



WATER ENGINEERS FOR THE AMERICAS

2012 YEAR END REPORT

EXECUTIVE SUMMARY

The non-governmental organization “Water Engineers for the Americas” (WEFTA), based in Santa Fe, New Mexico, was officially created as a non-profit 501(c)(3) in 2002. Since that time the organization has been able to assist rural communities in developing countries throughout Latin America with their water and sanitation needs.

We have been fortunate to receive ongoing support from the Wallace Genetic Foundation to help cover operational expenses of the organization. And we continue to count on the generous support provided via our sister NGO, Waterlines, as well as generous individuals committed to doing something about the lack of safe water supplies and proper sanitation in impoverished communities throughout Latin America.

With the ongoing support from Souder, Miller & Associates, the organization’s most significant corporate sponsor, as well as all the volunteer help from our supporters, WEFTA has been able to continue to send an increasing number of volunteers overseas to assess past, present and potential future projects and to provide the invaluable technical advice and recommendations needed to assure each project’s success.

WEFTA continues to grow as an organization, and has been fortunate to welcome some good, new partners in this work, both institutional and individuals. The enthusiasm and special talents and insights that these new partners bring are most welcome, and we are confident that they will result in healthy development and sustainable growth of the organization. One of the most promising developments has been the good and effective networking with other NGOs, especially local in-country NGOs that can be WEFTA’s eyes and ears on the ground and help voice our common vision of a better world that comes from the responsible sharing of the world’s abundant resources.

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SITE VISITS MADE BY WEFTA VOLUNTEERS IN 2012

The following are summaries of what our volunteers observed while in country. A detailed trip report for each is available for viewing on the WEFTA website (WEFTA.net).

- ***Trip to Colombia by Andrew Robertson and Tory Tadano***

Andrew has made a few trips to Colombia to follow up on the progress made in development of a water system for the community of San Cayetano. The proposed project will be relatively large and complex by WEFTA standards, but will provide a much needed water supply to the local population. Many options have been studied, and it has been determined that the most viable and effective solution will consist of the damming of the ephemeral stream known as “El Tunel” at a point above the communities to be served and diversion of water via an infiltration system incorporated into a dam structure. Andrew is working with several local partners, including a local engineer in the region that has experience with such structures. In 2012 he traveled with fellow WEFTA volunteer Tory Tadano to continue work on the project, including surveying of the site.

- ***Trip to Peru by Lou Harrington***

In the Urubamba Valley, Lou met with the local Habitat for Humanity community where WEFTA has assisted with the construction of a wastewater collection and septic system and potable water reservoir. He also met with Urubamba provincial government officials and town officials from communities up and down the valley to discuss the ways in which WEFTA could help with a regional approach to wastewater treatment. All the small urban centers along the river have historically dumped their raw sewage directly into the Urubamba River, and the once majestic waterway has become dangerously polluted and is an eyesore, with filth-lined shores and decimated fish population. With the expertise offered by some key supporters of WEFTA, clearly we could provide important insights into what treatment alternatives might be feasible.

Lou also paid a follow up visit to the Jesuit high school Colegio Cristo Rey in Tacna, Peru. The previous administrator, Hermano Cardona, is no longer at the school but the new administrator had made it clear that he would like to follow up on the idea of Hermano Cardona to use ‘scalped’ wastewater from the City of Tacna’s municipal wastewater system for irrigation of green areas after treatment. Lou was also able to meet with officials from the remote village of Coruca, of an adjacent watershed above Tacna whose only ‘potable’ water source had excessive levels of arsenic and other heavy metals. Together with representatives from the community, we discussed ways in which some of our volunteer engineers, with expertise in the field of water treatment, could perhaps prepare an assessment of what alternative treatment systems and technologies exist that we could help them install.

The related trip report is available on the WEFTA website.

- ***Trip to Guatemala by Blanca Surgeon and Matt Earthman***

In April of 2012, Blanca and Matt visited the completed latrines and water filtration project in the community of Macalajau, Guatemala, which was completed in collaboration with Habitat for Humanity Guatemala. They were also able to scope out the potential new project in the community of Ixcamal.



The team met up with representatives of another NGO by the name of United by Friendship, which has been working with the community of Santa Rosa la Laguna and hoped to get some expert advice from our volunteers on how best to address the need for development of a safe and sustainable water source for the community.

The results of the various site visits are available in the trip report prepared by Blanca and Matt which can be accessed on the WEFTA website (WEFTA.net) and by going to 'Where We Work' and clicking on Guatemala.

- ***Trip to Honduras by Andrew Robertson***

In May of 2012, Andrew was able to make a trip to Honduras to follow up on past projects and speak with representatives from Save the Children Honduras and other local community representatives about new projects on the horizon.

WEFTA PROJECTS OF 2012

The following projects were funded and completed in 2012. Detailed final reports and accounting for each are available upon request.

- ***Well Drill Rig Purchase, Equipping and Transfer to Bolivia***

Throughout most of 2012, much effort was made in raising funds to purchase well drilling equipment for our colleagues at Suma Jayma in Bolivia. Jason Gehrig, of the board of directors of WEFTA, led an enormous effort which resulted in the raising of well over \$40,000 toward the project. The people of the small town of Muenster, Texas, along with many others, truly rallied around this cause and were very generous. With a gift from a long-time supporter of WEFTA, we were able to bring the two key members of the Suma Jayma team up to the U.S. to train on the very rig that was purchased for them and which would subsequently be shipped to Bolivia.

The man who WEFTA purchased the rig from, along with others there in Texas, donated countless hours to training the Suma Jayma team. An Eagle Scout also volunteered to clean, prep and paint the drill rig and did a first-rate job.

For a slide show of all the tremendous work associated with this project, please visit the WEFTA website.

- ***El Maneadero Water System in Honduras***

A transfer of a little over \$8,000 was made in early 2012 to fund the first phase of development of the large El Maneadero water system project in the Intibuca region of Honduras. This first phase consists of the main trunk line connecting the water source to the water storage facility just above the community.

- ***Water Quality Testing at Yamaranguila, Honduras***

WEFTA helped fund the much needed water quality testing of the Yamaranguila well, funded by a grant we provided several years ago. There was concern about the presence of heavy metals, pesticides and other inorganic substances in the water which may pose a risk for the health of the locals. Thankfully the results of the tests showed no dangerous levels of any of these constituents.



- ***Completion of Miguel Hidalgo Water System in Chiapas, Mexico***

A transfer of about \$1,600 was made to Chiapas to cover the final costs associated with the Miguel Hidalgo community water system project. With this transfer, the final costs of development were covered and the project officially completed. For a complete write-up and photo gallery of this project, please visit the WEFTA website.

- ***Phase 2 of the Cullucachi, Bolivia project (community water system - manual hand pumps)***

This project was completed in July of 2012 and benefited 35 families of the community, representing a total population of 135 people. Individual wells with hand pump structures were constructed at each home.

Contribution from Local Community:	\$ 548
<u>Phase 2 funding from WEFTA:</u>	<u>\$ 10,860</u>
Total actual project cost:	\$ 11,408

- ***Cullana Tije, Bolivia (community water system)***

This project was the culmination of a huge effort on the part of the families of Cullana Tije and the Municipality of Comanche. The municipality had assisted with the cost of constructing two spring catchment structures and a large tank. WEFTA was able to assist with the portion of the project that brought water to each of the 22 families of the community via tap stands outside of each home. A portion of the funding provided by WEFTA was used to construct a chlorination building and related equipment.

For a complete final report please contact WEFTA and we can easily provide a copy of the detailed final report prepared by the staff of Suma Jayma.

- ***Titin Jawira, Bolivia - Phase 2 (community water system - manual hand pumps)***

This project consisted of the construction of individual hand pumps at the homes of each community member. The topography and distance between homes made a community delivery system impractical. The project would serves 21 families. The cost breakdown is as follows:

Contribution from local community:	\$ 469
Contribution from local government:	\$ 620
WEFTA funding:	\$ 7,433
<u>In-kind contribution from local community:</u>	<u>\$ 2,125 (labor + local materials)</u>
Total amount required to complete the project:	\$ 10,647

- ***Parco, Bolivia (community water system)***

In August of 2012 WEFTA provided the funding for the Parco community water system project. The work was coordinated by Suma Jayma and ultimately benefited 21 families, or a total population of 105 people of all ages. As was the case with the Cullana Tije project, the Municipality of Comanche provided the materials to construct two spring catchment structures and two water storage tanks. The funding provided via WEFTA was used to complete the project, bringing water to each of the homes of the community.



- ***La Union, Honduras (community water system)***

WEFTA provided a grant of a little over \$3,000 to fund the construction of a larger water storage tank for the community. The locals provided over \$5,000 for the project but needed assistance with the final amount required for completion. The problem experienced by the community had to do with daily water shortages during the day, but the tank overflowing at night: a classic example of a tank that is undersized, both for the community's demand and for the available supply.

- ***Continuing Education and Drill Rig Training for Suma Jayma staff***

WEFTA continues to provide financial assistance to the staff of Suma Jayma, specifically Jaime Rosas, to help offset the cost of engineering studies at the local university on the part of Jaime Rosas, the lead technical person at Suma Jayma. Evidently the lack of a degree and licensure as a professional engineer in Bolivia has created obstacles for the work of Suma Jayma when it comes to getting plans certified and approved. Thanks to ongoing contributions from a private donor, WEFTA has been able to wire down to the Suma Jayma team another installment to cover the cost of studies associated with the third year of this collaboration.

- ***Latrines and Water Filtration in Ixcamal, Guatemala***

This project is our second official collaboration with Habitat for Humanity International resulting from direct coordination with the organization's international office for the Latin America and Caribbean region based in Costa Rica. In this case WEFTA coordinated with the national office staff of Habitat for Humanity Guatemala (HFHGT). This project consists of water filters and latrines for 122 families in the Caserío Ixcamal community in San Marcos. The project benefits an estimated 610 individuals.

Caserío Ixcamal is located in the highlands of San Marcos, approximately 30 kilometers from the central city of the department. The community lives in poverty, with low levels of development overall. Only a few families in the community have latrines, and even these are in bad condition, made only of slats of wood. As a result, most individuals do not use waste disposal systems.

As of the end of 2012, the project was not yet completed, however it is anticipated that it will be completed in early 2013. The national office staff of HFHG have expressed interest in continuing this collaboration for several additional communities throughout Guatemala where Habitat has a long and rich history.

UPCOMING WEFTA PROJECTS FOR 2013 AND BEYOND

BOLIVIA

The major effort regarding work in Bolivia for at least the first part of 2013 will be in assuring safe passage for the drill rig and related equipment to Suma Jayma, in El Alto, Bolivia. It is the belief of the Suma Jayma staff that such well drilling services would be of tremendous service to communities throughout the region and have the added benefit of creating a sustainable work model for their organization, which is in the interest of everyone.

WEFTA intends to continue funding community water systems in partnership with Suma Jayma, and we'll be dedicating efforts to evaluating how we can best assist rural communities affected by mining activities in the Oruro region of Bolivia. We will also continue to support the continuing education of key Suma Jayma staff.



PERU

Representatives of WEFTA are in communication with local authorities in the Urubamba Valley, most notably the mayor of Urubamba, the provincial capital. The mayor has expressed great interest in working with WEFTA in the development of wastewater treatment alternatives that can be implemented in communities up and down the river, obviously including the town of Urubamba. WEFTA will be working with the officials from Urubamba as well as their colleagues in the smaller neighboring villages, in the development of a preliminary engineering report which will explore the feasible options available, and establish guidelines for the creation of a regional entity made up of potential stakeholders throughout the valley. A follow-up site visit will be required in 2013 to initiate this phase of development.

MEXICO

WEFTA intends to continue work in Chiapas, mostly in coordination with Kees Grootenboer, with whom we've coordinated successfully on several occasions. We also hope to open up channels of communication with Sabas Cruz of Skolta'el Yu'un Jlumaltic (SYJAC), a Mexican NGO based out of San Cristobal de las Casas. We'll be making site visits to all past projects in Chiapas in 2013 and hope to continue to fund more water and sanitation projects in the region.

HONDURAS

We intend to continue to develop close ties with the staff of Save the Children Honduras as well as Mr. Enrique Lozano, a local engineer who has devoted countless volunteer hours to the success of a few projects in the Intibuca region of Honduras, especially the large El Maneadero project.

SUMMARY FINANCIAL REPORT FOR 2012

WEFTA has been fortunate over the last year to receive very generous donations from other organizations and individuals. The organization continues to be able to rely on the countless hours provided by our volunteer professionals that make the very important site visits each year to the communities where we work.

Below is a list of key contributions followed by a cash flow summary for 2012.

- ***Grant from the Wallace Genetic Foundation***

The Wallace Genetic Foundation has continued to provide ongoing support to cover the operational expenses related to running WEFTA, especially the costs of site visits as well as the administrative support for tracking budgets and donations, and coordinating with our partner organizations, donors, and the beneficiary communities who ultimately receive the assistance they need to meet their water and sanitation needs. A grant of \$50,000 was received in July of 2012.

- ***Grant from Waterlines***

WEFTA received a \$35,000 grant from Waterlines in September of 2012 to cover the cost of the Ixcamal latrines and water filtration project in Guatemala, as well as the cost of the upcoming site visits planned for 2013.



- **Contribution from individuals and matching grants**

Throughout 2012 WEFTA received several donations from individuals, mostly in support of the fundraising efforts orchestrated by Jason Gehrig, of the board of directors, related to the purchase and shipping of the well drill rig to Bolivia.

- **Contribution from Souder, Miller & Associates**

In addition to the time donated by a number of individuals, Souder, Miller & Associates (SMA) has provided the administrative personnel and material necessary for the operation of WEFTA. SMA has invoiced WEFTA for the direct costs of such services, but has covered all the associated indirect costs such as benefits for personnel, all equipment and materials such as computers, office space and infrastructure required by the organization. The success of WEFTA is due in large part to the continued commitment on the part SMA to support the work of WEFTA.

- **Banking Activity in 2012**

Beginning Balance (1/1/2012)	\$ 93,801.98
Donations Received:	
individual donations received first quarter of 2012	\$ 58,871.00
individual donations received second quarter of 2012	\$ 3,850.00
individual donations received third quarter of 2012	\$ 3,403.00
individual donations received fourth quarter of 2012	\$ 13,528.00
Wallace Genetic Foundation grant	\$ 50,000.00
Waterlines grant	\$ 35,000.00
Total of Donations Received:	\$ 164,652.00
Program Expenses:	
transfer to Suma Jayma (drill training, continuing ed.)	\$ 4,128.09
transfer to Save the Children Honduras (El Maneadero)	\$ 8,159.04
transfer to water testing lab in Honduras (Yamaranguila)	\$ 1,011.09
transfer to Suma Jayma (Cullucachi Phase 2)	\$ 10,860.09
wire transfer to Suma Jayma (Cullana Tije, Titin Jawira)	\$ 19,395.09
transfer to Save the Children Honduras (La Union)	\$ 3,131.09
transfer to Chiapas (Miguel Hidalgo balance)	\$ 1,648.09
transfer to Habitat Guatemala (Ixcamal)	\$ 20,027.04
transfer to Suma Jayma (Parco)	\$ 12,834.09
travel expenses for WEFTA volunteers to Colombia	\$ 3,848.78
travel expenses for WEFTA volunteer to Peru	\$ 1,753.87
travel expenses for WEFTA volunteer to Guatemala	\$ 1,109.50
travel expenses for WEFTA volunteer to Honduras	\$ 763.70
purchase of drill rig	\$ 20,000.00
well drilling equipment	\$ 9,907.17
invoice from SMA for operational expenses (6/1/11 - 12/31/11)	\$ 11,765.21
invoice from SMA for operational expenses (1/1/12 - 7/31/12)	\$ 17,135.00
resource development consultant	\$ 18,160.00
board meeting expenses	\$ 838.80
misc. expenses	\$ 310.00
Total of Program Expenses:	\$ 166,785.74
Ending Balance (12/31/2012)	\$ 91,668.24



Notes:

\$ 34,637	Balance of grants from Wallace Genetic Foundation for operational expenses
\$ 3,600	Balance of grant received for Habitat Urubamba wastewater system (\$6,100 - \$2,500)
\$ 11,401	Balance of funds from individual yet to be designated to a project
\$ 7,406	Ford Foundation matching grant designated for Chiapas projects (\$9,000 - \$1,594)
\$ 16,014	Balance of funds raised toward Suma Jayma drill rig (see explanation below)
\$ 15,000	Balance of Waterlines grant designated to site visits of past Waterlines projects
\$ 88,058	Total of Designated Funds Received, Not Yet Spent
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\$ 91,668	Current total in bank account
\$ 88,058	Total of designated funds not yet spent
\$ 3,610	Balance of Undesignated Funds Available
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\$ 45,921	Funds raised so far toward drilling rig project
\$ 29,907	Funds spent so far on drilling rig project
\$ 16,014	Balance

GOALS FOR 2013

- *Assist Suma Jayma, our Bolivian partner NGO, with acquisition of well drilling equipment and continuing education*

It is in the interests of WEFTA that our partner NGO in Bolivia, Suma Jayma, creates a sustainable model for itself that will enable it to grow and be less reliant on donations from abroad. The capacity to drill and complete wells with such well drilling equipment would open up new possibilities for the efforts of both organizations in finding safe and reliable sources of water for the poor indigenous rural communities throughout the altiplano region. WEFTA has raised funds to purchase the needed rig and make key improvements. The next step is to coordinate the shipping of the rig to Bolivia.

- *Work with local and national partners in Urubamba River Valley with regional wastewater treatment initiative*

This is an exciting and potentially very impactful initiative to address the deteriorating environmental conditions within a defined watershed in Peru. The effort will involve the development of a coalition of stakeholders within the Urubamba River Valley who all have vested interests in sustainable development and the health of the local environment, specifically addressing the water quality of the Urubamba River. WEFTA volunteers will make site visits to the valley in 2012 to begin this effort in earnest and create the partnerships that will be necessary for this ambitious project to be a success.

- *‘The Great Circuit Ride of 2013’*

At the special meeting held on December 17, 2012, it was agreed that 2013 would be a year in which we would focus on returning to past projects and evaluating the status of each. The goal would be to learn from what has gone right and what has not. The goal related to these site visits should include an evaluation of what the problems/deficiencies are, how they can be fixed and who is responsible, a timeline for repairs, and plan for funding the needed repairs.



- ***Develop role of WEFTA in technical assistance capacity***

In 2013 we seek to promote the potential role of WEFTA with other local and international partners in providing technical review of proposed projects and even conceptual and final design development for solutions, considering the latest technologies available but always keeping in mind the appropriateness for the setting.

Instead of viewing WEFTA mostly as a funding source of water and wastewater projects, we should also promote our capacity to provide the technical review necessary to ensure any proposed project is based on solid criteria and that the proposed design represents the best option to the community, to the local and international NGO's involved, and the funders of the project. We have recently been able to see WEFTA play this role during recent site visits to Peru, Colombia and Bolivia.

WEFTA Board of Directors:

- Peter Fant, PE
- Lou Harrington
- Scott Rogers, PE
- Blanca Surgeon
- Jason Gehrig, PE

