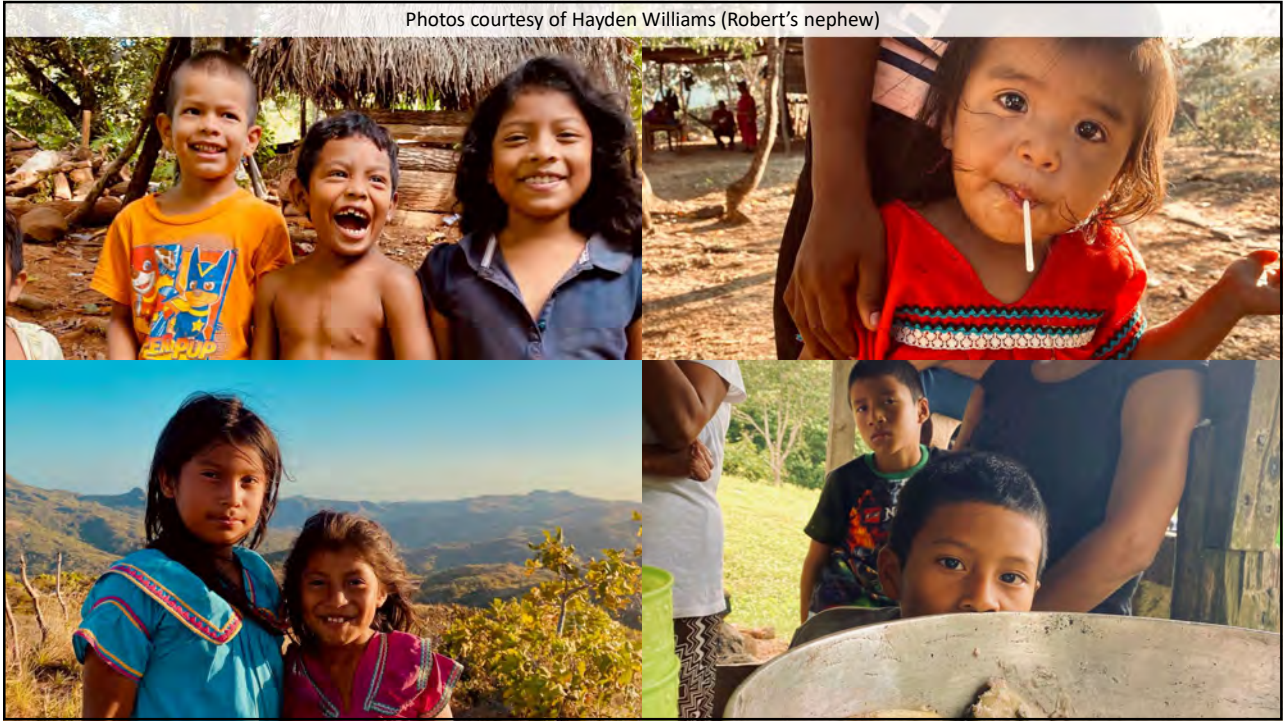
Searching for a new water source above the community of Bajo Gavilan.



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Photos courtesy of Hayden Williams (Robert's nephew)



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