

WATERLINES & WEFTA SPONSORED TRIP TO  
CHIAPAS, MEXICO

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Laguna Miramar  
CHIAPAS, MEXICO

**TRIP REPORT**

Related to Site Visits made by Ramon Lucero, Jr.  
to the Chiapas Region of Mexico

January 23 - February 6, 2009

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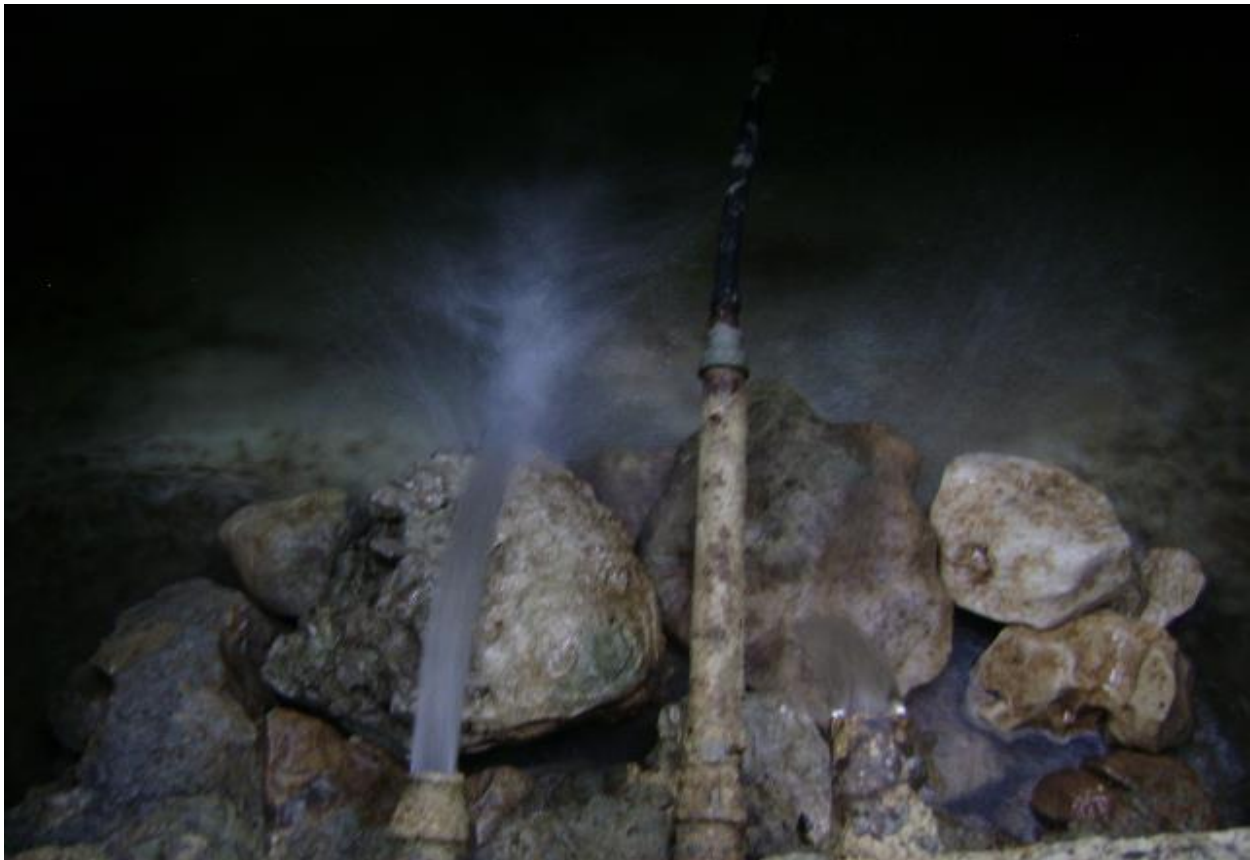
# WATERLINES & WEFTA SPONSORED TRIP TO CHIAPAS, MEXICO

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**Village:** Benito Juarez Miramar – Chiapas, Mexico

**Sponsor:** Waterlines

The water system in Benito Juarez was completed during the summer of 2008. Local authorities, Juan and Javier, were elected to take care of the water system for this year, and have done a very good job of providing maintenance to the spring catchment tank, waterline, air release valves, water storage tank and faucets at the homes. Although we did not have a bucket to measure the flow, the spring (manantial) produces an enormous amount of water; three two inch waterlines full to capacity.



Benito Juarez Manantial

During our visit, inspections were conducted on the spring catchment tank, waterlines, air release valves, water storage tank and faucets (tomas). Since the waterline between the manantial and the community is above ground, monthly inspections are important to insure that trees have not fallen on the waterline, that the waterline is covered to protect it from the sun and that the ties holding the waterline to the trees are not constricting the waterline.

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Based on concerns with puddles under the tomas, which can raise health concerns, some members of the community have taken measures to remedy the situation. In most cases members have built a six foot square cement pad under the toma, which solidifies the toma in place and diverts the water in different directions, although water still tends to puddle outside the cement pad. The most effective is a homemade wooden trough with a piece of polyethylene pipe to divert the water away from the home.



Benito Juarez girl standing on six foot square cement pad around toma



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Juan and Kees with homemade wooden trough

No longer a Zapatista community, Benito Juarez was once considered the ideal Zapatista community. Benito Juarez, Miramar is a very impressive community. Las Autoridades (the Authorities) elected every year to manage the different facets of the community dedicate their lives during the year to ensure that services to the community are being met. The Authorities are elected to manage the water system, health care, education, and a community cooperative. The cooperative serves two basic services; to sell miscellaneous products not typically found in the jungle, i.e.; pencils, candies, batteries, etc. and to raise money to be used for people that need medical attention. All decisions concerning the welfare of the people are made by consensus during community meetings attended by all men from the community.

Kees Grootenboer, a Dutch-Mexican architect and builder and the members from the community have an endearing relationship. Kees supervised construction of the project at Benito Juarez. He also designed and completed the water project at Las Perlas. Kees helps the community by providing miscellaneous parts for the water system, lots of photos and a home for people to stay in San Cristobal de las Casas when they are visiting the doctor, a trip nine hours long – 7 hours by car and 2 hours walking in dry conditions.

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Señoritas de Benito Juarez Miramar

**Village:** Laguna Chuncerro – Chiapas, Mexico

**Sponsor:** Seeking Sponsor

Laguna Chuncerro is a community divided by Zapatista and non-Zapatista families, which seem to get along well. There are approximately 20 families with a total population of approximately 200 people.

In order to gather data to prepare a cost estimate to complete a project, we took elevations of the spring, half-way between the spring and the community, at the river below the community and the community itself. In addition, we measured the distance from the spring to the community and took measurements from a proposed water storage tank location and the houses in the community. A separate document is attached with cost estimates based on the following data:



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Manantial elevation: 385 Meters

Community elevation: 366 Meters

Difference in elevation: 19 Meters

Distance between manantial and community: 2,520 Meters

Based on this information, we have concluded that is feasible to get water from the manantial to the community.



Laguna Chuncerro Manantial

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**Village:** Miguel Hidalgo – Chiapas, Mexico

**Sponsor:** Seeking Sponsor

Miguel Hidalgo is a Zapatista community with 150 houses and 1,750 people. The community is organized similar to a development in the suburbs of any major US city, although it is in the middle of the jungle, with the best mode of transportation to arrive in the community being a small motorized boat (lancha) on the Rio Jatate. Each house is on a 50 square meter piece of property, divided in blocks and separated by areas which could be classified as roads.

Similar to Chuncerro, in order to prepare cost estimate to build a water system, we took elevations of the manantial, the location of the proposed water storage tank and the community and measured the distance between the community, the water storage tank and the manantial. The attached cost estimates are based on the following data gathered during our visit:

Manantial elevation:	429 Meters
Proposed tank elevation:	396 Meters
Difference in elevation:	33 Meters
Community elevation:	368 Meters
Difference in elevation:	28 Meters

The distance between the manantial and the proposed water storage tank location is 1,600 meters and the distance from the water storage tank to the center of the community is 750 meters.



Miguel Hidalgo Manantial



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**Village:** San Juan las Palmas – Chiapas, Mexico

**Sponsor:** Seeking Sponsor

San Juan las Palmas is a Zapatista community located in the mountainous region northeast of the city of Ocosingo near the Mayan Archaeological Ruins of Tonina. There are 15 houses and approximately 150 inhabitants. In addition to the houses, there is a small school building, and small building for a church built with funds donated by Dr. Gregorio de Anda and his wife Dr. Aurora who work at the hospital in Altamirano. The community is approximately 1-1/2 hours walk from the nearest road.

This is the poorest community I visited during my trip. There seemed to be little food and a very poor waterhole, which doesn't run, is full of insects and shared with the horses. Unlike the communities in the jungle, the communities in the mountains do not get as much rainfall, which cuts down on the growing season. There are no running water springs only holes of water that are mostly stagnant and full of bugs. One of the leaders of the communities, a young man of approximately 17 years of age, explained the arduous trip he and his wife took to deliver their infant son, ill with diarrhea to the hospital in Altamirano. A trip that started by walking 1-1/2 hours to the nearest road and almost two hours by car, only to arrive at the hospital in Altamirano after dark with no place to stay. The infant son was treated at the hospital, but only after a long wait. The family slept within the confines of the hospital property, but outside exposed to the cold.



San Juan las Palmas Waterhole



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Similar to the previous communities, in order to prepare cost estimate to build a water system, we took elevations of the waterhole, the location of the proposed water storage tank and the community and measured the distance between the community, the water storage tank and the waterhole. The attached cost estimates are based on the following data gathered during our visit:

Waterhole elevation:	1,302 Meters
Proposed tank elevation:	1,293 Meters
Difference in elevation:	9 Meters
1 <sup>st</sup> house after tank elevation:	1,286 Meters
Last house after tank elevation:	1,255 Meters
Difference in elevation:	Between 7 and 38 Meters

The distance between the waterhole and the proposed water storage tank location is 235 meters and the distance from the water storage tank to the last house is 1,203 meters.

Because water in the hole never exceeds a certain level, a second option would be to dig and construct a hand dug well. Although a hand dug well would not deliver water to the individual homes, it would provide a method of better protecting their water source. The well could be constructed one of two ways; the first would be similar to the hand dug wells and hand pumps from the Altiplano of Bolivia and the second could be similar to the hand dug wells of New Mexico during the early 1900's, with a bucket, rope and pulley system. The hand dug wells would be relatively cheap in comparison to the construction of water tanks, waterlines and tomas. There is a second waterhole lower in elevation to the community where a second well could be constructed.

**Village: Jalisco/Sibaquil – Chiapas, Mexico**

**Sponsor: Seeking Sponsor. Previous Sponsor was the Seton Institute for \$7,000**

The community of Sibaquil is a Zapatista community of 110 families and approximately 1,000 inhabitants.

The community receives water from two springs located in the mountains above the community. During the dry season, there is insufficient flow from one of the springs, therefore for several months of the year, water is supplied to a single point to the center of the community. The second spring provides plenty of water the entire year, but because the spring is located at a lower elevation, the water from this spring doesn't reach the community. During our visit, water from the second spring was running out of a PVC pipe approximately 300 meters distance from the community. The community is requesting funding to build a pumping station, purchase a pump, an electrical transformer and rehabilitate an existing tank at the entrance of the community.

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Based on information from the water Authorities, an electrical transformer and an extension of the power lines would be needed to supply energy to the pump. Because Sibaquil is a Zapatista community, they do not accept power from the government owned and operated power supply, therefore I'm assuming they would tap the power supply illegally. They gave us a cost between \$15,000 and \$25,000 dolares to purchase the transformer. They will be emailing me the cost of the electrical wire to transfer power from the transformer to the pump. A full cost estimate to complete these improvements is attached.

Sibaquil also faces health concerns from raw sewage running in the nearby arroyo. Altamirano, approximately 20 minutes from Sibaquil dumps all their raw sewage into an arroyo that flows near Sibaquil. Members of the community stated that the smell and the mosquitoes are unbearable during the dry summer months.



Raw sewage in arroyo near Sibaquil



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**Village: San Javier – Chiapas, Mexico**

**Sponsor: Seeking Sponsor**

San Javier is a Zapatista community with 45 families and approximately 450 inhabitants. Families from San Javier are originally from Benito Juarez Miramar, who left after having disagreements among the community about the Zapatista movement. As with all disagreements, each side tells a different story. Although in speaking with both sides, it is evident that the separation of the community has been very hurtful to both sides, a separation that left fathers on one side and sons on the other side of the Zapatista movement.

San Javier currently gets their water from the community of Patate Nuevo, which is not a Zapatista community and is reluctant to continue giving water to San Javier. Water for Patate Nuevo comes from a region known as Las Palmas higher in the mountains approximately 16 km (approximately 10 miles) from the community. Members from San Javier also found someone in this high mountainous region who is willing to let San Javier pipe water from a river that runs through their property. Although there is plenty of water, there are many concerns for a project of this magnitude, one of them being the ability to execute a long term agreement between the private property owner, his descendents and the community of San Javier. Other concerns are the ability to divert water from the river, the high cost of running waterlines over ten miles and the crossing of the Rio Jatate.

Similar to the community of San Juan las Palmas, San Javier has a couple of waterholes that could be explored for the possibility of hand dug wells. Unlike San Juan las Palmas, the community of San Javier has never excavated these water sources to determine if these water sources are worth developing.

**Village: Laguna Carmen de Patate – Chiapas, Mexico**

**Sponsor: Seeking Sponsor**

Laguna Carmen de Patate also known as Patate Viejo is a Zapatista community of 30 families and approximately 200 inhabitants. There are two water holes from which the community gets their water; one is for drinking and the other (the lake) is for washing clothes and bathing. Some of the houses also have rotoplas (rain catchment tanks) to collect water during the raining season. During the dry season, the community trucks water from Ocosingo and fills up the rotoplas, although this becomes quite expensive.

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Due to time constraints, the community chose to show us a manantial approximately 3km from the community versus their water holes. The manantial is at an elevation of 1,456 meters and the community is at an elevation of 1,405 meters. Cost estimates for the project are based on this data.



Laguna de Carmen Manantial



Laguna de Carmen Residents