

Waterlines Report: 2008

The rest of the Report will bring readers up to date with Waterlines' recent activities. As always, none of this could be possible without the support of extraordinarily committed volunteers and donors.

But first I'd like to convey a more personal point. My work with water began in 1985, writing magazine articles about the global drinking water issue. I was stunned by the casualty toll taken by 20 diseases associated with inadequate water and sanitation—cholera, typhoid, schistosomiasis, guinea worm, trachoma, amoebic dysentery, hookworm—to name just a few.

During the 1980's I interviewed hundreds of water experts, but I didn't know enough then to call the problem by its right name: *the most serious public health problem in the world*. These diseases caused by inadequate water and sanitation kill and sicken more people than AIDS, TB, and malaria and astonishingly cause half the world's malnutrition.

This should be unacceptable. TIME recently noted that 40 percent of the world has worse water than Romans 2,000 years ago. More than 2.5 billion people have no way to dispose of their human wastes safely. Think of that statistic for a

moment, because, as Rose George notes in *The Big Necessity*, too few people who could help care to.

How do children attend school successfully when, as UNICEF points out, half the world's schools lack safe water and latrines? How do women live productive lives when they must walk three miles for household water daily?

Waterlines' work, like most nonprofits', seems a drop in the ocean in this sea of need. But in rural communities where Waterlines provides help, water has arrived. And we measure annually what is working (and what is not), thanks to such volunteers who have recently visited projects in Kenya, Ethiopia, Mexico and Panama. Letters handwritten by communities vividly confirm the advantages that clean

water brings.

Waterlines helped launch Water Advocates (described later). That organization, the U.S.'s first full-time advocacy organization for worldwide drinking water and sanitation, would not exist but for the actions of Waterlines' volunteers and donors over the decades.

Thanks to you all for what you do—making site visits, tracking projects, writing checks—to address

portions of what remains in 2009 the world's most serious public health problem. And one the world knows how to solve.

David Douglas, President

From the President



Clean water arriving in a Panamanian village

Update on Water Projects in Panama

“Without Waterlines’ help, we couldn’t have water at home right now”



The community of Pedregoso, Panama after water has arrived

Seventy water projects now completed

Waterlines’ volunteer, Father Robert Cumberland, accompanied on site visits by Lam Ho from Souder Miller Engineering,

notes in his 2009 Panama trip report that the past year saw advances not only in the number of people served “but also in the quality of help that the water committees and Waterlines are providing.”

As Father Robert notes, “It is always so obvious when we go to a community which has an active or at least functioning water committee.”

In the past 15 years, Waterlines has worked to extend drinking water to more than 70 rural communities in western Panama, primarily in the provinces of Chiriqui and Bocas del Toro.

The gravity-flow drinking water projects have been community-led and are variously overseen by the Catholic Sisters of Llano Nopo, Peace Corps volunteers, and community organizer Marcial Mendoza of Llano Venado.

A letter from one water committee reads: “Without Waterlines’ help, we couldn’t have water at home right now. We started the construction of this project since 1984, but had failed it twice.

“We want to mention the great participation of Mr. Nicholas Arcia who led this project. We saw and learned with him that with love and work we can get done wonderful things. Along with those men, day after day, who worked and believed in this project to make it a reality. We are thankful to Waterlines.”

Update from Mexico

Eight Chiapas projects

In recent years Waterlines has supported eight drinking-water projects in Chiapas in projects overseen by Kees Grootenboer, Bill Muldrow and the Sisters of Altamirano Hospital.

In February, 2009, Souder Miller’s Ramon Luce-ro, a volunteer with Waterlines and Water Engineers for the Americas, evaluated new project sites and visited the most recent gravity-flow project in the remote jungle community of Benito Juarez.

Ramon notes, “The water system in Benito Juarez was completed during the summer of 2008. Those elected to take care of the water system for this year have done a very good job.

“Since the waterline between the spring and the community is above ground, monthly inspections are necessary to insure that trees have not fallen on the waterline and that ties holding the lines to the trees are not constricting it. The spring produces an enormous amount of water.”

“The spring produces an enormous amount of water”



Working on Benito Juarez project

Update on Water Projects in Ethiopia

Ethiopian Work Ripples Out

Waterlines' volunteer, Bill Muldrow, reports from Ethiopia on his site visits in December, 2008 to spring-protection projects in the Western Wollega Province:

"The improvement that clean water makes ... never ceases to amaze"

"Five projects (three of which are completed) are scattered throughout the province in isolated, largely roadless areas. . . Hand work and labor was contributed by communities, with work supervised by technicians employed by the Western Wollega Bethel (Presbyterian) Synod. . .

"I was extremely gratified with what we saw of the completed projects. The quality of the work is excellent. The improvement that clean water makes in the health, spirit and productivity of the communities never ceases to amaze.



Spring protection near Zembo, Ethiopia

"People from each community met us with joyous expressions of gratitude to all of those responsible for making the projects possible."

Bill also visited the Bekilomanekiya Spring project near Zembo, in Ethiopia's West Gojam Province, the latest work overseen by Shimeta Ezezew.

The project consists of a large spring-protection concrete box, two symmetrical cylindrical storage tanks, continuously flowing outlet pipes, a clothes washing stand and two showers.

Bill notes: "The workmanship is very fine. . . The entire community greeted us upon our arrival. They are highly pleased with the project and with the convenience and safe drinking water that it provides them."

Water Advocates Update

A Waterlines-related Voice in Washington

Nearly one billion people lack clean water

Set up as a "Supporting Organization" to Waterlines, Water Advocates began in 2005 as the nation's first fulltime advocacy organization on behalf of worldwide safe drinking water and basic sanitation.

With a sunset clause of December 31, 2010, Water Advocates (www.wateradvocates.org) works to increase funding for these missing basics from Congress, foundations,

corporations, and civic and faith groups.

Nearly one billion people lack clean water, 2.5 billion lack even a basic latrine, and by 2025 more than 3 billion people are expected to live in water-stressed countries.

This past year Water Advocates and other organizations helped to increase U.S. Congressional and private support for long-term safe drinking water and sanitation internationally by over \$100 million.

Long accustomed to taking water for granted, more Americans recognize its importance not only for global public health but children's education, women's rights and environmental sustainability.

Many look forward to the U.S. regaining leadership in this key development sector as it responds to President Obama's Inaugural pledge: "To the people of poor nations, we pledge to work alongside you to. . . let clean waters flow."

Update on Waterlines



Introduction: Waterlines has probably helped build more rainwater collection tanks in the Rift Valley Province of Kenya over the last decade than any other non-profit organization. In just the past two years, 160 tanks have been built, between 30,000 and 50,000 liters in size, for schools, dispensaries, churches and women's groups. Waterlines cannot fully respond to the overwhelming demand for tanks and thus will be funding this year only tanks serving the greatest number of people, namely schools and dispensaries. -- David Douglas

by Mark and Diane Reimers

Rainwater Harvesting

“It would seem that lush, tropical Africa with 25 to 50 inches of rainfall should have plenty of drinking water,” is a comment frequently overheard in the US.

But what often is lacking is a system that collects rainfall and stores it from one rainy season to the next. Utilizing metal roofs on existing buildings to funnel water via gutters into tanks, rain harvesting provides a significantly improved water resource for Kenyans compared to open streams and polluted springs.

A biosand filter or other purification method in an adjacent building may be utilized to provide an additional level of protection.

Typically, Waterlines receives completed applications from local water committees that will raise 25% of the overall cost. (Total cost for a 30,000 liter tank, or 8,000 gallons, for a pri-

mary school averages \$2,200, while a 50,000 liter tank for a secondary school averages \$3,000.)

In projects overseen by one of Waterlines three Kenyan facilitators (Joel Mitei, David Langat and Richard Kayla) ferro-cement tanks are built onsite at schools, health clinics, churches, and for women's self-help groups.

Protection of Springs

Even with expert work, spring protection cannot increase water flow but it can protect the quality of the water from contamination.

Spring boxes with pipes can make water available for collection without contamination.

The area is then fenced to keep livestock away, with water diverted to an adjacent drinking area for animals. The site must be on public land, to ensure community access.

A strong management committee raises 25% of the construction cost, maintains the area, and manages

es Projects in Kenya



the use of the spring, which can serve several hundred families.

Working with Tenwek Community Health and Development and the Ministry of Water, Waterlines funds three to five spring protection projects annually.

It is really a community celebration (singing, dancing, tongue trilling and speech making), with chiefs, government officials, and local citizens attending, when a spring's flow of water is finally protected.

Water at Schools, Churches and Dispensaries

• **Schools:** Six years ago, the Kenyan president announced free public education for primary school children, resulting in large increases in children attending school.

Kenya has used financial resources to rebuild old schools, build new classrooms and employ additional teachers, but water and latrines are often missing.

In our experience, the typical rural school (even those with enrollments as high as 800 students) lacks a water source, so students must carry whatever they need for the day. Waterlines has helped build tanks for 200 primary and secondary schools over the years.

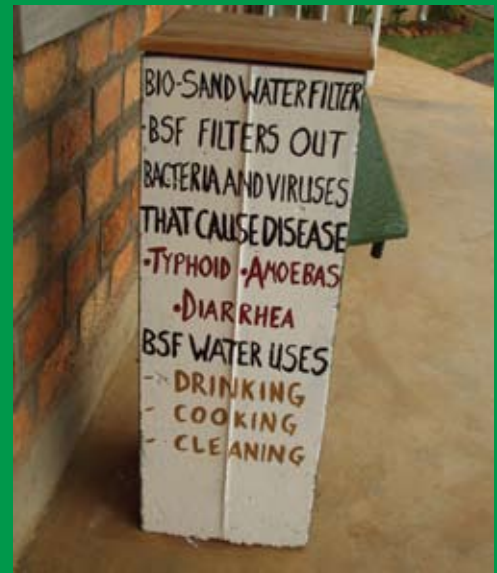
• **Churches:** It sends a shiver up the spine when a Kenyan minister evokes the name of God and creation when

thanking Waterlines for assistance in building a rain-harvesting system at a church.

Baptism references are cited and the water is an answer to prayer. Frequently a church center is the 'mother' for three or more smaller, dispersed congregations which meet at the center periodically. Typically the church feels called to provide water to the wayfarer, or stranger. This water can be received as a 'sacred gift.' Waterlines has helped build 55 tanks for churches over the years.

• **Dispensaries:** A medical facility needs a water source, and indeed water is a requirement for licensing of dispensaries, yet often Kenyan community medical clinics are constructed without a water source.

Waterlines has helped 15 clinics/dispensaries build rainwater collection tanks over the years.



Waterlines
302 East Coronado Rd
Santa Fe NM 87505
505-988-5642

Board of Directors for Waterlines

Father Robert Cumberland,
Deborah Douglas, Peter Fant,
Lou Harrington, Judy Crawford,
Mark and Diane Reimers, Betty
Kersting, David Douglas, Bill
Muldrow (emeritus)

Celebrations marking the completion of a water project always bring happy smiles from children, joyous parents, and teachers. With the additional use of sand filters, sanitary latrines, and hand-washing procedures, children are much healthier and are able to attend school more regularly. And they don't have to spend valuable time hauling water.

WASH-in-Schools Report

The missing basics: WATER, Sanitation & Hygiene

Half of the world's schools, according to UNICEF, lack safe water and latrines, and hygiene. The new WASH-in-Schools Initiative, launched by

Water Advocates and others last year at the National Geographic Society, expands ways for Americans – through their own schools, Congress, foundations, corporations, faith and civic groups – to reduce this staggering statistic by sponsoring in developing countries WASH projects implemented by well-regarded non-profits. (See www.wateradvocates.org)

As part of this larger global WASH initiative, Waterlines has begun its own expansion beyond water provision into sustainable sanitation and hygiene programs for school children.

Waterlines' pilot program for WASH-in-Schools is taking place in 15 Kenyan schools in the southern Rift Valley Province, in a program overseen locally by Tenwek Community Health and Development (CHD), with funds from Waterlines' donors and the schools themselves.

In addition to the

usual rain-harvesting tank and bio-sand filter, Waterlines' support now includes gender-specific latrines and a hygiene program, backed by health clubs and hand-washing training.

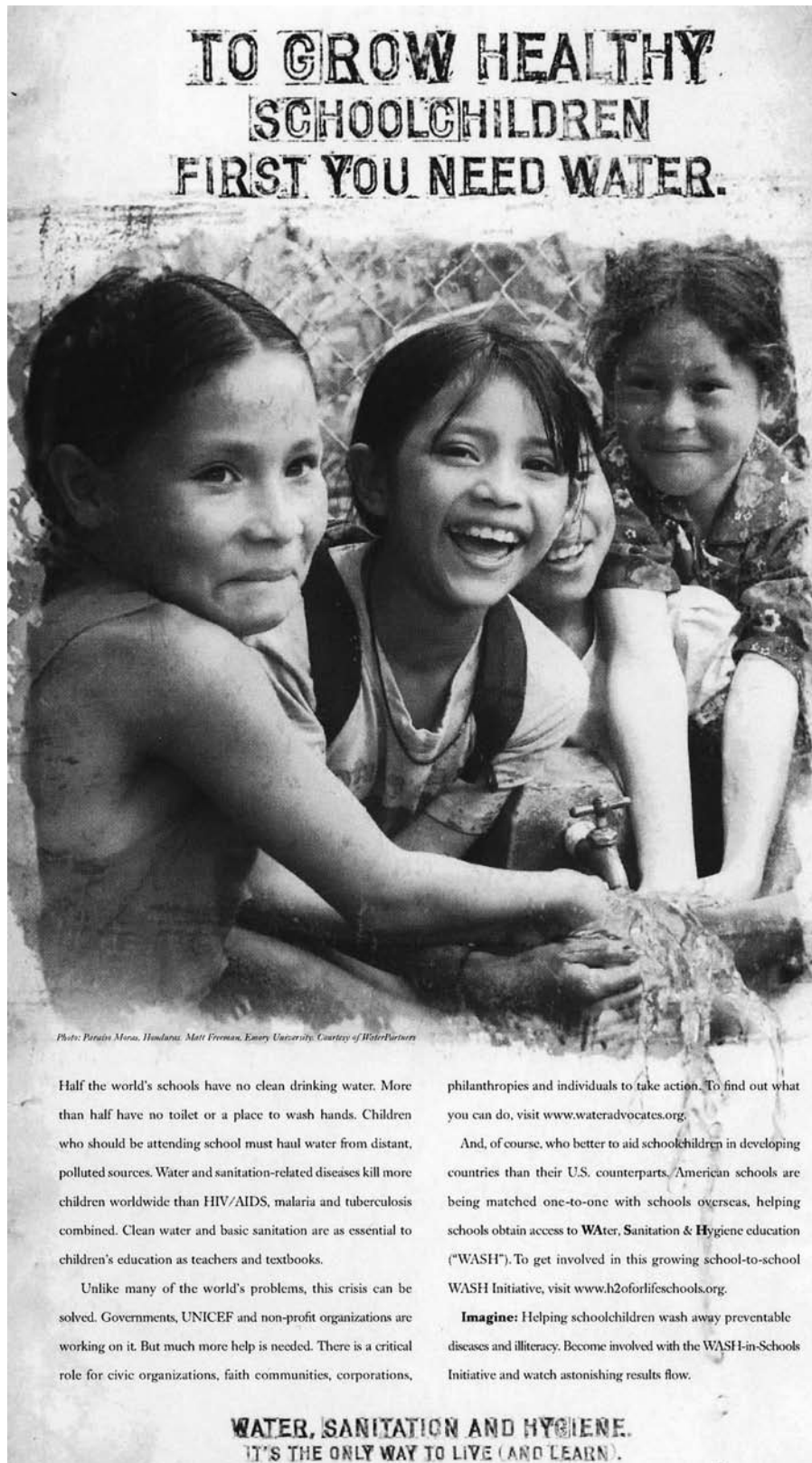
Tenwek CHD already had an active program of community development, involving rain-harvesting systems in schools and community hygiene training.

Mark and Diane Reimers visited nine of the schools while evaluating in detail the pilot program with Tenwek staff in February 2009.

A brief summary of their findings? "Very good progress at each of the schools with the rain harvesting system. Medium progress, but ongoing, with improved latrines. Good work in hygiene and school health clubs. The challenge has been hand washing."

Monitoring of the program is ongoing and will continue over the years.

Waterlines will add 10 more Kenyan schools to the WASH program in 2009.



TO GROW HEALTHY SCHOOLCHILDREN FIRST YOU NEED WATER.

Photo: Poraina Moran, Honduras; Matt Freeman, Emory University. Courtesy of WaterPartners

Half the world's schools have no clean drinking water. More than half have no toilet or a place to wash hands. Children who should be attending school must haul water from distant, polluted sources. Water and sanitation-related diseases kill more children worldwide than HIV/AIDS, malaria and tuberculosis combined. Clean water and basic sanitation are as essential to children's education as teachers and textbooks.

Unlike many of the world's problems, this crisis can be solved. Governments, UNICEF and non-profit organizations are working on it. But much more help is needed. There is a critical role for civic organizations, faith communities, corporations,

philanthropies and individuals to take action. To find out what you can do, visit www.wateradvocates.org.

And, of course, who better to aid schoolchildren in developing countries than their U.S. counterparts. American schools are being matched one-to-one with schools overseas, helping schools obtain access to **WATER, Sanitation & Hygiene** education ("WASH"). To get involved in this growing school-to-school WASH Initiative, visit www.h2oforliveschools.org.

Imagine: Helping schoolchildren wash away preventable diseases and illiteracy. Become involved with the WASH-in-Schools Initiative and watch astonishing results flow.

WATER, SANITATION AND HYGIENE.
IT'S THE ONLY WAY TO LIVE (AND LEARN).

Water Advocates' *New York Times* full-page ad for WASH-in-Schools

Contributors to Waterlines in 2007

Edna Currie, \$5,000
 Chuck and Derry Shepard, \$2,000
 Ray and Betty Kersting, \$1,300
 Jack and Mary Purdy, \$500
 Peg and Bob Douglas, \$1,000
 Michaela Oldfield, \$100
 Jules and Devon Stokhofdejong, \$200
 Matthew Babcock, \$20
 Ruby Holloway, \$1,000
 Charles and Awanda Whitworth, \$12,000
 Allen and Mary Sanborn, \$200
 Renesan Presentation, \$50
 Grace Thada, \$50
 Kind World Foundation, \$110,000
 Weathertop Foundation, \$10,000
 Michael and Angela Chapuran, \$800
 George and Pat Adams, \$100
 Nokesville Lion Club, \$100
 Fred and Susie Harburg, \$5,000
 Carolyn Stupin, \$900
 St. Kevin's School, (Warwick, RI) \$203
 Robert and Susan Benjamin, \$75
 Dan Tallman, \$2,000
 Bruce and Jacque Rolstad, \$100
 Les Douglas, \$20,862
 Robert Holloway (Columbia Basin Foundation) \$1,000
 First Presbyterian Church of Freeport, New York \$500
 Wardle Family Foundation, \$10,000
 Riversville Foundation, \$20,000
 Exxon-Mobile (match with George and Lana Staples), \$3,097
 Bill and Betsey Muldrow, \$1,000
 United Church of Los Alamos, \$4,850
 Else Bernabe, \$20
 Alice Correa, \$400
 Dave and Marianne Thomas, \$200
 Westminster Presbyterian Church of Santa Fe, \$431
 Clifton Presbyterian Church, \$500
 Bob Adamski, \$200
 Charles and Janet Tallman, \$500
 Sandy Springs School, (Silver Springs, MD via Tides Foundation) \$4,000

John Stephenson, \$2,100
 David Kremenak, \$2,000
 Jack and Mary Stotts, \$250
 Charles and Ila Little, \$50
 Pat and Nancy Noonan, \$1,000
 John Leinenweber, \$1,000
 Dotty Stevenson, \$100
 Wallace Genetic Foundation, \$25,000
 First Presbyterian of Santa Fe, \$51,614
 John Vavruska and Laura Holt, \$1,300
 Barbara Medina, \$25
 Belden and Patricia Lane, \$75
 Eric and Lisa Oppenheimer, \$20,000
 Bev and Betty Graham, \$100
 Pat Luiken, \$17,250
 Art Kamisuka, \$5,224
 Deborah Douglas, \$5,000
 Walt and Gerry Fant, \$2,500
 Ed and Ann Maglisceau, \$300
 Auriela Fule, \$100
 Dana Andrewson, \$200
 Annette Molnar, \$150
 Woods Architects and Builders, \$2,500
 Al and Kay Forsyth, \$50
 Forward Movement, \$100
 William and Joanne Kersting, \$200
 Tess Kersting Reis, \$50
 Merlin and Ada Kersting Randall, \$50
 John and Donna Osthaus, \$3,000
 Mark Van Putten, \$1,000
 Daniel Ritter and Eileen Penner, \$3,250
 Paul Stimers and Stacey Dershewitz, \$500
 Bruce and Diane Heiman, \$250
 Arvid and Mary Jo Lundy, \$1,000
 Fred Nathan, \$250
 Ed and Nancy Rubovits, \$100
 John and Bonnie Hustler, \$100
 Ralph Veatch, \$300
 Chris and Becky Kersting, \$75
 Dave and Barbara Okerberg, \$100

Total Contributions in 2007: \$368,422

" . . . I was panting, panting, panting of thirst, but oh from a distance I saw an extended hand---It was a hand of a friend promising to help to quench thirst. This must be a true friend and how I look forward to the future - future when I can quench my thirst without risk or fear illnesses. But what can I give in reciprocation, except a big tank, tank of thanks. Thank you and God bless you."

Composed and recited by Kihote Jeremy.
 Mulot Full Gospel Church, Longisa
 for the family of Mrs. and Mr. Mark Reimers of WATER-
 LINES from USA

" When we see the tanks each day we are thankful. You are letting us use our budget for development not medicine. Thank the Lord for speaking to you and for listening. Clean water and firewood go together as women's work. You have relieved half our burden."

Sebet Women's Group

" Now I can go early to the shamba to work rather than gathering water. We are well from typhoid. We want to finish the tanks so that we can use money for development."

Ituna Women's Group

Contributors to Waterlines in 2008

Charles and Awanda Whitworth \$12,000
 Ann and Dick Rowe \$200
 Lois and Bud Redding \$225
 Fred and Susie Harburg \$12,000
 Lawrence and Mary Gurley \$1,100
 Betty and Ray Kersting \$1,100
 Dick and Judy Crawford \$100
 Clifton Presbyterian Church \$3,000
 Carolyn Stupin \$500
 Steve Werner \$150
 Janice and Michael Beech \$500
 Robert and Nita Chapuran \$400
 Gary Thurman \$500
 John Stephenson \$1,000
 Michael and Angela Chapuran \$200
 Schuyler Schell \$75
 Natalie Whitted \$30
 United Church of Los Alamos \$5,430
 Pat Brandenburg \$2,000
 Elizabeth Hancock \$250
 Richard and Wendy Aceto \$100
 George and Lana Staples \$1,000
 Match from Exxon Mobile \$1,000
 Laura Holt and Pat Waganaar \$100
 Rob Elliott Family Foundation \$1,000
 Westfield Presbyterian Church \$4,000
 First Presbyterian Women--Santa Fe \$50
 Westminster Presbyterian Church--Santa Fe \$465
 Jane Hanna and Frank Shuck \$50
 Dan Tallman \$2,000
 Weathertop Foundation \$10,000
 Bob and Janet Adamski \$200
 Wardle Family Foundation \$25,000
 First Presbyterian Church of Santa Fe \$700
 Daniele Agostino Foundation \$5,000
 John Leinenweber \$1,000
 Beth Burns \$100
 Stillwater, OK's Sangre Ridge 3rd Grade Class \$1,025
 Pat Noonan \$2,500
 Pete and Elizabeth Bowles \$120
 Les Douglas \$101,071

Riverside Foundation \$20,000
 Market Square Presbyterian Church \$1,433
 Denise Barham \$15
 Dennis and Kathy Wellman \$10,000
 Clifton Lions Club \$1,500
 David Kremenak \$2,000
 Michaela Oldfield \$100
 Joyce Meister \$2,700
 Amber and Eugene Fayenberg \$100
 Philip and Barbara Seeger \$250
 Seton Foundation \$12,300
 Deborah Douglas \$485
 Anne Wright \$50
 Anonymous \$25
 Alice Bullough \$500
 Robert and Jennifer Dolan-Waldman \$150
 Andrew Family Foundation \$5,600
 Linda Policarpio \$20
 Oppenheimer Brothers Foundation \$20,000
 Montview Prebyterian Church, Denver \$15,000
 Betty Graham \$80
 First Presbyterian Church of Freeport, NY \$500
 Woods Architects-Builders \$2,700
 Peggy Ater \$100
 Sarah Miller, \$200
 Faith Garfield, \$60
 Carol Fallis \$20
 Alan and Ellie Lamb \$60
 St. Andrew's Presbyterian Church, Yuba, CA \$1,000 (Chris and Becky Kersting)
 Mary Jo and Arvid Lundy, \$1,000
 John and Bonnie Hustler \$100
 Alternative Christmas donors \$946
 Merlin and Ada Kersting Randall \$50
 Tess Kersting Reis \$50
 Ralph Veatch \$200
 Al and Kay Forsyth \$50
 Diana White \$50
 Matthew Babcock \$300
 Ann Overbeck \$100

Total Contributions in 2008: \$297,133



Waterlines' 2008 Project Expenses:
 Kenya (\$153,095), Ethiopia (\$42,407), Panama (\$57,605), Nepal (\$485), Mexico (\$2,866), WEFTA in Peru, Bolivia (\$25,000), Miscellaneous (including wire transfer and bank fees \$1,149)

Total Expenditures During 2008: \$282,607

 Beginning Balance, January 1, 2008: \$85,762
 Contributions deposited during 2008: \$297,133
 Funds available for 2008: \$382, 895
 Expenditures during 2008: \$282,607
 Beginning Balance, January 1, 2009: \$100,288