



WATER ENGINEERS FOR THE AMERICAS



2011 YEAR END REPORT

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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 several 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. In 2011 the Wallace Genetic Foundation agreed to support a new initiative for WEFTA in the hiring of a resource development expert that we hope will help WEFTA create an ever broader base of support, not just for project funding but also to cover the operational expenses of the organization. In the fall of 2011 we welcomed Jeff Abbott to the team and hope that his efforts in promoting the work of WEFTA and contacts with foundations and other potential funding sources will lead to new sources of revenue to allow for continued growth of the organization.

Jeff’s wife Holly has also volunteered to help with the development of a new website as well as other promotional material. To that end, Holly and other volunteers developed a new logo which was adopted in 2011. We believe that this new logo does a good job of capturing the essence and energy of WEFTA. A new website will help in getting across the nature of the work of WEFTA to anyone interested in knowing more about what we do, how we work and who we serve.

With the ongoing support from Souder, Miller & Associate, 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 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 NGO’s, especially local in-country NGO’s 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 2011

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 (www.WEFTA.net).

- ***Trip to Panama by WEFTA volunteers Brent Adams and Anne Englert***

In January of 2011 Brent and Anne traveled to Panama along with other volunteers from our sister NGO Waterlines. They were also accompanied by in-country Peace Corps personnel who have been key allies in the work being done in Panama. These projects are being funded directly by Waterlines and our participation in making these site visits was strictly in support of Waterlines.

Approximately 20 communities were visited. The condition of the various water systems ranged from needing improvements to working smoothly. Several studies were assigned to Nicolas Arcia, our local Panamanian construction expert, for potential future water projects. The Peace Corps continues to be a great and valuable partner in the implementation of Panama water projects and now more than ever with the “circuit rider” program in place. Based on the trip, a few observations and recommendations were made and are provided at the end of trip report that can be found on the WEFTA website.



- ***Trip to Colombia by Andrew Robertson***

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. WEFTA hopes to have a formal proposal for the proposed project in 2012 and begin to assist in the search for funding to make the project possible.

Andrew has also been working with other communities in the region with their water systems. In some cases his work has consisted of technical advice regarding how to improve on what already exists, and in other cases the development of alternative methods of collecting and treating water to be used for consumption. These projects have been funded in great part by Lutheran World Relief, and coordinated locally by a Colombian NGO by the name of Corporación Desarrollo Solidario, whose representatives have enthusiastically thanked Andrew for his support and guidance as the proposed projects are developed. These organizations had requested assistance from WEFTA in the form of technical expertise in the evaluation of the needs at each location where the organizations have been working, as well as a study of alternative design solutions.



- ***Trip to Mexico by Ramon Lucero and Justin Logan***

In November of 2011, Ramon and Justin traveled to Chiapas, Mexico and met up with Kees Grotenboer, a Dutch architect who lives in San Cristobal de las Casas and has been playing a key role in the design and implementation of projects in the region for years. Kees took them to specifically assess some past projects and to evaluate the progress being made on the large Miguel Hidalgo water system project.

Ramon and Justin visited the Hospital San Carlos in the rural town of Altamirano where Waterlines assisted with funding of the hospital’s wastewater collection, treatment and disposal system several years ago. This system failed a few years ago and the sisters who run the hospital, as well as Kees, have been very interested in finding out what to do about the system, whether to either salvage it or abandon it and construct something completely new. Justin was able to assess what they have and where he believes the system failed. He believes that the existing infrastructure, for the most part, can be salvaged but repurposed to a certain extent. His recommendations will be made available to Kees and the administrators of the hospital.



They also visited the community of Chum Cerro where WEFTA assisted with the construction of a community water system in 2010 and latrines at each home site in 2011. These structures are referred to by the locals as latrines but they are really a type of concrete septic tank with a toilet and shower installed over them. According to Justin, the system is “very robust and conceptually a very good approach in these communities. My opinion is that individual house facilities will be best at Chum Cerro if the funds can be raised, since some houses already have them. However, at the other communities, the larger scale facilities that could serve groups of homes will be the most cost effective.” The final trip report will include such recommendations.

Upon visiting the large water system project in the Zapatista community of Miguel Hidalgo, Ramon and Justin were able to witness the ongoing construction of the water system that will serve 150 homes and a total population of approximately 1,750. Ramon stated that “members of the community were greatly appreciative of the new water system, stating that water piped directly from the spring would immediately have a positive health effect on the infants and elderly and reduce the amount of hard work of bringing water from the arroyo.” More on this project can be found later in this report and on the WEFTA website (www.WEFTA.net).



- ***Trip to Bolivia by Scott McKittrick***

In July of 2011 Scott, a hydrogeologist with Souder, Miller & Associates, was able to make a trip to Bolivia to specifically visit several communities that have been affected by nearby mining activities. WEFTA was invited by local NGOs as well as a Belgian NGO to provide technical support in the evaluation of the existing situation and assessment of what alternatives are available in assuring these communities have access to a safe and reliable drinking water source.

Scott was also able to visit some past and ongoing Suma Jayma-organized projects in the altiplano region of Bolivia. A very complete and detailed report of what Scott found and recommendations for moving forward is available on the WEFTA website.



WEFTA PROJECTS OF 2011

The following projects were funded and completed in 2011. Detailed final reports and accounting for each are available upon request.

- ***Chum Cerro Latrines Project in Chiapas, Mexico***

The large Chum Cerro project in a remote corner of the State of Chiapas, Mexico was completed in early 2010. Upon completion of the water system, fifteen of the families of Chum Cerro requested assistance with the installation of latrines at each home. Via a donation from one individual and a matching grant from the Ford Foundation, WEFTA was able to provide the funding for the construction of combination latrine/shower facilities at individual home sites.

Ramon Lucero, a WEFTA volunteer visited the site in late 2011 along with Justin Logan, had the following observation in the subsequent trip report: “While construction of the concrete septic tanks was expensive due to the high cost of cement, labor and transportation of materials into the community, the combination of the new water system and the latrines offer a higher quality of life from a sanitary and health perspective.” For more information related to this project, refer to the relevant trip report found on the WEFTA website.



- ***Miguel Hidalgo Project in Chiapas, Mexico***

Miguel Hidalgo is situated on the edge of the Jatate River, within the Montes Azules Reserve, not far from the spectacular Lake Miramar in Chiapas. This project was made possible by the tireless efforts of Kees Grotenboer on behalf of the people of the community. The locals clearly feel much affection and respect for Kees, and showed their enthusiasm as expressed by Kees in his own words via a progress report he presented once the project was underway: “The two people in charge of the water project always assisted our work with a large crew of helpers, we soon noticed how kind and exquisitely polite everybody was, and how serious and efficient every task was accomplished, always with joy and discipline at the same time, they would be no Mayas if they did not brake the work now and then with a joke and good laughter.”



The goal of the project was to construct a system that allows the abundant and clean water from the spring to reach a large water tank in the village by gravity, and from there the water will be distributed to the 150 houses ... each of them with a tap.

The tank was built on a high spot of the village and has a capacity of 75,000 liters. The highly skilled Maestro Jose Paniagua provided the masonry work on the project as well as all the other aspects of the work, like the building of the spring box and installation of the waterlines, connections, and tap stands. Invaluable technical support was provided by Alvaro Farias from UCL Engineering at University College London. Alvaro performed the initial and follow-up topographic studies of the site and also helped the community with gathering all the requisite information to respond to concerns presented by WEFTA.



During the construction of the spring catchment site, Kees noted: “A very special place to work, with our feet in the cold crystal clear stream, the spring emerging from rock formations surrounded by exuberant tropical vegetation, it was a great joy to experience that part of the work in an almost magical context.”

For more on this project, please go to the WEFTA website where this project will be featured.

- ***Geotechnical Investigations at San Cayetano, Colombia***

Andrew Robertson has made multiple trips to the community of San Cayetano and has been coordinating activities with the local leadership as well as with CDS (Corporación Desarrollo Solidario), a Colombian NGO. Andrew's preliminary findings, based on data he has collected on the ground as well as after consulting with the locals, indicate that the best option available to the community will be a retention structure (dam) on the river that runs by the community, along with all related infrastructure for treatment, storage and distribution. Before moving ahead with any final design work for this structure however, it is imperative that the proper geotechnical studies are performed and data gathered to formally assess the viability of the construction of a dam and to ultimately know how to design such a structure so that it can withstand the anticipated forces. Clearly we don't want to base any final design decisions on incomplete data. Andrew and the local leadership had originally negotiated a co-funding deal between WEFTA and the Municipality of San Juan Nepomuceno whereby each party committed to raise half of the approximately \$10,000 total cost of performing these studies and analyzing the data. The mayor of San Juan Nepomuceno has since reneged on that promise. But as Andrew later commented, this could perhaps be a blessing in disguise. While meeting with the community leaders it was concluded that the community of San Cayetano would not wait for the politicians to provide assistance, but instead would rather begin a local fund-raising campaign to raise the \$5,000 needed to match the \$5,000 to be provided by WEFTA. This would entail the local water board going door to door throughout the community of San Cayetano and collecting about \$2.50 from each of the approximately 2,000 households that make up the community. This will be a great measure of the commitment of the locals in organizing such a fund-raising drive as well as their commitment to take ownership of the project and see it through.

WEFTA utilized \$4,575 of the grant offered by Waterlines in 2011 to cover the match portion of this work. Based on Andrew's commitment to this project and shown by his multiple trips to the region and hard work, as well as the enthusiasm he has felt on the part of the locals for this project, as well as personnel from CDS, we're confident that this could be a tremendous project for WEFTA to be involved with.

San Cayetano, Colombia

Number of families (est):	2,000
Total population (est.):	8,000
Total cost of geotechnical studies:	\$ 10,000
Local community support in cash:	\$ 5,000
Support from other sources:	\$ 425
Support from WEFTA:	\$ 4,575

- ***Phase 2 of the Machacamarca, Bolivia project***

This project is the largest project that WEFTA has been involved in to date. The project benefits over 200 families with individual tap-stands at each home. Besides the relatively high cost, other challenges to be met included great elevation differential and the fact that the water source was a surface water source which would require special attention regarding water quality issues.

The Municipality of Pucarani assisted with the construction of a large water storage reservoir that would be integral to the final system. All of the locals provided all of the non-skilled labor required to trench for the waterline and excavation and backfill at the tank site and other infrastructure sites.



The project was broken into two phases for funding purposes. A private donor provided the needed funding to get the first phase completed. WEFTA received a donation from Waterlines in 2011 that made it possible to complete the final phase.

Contribution from Local Community:	\$ 3,800
Contribution from Local Government:	\$ 31,200
Phase 1 funding from WEFTA:	\$ 15,000
Phase 2 funding from WEFTA:	\$ 17,400
<u>Total actual project cost:</u>	<u>\$ 67,400</u>

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

The original project was constructed by the Municipality of Pucarani many years ago, according to the local authorities of the community. The system consisted of an elevated tank filled by a pump, but evidently the pump burned out after only about six months of service. The idea with this new proposal was to tie into the new Machacamarca system and extend service to each of the 38 homes that make up the Viruyo community, thus avoiding the need to artificially pressurize the community water system.

This project was completed in September of 2011. It basically took advantage of the nearby Machacamarca project by tying into the infrastructure of the new recently completed system. It included extensive lateral line construction as well as 39 tap-stands (one at each of the 38 homes that make up the community and one at the community center).

Contribution from Local Community (cash):	\$ 893
Contribution from Local Community (in-kind):	\$ 3,548
<u>Amount provided by WEFTA:</u>	<u>\$ 13,861</u>
Total Project Cost:	\$ 18,302



- ***Comanche Chico, Bolivia (community water system)***

Suma Jayma prepared the original study for the Municipality of Comanche in early 2008. Later, that same year, the Municipality budgeted for the construction of a portion of the infrastructure (tank, spring catchment structure, pressure break tanks), and subsequently for the installation of main trunk-lines, all according to the original budget. The local authorities solicited support from WEFTA for completion of a part of the branch lines, construction of tap-stands at each home, as well as some river crossings which Suma Jayma personnel verified. The local authorities did not have the resources needed to complete this project.

The municipality completed construction of a water tank and network, but the network needed some repairs and the system was lacking the individual services to homes. The municipality contributed most of the funds for the first phase of the project. The community provided manual labor as well as local materials.

Thanks to a grant from Waterlines, WEFTA was able to provide the funding to allow for completion of the project as follows:

Number of families:	39
Total population (est.):	195
Total cost:	\$ 50,440
Total cost in cash:	\$ 30,645
Municipal support in cash:	\$ 15,650
Community support in cash:	\$ 871
<u>Community support in-kind:</u>	<u>\$ 19,795</u>
Support from WEFTA	\$ 14,124



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

Huanocollo is a remote traditional Aymará pueblo in the municipality of Comanche. The need had to do with purchasing piping to construct water services to homes, some of which are 500 to 600 meters from the main network. The community committed to donate the manual labor to install the lines and hopes for a well-designed and constructed project to complete domestic installations. There are 35 homes to be reached with the new system.

A transfer was made to Suma Jayma at the end of 2011 and it is anticipated that construction should be completed in early 2012.

Contribution from Local Government (cash):	\$ 6,000
Contribution from Local Community (cash):	\$ 521
Contribution from Local Community (in-kind):	\$ 4,200
<u>Amount requested of WEFTA:</u>	<u>\$ 13,747</u>
Total Project Cost:	\$ 24,468

- ***Continuing education and training for Suma Jayma staff***

WEFTA received a request from the Suma Jayma staff for assistance with the cost of continuing education and training of their personnel, especially with 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.

After several conversations with Suma Jayma, it was agreed that the most prudent way to move forward with such assistance would be in the way of annual installments and subsequent reporting of how such studies are progressing. 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 second year of this collaboration.

- ***Wastewater system equipment in Urubamba, Peru***

In late 2011 WEFTA received word from the Habitat community in Urubamba, Peru that one of the septic systems installed several years ago had begun to back up. The local water committee asked if WEFTA would be able to help them purchase a 4” motorized pump to clean out the tanks and get the system back online.

After requesting several quotes from vendors of such equipment in the Urubamba area, and input from our local contact in Urubamba, Linda Ochoa, WEFTA made the funds available to the community for the purchase of the pump (\$800). It is hoped that with the pump and ongoing maintenance of the septic system in the community, the system could once again function as it has for several years. WEFTA volunteers will be visiting the site in 2012 and can help assure the community has a long term and viable operations and maintenance plan for the system.



UPCOMING WEFTA PROJECTS FOR 2012 AND BEYOND

BOLIVIA

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

This project consists of the construction of individual hand pumps at the homes of each community member. The topography and distance between homes makes a community delivery system impractical. The project would serve 31 families. The cost breakdown is as follows:

Contribution from local community:	\$ 692
Contribution from local government:	\$ 750
Amount requested of WEFTA:	\$ 10,506
<u>In-kind contribution from local community:</u>	<u>\$ 3,136 (labor + local materials)</u>
Total amount required to complete the project:	\$ 15,084

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

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

Contribution from local community:	\$ 469
Contribution from local government:	\$ 620
Amount requested of WEFTA:	\$ 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

- ***Munaypata, Bolivia (community water system - manual hand pumps)***

This project consists of the construction of individual hand pumps at the homes of each community member. The topography and distance between homes makes a community delivery system impractical. The project would serve 22 families. The cost breakdown is as follows:

Contribution from local community:	\$ 491
Contribution from local government:	\$ 630
Amount requested of WEFTA:	\$ 7,728
<u>In-kind contribution from local community:</u>	<u>\$ 2,226 (labor + local materials)</u>
Total amount required to complete the project:	\$ 11,075

- ***San Pablo Ninamarca, Bolivia (community water system)***

This project consists of the construction of a community water system that will serve 24 families. The estimated project budget is as follows:

Contribution from local community:	\$ 357
Contribution from local government:	\$ 6,000
Amount requested of WEFTA:	\$ 9,200
<u>In-kind contribution from local community:</u>	<u>\$ 3,890 (labor + local materials)</u>
Total amount required to complete the project:	\$ 19,447



- ***Villa Porvenir, Bolivia (community water system)***

This project consists of the construction of a community water system that will serve 31 families. The estimated project budget is as follows:

Contribution from local community:	\$ 692
Contribution from local government:	\$ 15,650
Amount requested of WEFTA:	\$ 12,000
<u>In-kind contribution from local community:</u>	<u>\$ 9,500 (labor + local materials)</u>
Total amount required to complete the project:	\$ 37,842

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

This project consists of the construction of a community water system that will serve 19 families. The estimated project budget is as follows:

Contribution from local community:	\$ 424
Contribution from local government:	\$ 750
Amount requested of WEFTA:	\$ 10,000
<u>In-kind contribution from local community:</u>	<u>\$ 50,000 (labor + local materials)</u>
Total amount required to complete the project:	\$ 61,174

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

This very large project consists of the construction of a community water system that will serve 250 families, and total estimated population of 1,250. The estimated project budget is as follows:

Contribution from local community:	\$ 5,580
Contribution from local government:	\$ 19,345
Amount requested of WEFTA:	\$ 24,928
<u>In-kind contribution from local community:</u>	<u>\$ 10,500 (labor + local materials)</u>
Total amount required to complete the project:	\$ 60,353

- ***Well Drilling Equipment for Suma Jayma (drill rig)***

In an effort to become more self-sufficient and to create a sustainable model for development, Suma Jayma has requested assistance from WEFTA with the purchase of a well drilling rig. 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 providing the needed income to allow the organization to generate revenue and keep their staff occupied, especially while awaiting funding for the projects they're associated with.

It is still not clear what the total cost of such equipment will be nor the cost of shipping it to Bolivia. However the best option appears to be a used rig that the owner is willing to sell to WEFTA for \$20,000. Jason Gehrig has been working with Suma Jayma and some local contacts in Texas on what the best options are. WEFTA is reviewing these options with an emphasis on helping Suma Jayma find the safest and most viable solution. We hope to have a good idea of what this may entail soon and then pursue funding options to make this possible in 2012.



- ***Ongoing Technical Development of Suma Jayma Staff***

The staff at Suma Jayma is requesting financial assistance that will make it possible for four staff members to further develop their technical expertise in the design and implementation of water and wastewater systems. The total estimated cost of the proposed studies is \$9,170 over a three-and-a-half year period, of which the Suma Jayma team is requesting approximately \$7,000 from WEFTA and proposes to cover the other costs, mostly consisting of travel to and from the institutions where the coursework is given. As discussed earlier, WEFTA has been able to assist with a first installment and hopes to be able to help Suma Jayma find the necessary funds to cover the remaining cost of these studies.

<u>Suma Jayma Staff Member</u>	<u>Total</u>	<u>WEFTA</u>	<u>In-Kind (mostly travel)</u>
Jaime Rosa Mamani	\$ 5,170	\$ 4,290	\$ 880
Jorge Rosas Mamani	\$ 1,500	\$ 1,900	\$ 600
Edgar Vargas Alanoca	\$ 1,500	\$ 900	\$ 600
<u>Braulio Rojas Mamani</u>	<u>\$ 1,000</u>	<u>\$ 600</u>	<u>\$ 400</u>
Totals:	\$ 9,170	\$ 6,990	\$ 2,180

PERU

- ***Habitat community in Urubamba, Peru (wastewater system improvements)***

This project consists of improvements to the present disposal system. In late 2011 the percolation pits constructed as part of the original system became fouled and required cleaning. As discussed earlier, WEFTA provided the funds necessary to purchase a pump to clean the septic tanks and percolation pits. A site visit will be made in 2012 to evaluate the situation. We will also have to evaluate the need for assistance with the final tie-in of the new water storage tank and final completion of the tank with controls and valves.

Funding for this project has already been secured and we are awaiting final coordination with the community to move forward. We expect that Linda Ochoa will again play a key role in seeing the project move forward and assisting with the handling of finances. She has played an invaluable role for WEFTA in the region for many years.

- ***Colegio Cristo Rey, Tacna, Peru (wastewater system)***

This project was presented in the trip report prepared by Lou Harrington and Pete Fant in 2010. Since those initial conversations with representatives of the school, the man behind the project, Hermano Cardona, S.J., has been reassigned to Lima. A follow up site visit will be required in 2012 to assess whether the interest and capacity to see the project through still exists. Ultimately, what will be required of WEFTA basically consists of providing technical review services to help the school administrator know what other options are available to him when it comes to constructing the model wastewater treatment and reuse project.

- ***Coruca, Sama Inclan, Peru (community water treatment system)***

Locals from Tacna shared with WEFTA volunteers in 2010 the reality in which a poor, farming community lives up the canyon in an adjacent watershed to that of Tacna. Evidently they have very elevated levels of heavy metals in their drinking water such as arsenic, boron, lead, etc. This community is much too small and poor to be able to do anything on their own. We are awaiting a formal proposal from the local leadership in Coruca regarding potential assistance with providing ideas and suggestions for treatment of drinking water. If contact is made, a site visit by WEFTA volunteers will be made in 2012 to assess the situation.



- ***Urubamba Valley Wastewater Initiative (wastewater treatment and disposal)***

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 provincial mayor of Urubamba as well as his 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 2012 to initiate this phase of development.

MEXICO

- ***Chum Cerro, Chiapas (final latrines)***

There are a few more homes within the Chum Cerro community that require latrines. These families did not sign on to the original project due to doubts they had as to the finished product. Now that they've seen the systems completed and functioning properly, they've come to WEFTA asking that we consider providing funding for them also. We will coordinate with Kees on this final group of latrines/showers.

- ***Miguel Hidalgo, Chiapas (sanitation system)***

WEFTA has been asked to assist with development of a sanitation system for the community members. Initially Kees wondered if we could build the same latrine structures at each home. Due to the relatively high cost of these structures and much larger number of families to be served, we will probably have to look at other options, perhaps such as a few community or block facilities that can be shared by a number of families.

- ***San Jose del Carmen, Chiapas (five community water systems)***

WEFTA has been coordinating with Mr. Richard Flamer who has in turn been coordinating with local leaders from five rural communities near where he currently lives. The five communities include Cruz Cqantulan (15 families), Corralito (15 families), San Juan Bautista (12 families) San Jose del Carmen (45 families) and San Jose Buena Vista (105 families). The area where they are located is on a hillside, 10 kilometers outside of San Cristobal de Las Casas.

At the moment, there is no potable water for any of these communities. Drainage is simply directed downhill with an outhouse dug for each home. What water they have is collected from rainwater in primitive cisterns dug out and lined with plastic sheeting. Rainwater is sufficient for the crops for most years. There are no springs or wells within walking distance of the area. The communities are asking for help in drawing up a plan, and once the plan is complete they would look for funds for the materials and than proceed with building the collection tanks. The volunteer engineer to make the site visits to these communities will certainly have a full plate when it comes to developing potential solutions.



HONDURAS

- *Barrio El Maneadero, Intibuca, Honduras (peri-urban water system)*

This project is a large project located on the outskirts of the city of Intibuca. The community is relatively large with a total population of approximately 2,000. The amount requested of WEFTA is just under \$50,000 which poses a special challenge for the organization. Toward the end of 2011 we agreed to provide funding for development of new infrastructure at the water source and new main trunk line that will bring water to the community. This funding will be made available in early 2012. For the complete build-out, we will be coordinating with the representatives of Save the Children Honduras on finding ways to share the cost of the proposed project with other institutions, both local and perhaps international.

COLOMBIA

- *San Cayetano, Colombia (dam structure, water treatment and distribution system)*

Andrew Robertson has been working extensively with several local representatives in the development of a large and relatively complex project in the San Cayetano region that will benefit many homes that presently have no safe and reliable source of water. The nature of this project is discussed further in the 'Site Visits' portion of this report. As this project develops and begins to take shape, both in terms of the technical approach and final cost, WEFTA will begin the search for funding together with the local representatives.

ECUADOR

- *La Pita, Ecuador (community water system)*

WEFTA has been coordinating with a local Peace Corps volunteer in the community, Colleen Kenny, who has helped the community make contact with WEFTA and complete the initial questionnaire. Colleen and the local leadership are currently working with local government officials to determine to what extent the project could be funded with local funds. This project will require a site visit from a WEFTA volunteer to confirm the need and proposed community water system. The preliminary cost estimate for this project is \$24,000.

NICARAGUA

- *Fonseca, Siuna, Nicaragua (community water system)*

The community has been coordinating with another NGO by the name of Bridges to Community who has assisted with preliminary work on the proposed water system. The portion of the work that they are seeking assistance from WEFTA for consists of bringing clean water to the remaining 30 homes of the community. The community has committed to providing all the labor needed to dig the ditches for the waterline, lay the piping and install a spigot outside each home as well as at the school and the church. WEFTA will continue coordination with Bridges to Community leadership in seeking funding for this important project. This final phase of the project has an estimated cost of \$15,000.



SUMMARY FINANCIAL REPORT FOR 2011

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. The Wallace Genetic Foundation has continued to provide ongoing support to cover much of 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 and the beneficiary communities who ultimately receive the assistance they need to meet their water and sanitation needs. WEFTA received a \$25,000 grant from the Wallace Genetic Foundation for these operational expenses in 2011, plus an additional \$25,000 grant to fund the resource development initiative implemented by WEFTA beginning in late 2011.

Below is a list of key contributions followed by a cash flow summary for 2011.

- ***Contributions from Waterlines***

WEFTA received a \$50,000 grant from Waterlines in July of 2011, to fund the Machacamarca Phase 2, Viruyo and Comanche Chico projects in Bolivia, as well as the San Cayetano, Colombia project.

- ***Contribution from individuals and matching grants***

Throughout 2011 WEFTA received several donations from individuals, from \$400 to two very large grants of \$15,000. We received donations from one individual amounting to \$13,000 to fund the ongoing work in Chiapas, Mexico which were followed by two matching grants from the Ford Foundation at a 3:1 ratio, resulting in an additional \$39,000. All of these funds are destined to support our work in Chiapas.

- ***Donation of computer equipment by HP and private donation***

One of our key supporters who works for Hewlett-Packard in California, provided the funds necessary to take advantage of a computer equipment matching grant program that HP offers its employees to benefit qualifying non-profit organizations such as WEFTA. Through that program WEFTA will receive laptop computers, printers, projectors and other equipment to support the work of the organization.

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

In addition to the time donated by a number of individuals, Souder, Miller & Associates (SMA) has provided all of 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 all required infrastructure required by the organization. The success of WEFTA is due in large part to the continued commitment on the part of the company and individuals at SMA to support the work of WEFTA, both in terms of providing technical and managerial expertise, as well as covering a large portion of travel expenses of its employees willing to donate their time to travel to Latin America and work on projects.



• **Banking Activity in 2011**

Date	Explanation of Transaction	Withdrawals	Deposits	Balance
1/1/2011	beginning balance			\$ 33,833.82
1/5/2011	donation from individual		\$ 500.00	\$ 34,333.82
1/5/2011	HP Foundation matching grant		\$ 400.00	\$ 34,733.82
2/2/2011	travel expenses for WEFTA volunteer to Colombia	\$ 1,029.60		\$ 33,704.22
2/25/2011	in-country travel expenses in Panama for volunteers	\$ 459.63		\$ 33,244.59
2/25/2011	transfer to CDS in Colombia (San Cayetano + wire fees)	\$ 5,554.09		\$ 27,690.50
3/9/2011	in-country travel expenses in Colombia for volunteer	\$ 218.00		\$ 27,472.50
3/11/2011	NM Public Regulations Commission (filing fee)	\$ 10.00		\$ 27,462.50
3/15/2011	donation from individual (Chum Cerro latrines)		\$ 10,000.00	\$ 37,462.50
3/15/2011	transfer to Chiapas (Chum Cerro latrines + wire fees)	\$ 10,054.09		\$ 27,408.41
4/25/2011	donation from individual (Chum Cerro latrines - complete)		\$ 3,000.00	\$ 30,408.41
5/3/2011	travel expenses related to board meeting	\$ 322.60		\$ 30,085.81
5/5/2011	transfer to Chiapas (Chum Cerro latrines)	\$ 3,054.09		\$ 27,031.72
5/5/2011	transfer to Suma Jayma (Machacamarcas - P2 + wire fees)	\$ 11,359.09		\$ 15,672.63
5/17/2011	donation from Ford Foundation (Miguel Hidalgo)		\$ 30,000.00	\$ 45,672.63
7/7/2011	transfer to Chiapas (Miguel Hidalgo + wire transfer fees)	\$ 30,054.09		\$ 15,618.54
7/15/2011	travel expenses to Bolivia for WEFTA volunteer	\$ 1,499.60		\$ 14,118.94
7/25/2011	donation from Waterlines		\$ 50,000.00	\$ 64,118.94
7/25/2011	donation from individual		\$ 15,000.00	\$ 79,118.94
8/4/2011	in-country travel expenses for volunteer in Bolivia	\$ 337.00		\$ 78,781.94
8/9/2011	transfer to Suma Jayma (Viruyo, cont. ed. + wire fees)	\$ 14,889.09		\$ 63,892.85
8/12/2011	donation from Ford Foundation (Miguel Hidalgo)		\$ 9,000.00	\$ 72,892.85
9/13/2011	invoice #1 from resource development consultant	\$ 2,200.00		\$ 70,692.85
9/20/2011	donation from individual (Suma Jayma well drill rig)		\$ 1,000.00	\$ 71,692.85
9/26/2011	Wallace Genetic Foundation grant		\$ 50,000.00	\$121,692.85
10/5/2011	transfer to Suma Jayma (\$14,124 for Comanche Chico)	\$ 14,124.00		\$107,568.85
11/1/2011	donation from individual		\$ 15,000.00	\$122,568.85
11/3/2011	travel expenses for WEFTA volunteer to Mexico	\$ 553.60		\$122,015.25
11/4/2011	SMA for operational expenses (1/1/11 - 5/30/11)	\$ 7,598.12		\$114,417.13
11/9/2011	travel expenses for WEFTA volunteer to Mexico	\$ 1,083.80		\$113,333.33
11/10/2011	invoice #2 from resource development consultant	\$ 1,180.00		\$112,153.33
11/30/2011	hosting service with Network Solutions for 3 years	\$ 316.17		\$111,837.16
12/6/2011	transfer to Suma Jayma (\$12,747 Huanocollo + wire fees)	\$ 12,801.09		\$ 99,036.07
12/16/2011	transfer to Urubamba, Peru (WW pump + wire fees)	\$ 2,554.09		\$ 96,481.98
12/19/2011	invoice #3 from resource development consultant	\$ 2,680.00		\$ 93,801.98
12/31/2011	ending balance			\$ 93,801.98

Of the remaining balance, the designated funding is as follows:

\$ 2,200	San Juan las Palmas, Chiapas, Mexico, water system project
\$ 2,132	Balance of original grant for Chiclayo, Peru project redirected to Yaribay, Bolivia (\$15,000 - \$12,868)
\$ 3,800	Habitat community in Urubamba, Peru, water storage system project
\$12,500	San Juan II, Usulután, El Salvador, water system project
\$ 3,600	Balance of grant received 10/28/10 for Habitat Urubamba wastewater system (\$6,100 - \$2,500)
\$ 9,000	Ford Foundation matching grant received 8/12/11 designated for Chiapas projects
\$16,279	Balance of donations from individuals designated to construction
\$40,755	Balance of WGF grant for operational expenses and resource development work as of 12/31/11

Note: The remaining balance of \$3,536 is undesignated funding received. The funds set aside for the first three projects listed above are to be redirected to another project in 2012.



GOALS FOR 2012

- ***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, create a sustainable model for itself that will enable them 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 began a fund raising campaign in late 2011 for this work and hopes to make this initiative a reality in 2012.

- ***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.

- ***Develop role of resource development position***

WEFTA will obviously continue the search for funding for the projects that our volunteers have had the opportunity to visit and confirm the feasibility and merits of. Clearly an expansion of WEFTA's donor base would help in this effort, and will involve a more focused effort in contacting other potential donors and sharing the mission and history of WEFTA. With the establishment of the role of resource development coordinator, WEFTA hopes to make a serious and concerted effort in growing our donor base and allowing for the healthy and sustainable growth of the organization.

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

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, and Jason Gehrig, PE

