

Finding New Partners for Clean Water/Sanitation/Hygiene Projects in Developing Countries

By Scott Kelly, P.E.

Florida's Water Associations (FWA) is working to address the challenge of unmet clean water, sanitation, health and hygiene needs in developing countries around the

world. The members of this donor group organization are the Florida Section of the American Water Works Association (FSAWWA), the Florida Water Environment Association (FWEA), the Florida Water & Pollution Control Operators Association (FWP-

COA), and the Florida Rural Water Association (FRWA). Our primary focus has been to meet those needs in the countries of the Caribbean and Central America.

Our efforts have been strengthened by our partnership with our industry's principal service organization, Water For People, an international agency that helps people in developing countries improve their quality of life by supporting the development of locally sustainable drinking water resources, sanitation facilities, and health and hygiene education programs.

Water For People was formed by members of the American Water Works Association and the Water Environment Federation. Since our partnership's inception with Water For People in 2006, FWA has raised over \$172,000 to support efforts in El Negrito, Honduras, to provide sustainable, clean water and sanitation to the 35,600 people of this poor, rural area. In 2008, Water for People's El Negrito program served 804 people in three communities by developing clean water systems, installing latrines, and providing hygiene education.

FWA also successfully partnered with Water for People and Rotary to fund a major water and sanitation project in El Ponciano-Buena Vista, Honduras, in 2007. El Ponciano-Buena Vista is composed of two villages with 175 households, all of whom got their water from three small, shallow bores that produced very little during the dry season. Drinking water from unprotected natural wells, the people of El Ponciano-Buena Vista commonly had health problems related to contaminated water (parasites, diarrhea, and skin diseases).

Water For People, through its partnership with FWA and Northeast Florida Rotary District 6590, provided access to water to the people of El Ponciano-Buena Vista for years to come. The project, completed in 2007, included over 14 kilometers of distribution piping and two large concrete reservoirs.

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FWA volunteers survey a pila, or clothes washing station, that was built as part of the 2007 water and sanitation project in El Ponciano, Honduras.



Citizens of Buena Vista, Honduras, gather to celebrate the completion of their new 10,000-gallon ground storage reservoir.



Children of Miramar collecting water from the street and sidewalk that has leaked from the municipal storage tank.

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In this period of collaboration and success, we have worked effectively with other partners. For instance, partners such as Wisconsin Water for the World (WWW), Rotary, and Aqua Para La Salud have helped provide facilities to provide clean water to the villages of El Adelanto and Sacbolchol, Guatemala. WWW (a committee of the Wisconsin American Water Works Association) and a number of Rotary Clubs in Northeast Florida matched the \$10,000 contribution from FWA to each of these projects.

The community of El Adelanto is a widespread village of approximately 1,200 people composed of multiple population sectors scattered across the mountainside. Most parts of the village are supplied with water, but there is a section composed of 40 homes or 200 people where the water supply has been unreliable. Residents report that in recent times, they have had to climb down treacherous canyon paths to collect and transport water to their homes, spending as much as five hours a day on the effort.

A water distribution and storage system was designed and built for, with, and by the community of El Adelanto, Guatemala. Professionals from WWW, along with Peace Corps volunteers and representatives of Agua Para Salud, worked side-by-side with people of the village to build a water system that included an electrically powered pump, two ferro-cement storage tanks, a transmission main, and distribution piping. A team of WWW members taught health education classes to the children of the community, and another WWW team coordinated satellite education classes with two Wisconsin elementary schools.

Sacbolchol is a village of roughly 150 homes located in the Guatemala Western Highlands. The majority of the residences are furnished with a relatively conveniently acces-

sible source of water, but increased demand in the existing systems has left a number of homes and the local school with an unreliable—or often in the dry season, non-existent—water supply.

A water distribution system including a spring collection box, distribution lines, lower and upper collection tanks, and a pumping system was scheduled for installation in March to rectify the problem. Also, health and hygiene education consisting of village school participation in hand washing, personal hygiene, food preparation, and disease transmission mechanisms will be conducted through individual home visits and classroom lessons.

Increasingly, we are identifying opportunities to work with other nonprofit organizations to implement clean water and sanitation projects in communities of need. For instance, the University of South Florida Chapter of Engineers Without Borders (EWB-USF) approached FWA last year to partner in a project planned for Miches, Dominican Republic. FWA has committed to fund \$10,000 for the project, conditioned on a match of \$5,000 from Rotary and \$8,000 from EWB-USF to address the water needs of this small community of approximately 126 homes and 500 residents, located on the northeast coast of the Dominican Republic.

Miramar is located uphill from the municipal water tank, leaving it un-served by the gravity-fed public water infrastructure. Currently its residents must bring water to their homes by carrying it in small containers. EWB-USF is proposing a borehole well with a submersible electric pump, a ferro-cement storage tank, and a gravity-fed distribution system. Implementing this design will provide a sustainable water source and significantly improve the quality of life in the community of Miramar.

The newly formed Chapter of EWB at the University of North Florida is creating design

plans for improvements to the Tamale Children's Home, in Northern Ghana. In May, a team of engineering and honors students will travel to Ghana to bring those plans to construction, working with local labor and effectively completing a design-build project.

There are several projects that the administrators of the Children's Home would like to see implemented, and the 2009 senior design team is working on establishing the feasibility of these projects. FWA has been requested to provide assistance in the most urgent project, which is to connect the Children's Home to the municipal water provider.

Another example of an EWB project is the effort to provide water to the small, inaccessible mountain village of Santa Cruz de Azuay in Ecuador, led by the Southwest Florida Professional EWB Chapter.

As a result of our experiences with all these great collaborative efforts, the membership of FWA recognizes the value of teamwork. We realize that there are opportunities for additional service and volunteer contributions by our members. In fact, many of our members are also members of other service organizations that represent strategic partners, such as Rotary International, Engineers Without Borders, and the International Rural Water Association.

We believe that the expansion of our partnerships with these other organizations will create additional synergy and opportunities to do more service for the international community by our associations and respective members. Our approach will be built on a foundation of strategic alliances and partnerships with additional "like-minded" organizations committed to the same mission.

Our Mission

The FWA mission is to identify, plan, finance, and undertake sustainable water and sanitation projects, along with health and hygiene education programs, in developing countries where the need is greatest and the opportunities to partner with the community and other "like-minded" nonprofit organizations to provide a comprehensive approach to program implementation.

Our Vision

- To promote a successful, sustainable fundraising organization that seeks out matching

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funds from organizations and sources outside of the FWA donor group.

- To identify, evaluate, and prioritize projects, communities, and countries in need of support to provide sustainable clean water and sanitation to improve health and hygiene.
- To work collaboratively with other “like-minded” nonprofit organizations to effectively and successfully implement projects.
- To create a forum for the exchange of ideas, technical information and resources, scientific and engineering information and methods, and cultural experiences to facilitate successful projects and programs.

Our Goals

1. Establish a framework for collaboration that parlays the strengths of “like-minded” nonprofit organizations into a fully-functional team accountable for the successful implementation of sustainable clean water and sanitation projects.
2. Secure understandings from all members of the FWA donor group (FWEA, FSAWWA, FWPCOA, and FRWA), as well as organizations present in the state of Florida like Engineers Without Borders (EWB) and Rotary International (RI), to work together where possible.
3. Maintain an organizational steering committee to facilitate effective communications with partners for identifying, planning, and prioritizing needed projects.
4. Promote collaboration through the network of cooperating nonprofit organizations.
5. Establish and maintain a forum for accountability and determination of the effectiveness and sustainability of implemented projects.
6. Encourage the pooling of volunteer efforts, technical resources, and funding to expedite projects with the highest priority for need.

Our Plan

Our plan for continued success in future efforts is based on a high level of collaboration and cooperation with nonprofit organizations in the state of Florida that have programs intended to meet our common goals. To realize these goals, the FWA donor group desires to have an understanding of intent to work together where possible with the Florida-based chapters of EWB and the Rotary districts and clubs. It is also our goal to leverage our project funding by requesting matching funds from Rotary International.

The FWA donor group has been extremely successful in fund-raising efforts in recent years. Also, we have been effective in partnering with other nonprofit organizations

to implement projects primarily in communities and countries in Central America. Furthermore, FWA members are professionals specializing in operations and engineering of sustainable water and sanitation systems.

Our membership represents the strongest assembly of technical resources and professionals in the state that are dedicated to protecting the public health and environment. It also represents a large number of potential volunteers who could donate knowledge, expertise, and/or time to implementing needed projects successfully.

The FWA donor group values a productive understanding of collaboration with the Rotary Districts and Clubs as being vital to our mission. The strength of Rotary is the extensive network of clubs throughout the world. Rotary International (RI) is one of the world’s largest service organizations with 32,000 chapters and 1.2 million members. The Rotary Club network offers:

- Synergy to the FWA donor group by providing opportunities for potential matching funds for projects of common interest.
- A Florida-based club network that may help to identify projects, communities, and people in need.
- A strong network of Rotary Clubs that also exist in potential communities and in host countries that represent tremendous assets in the in-country efforts to address travel logistics, transportation and lodging, community relations, and accountability.

The FWA donor group also recognizes the EWB chapters in Florida as another important partner. Engineers Without Borders-USA (EWB-USA) is a nonprofit humanitarian organization established to partner with developing communities worldwide in order to improve their quality of life. This partnership involves implementing sustainable engineering projects while involving and training internationally responsible engineers and engineering students.

Establishing an understanding with EWB creates another synergistic relationship, based on the EWB mission. Working together with EWB chapters, FWA can focus on planning and funding efforts for projects while EWB chapters focus on recruiting volunteers for im-

plementation.

FWA and EWB will share in the obligations to identify and evaluate projects and the engineering efforts to plan and design appropriate, yet sustainable, facilities to implement. FWA recognizes the advantage of EWB to attract students and retain young professionals through its network of chapters on college campuses. Further, FWA views as mutually beneficial the partnership of emerging, internationally responsible leaders with the expertise of senior professionals and technologists with decades of experience in the water and sanitation industry.

The FWA donor group also sees the value of reaching out to the International Rural Water Association (IRWA). IRWA is a sister organization to the National Rural Water Association and its affiliation of state associations like the Florida Rural Water Association (FRWA).

In Florida, the FRWA has long been effective in providing training and on-site assistance to utilities. The IRWA has been working since 1988 to establish networks of “circuit riders” in developing countries to provide technical assistance programs and build sustainable water and sanitation systems. The circuit riders provide technical assistance, training, and education to representatives of communities that benefit from implementing water and/or sanitation projects. Circuit riders work in country and tailor training programs to the capabilities and available technology in the developing country to improve the chances for success.

The opportunity for continuing technical assistance and training will significantly improve the long-term operation and maintenance of water and sanitation systems. FWA desires an understanding with the IRWA to collaborate where mutually beneficial interests exist to ensure the long-term viability of implemented projects.

Strategically, if understandings relating to shared interests, priorities, and collaboration can be achieved between FWA and our desired partners—Rotary, EWB, and IRWA—then the full spectrum of activities related to project development, implementation, and operation will be addressed more comprehensively and

Organizational Strengths and Areas for Collaboration

Nonprofit Organization	Project Identification, Prioritization	Project Funding Coordination	Project Planning, Evaluation	Project Design	Project Construction	Project Operation and Maintenance Assistance
FWA	X	X	X	Y	Y	
Rotary	X	X	Y		Y	
EWB	Y	Y	X	X	X	
IRWA¹	Y		Y		Y	X

X – Leads effort

Y – Provides support

¹ – Limited to countries where the organization is present (Guatemala, Honduras, El Salvador, and Dominican Republic)

the future of desperately needed sustainable water and sanitation projects in communities of developing countries around the world will be made more secure. This partnership has the opportunity to work together to realize a shared mission and vision to improve health and hygiene in communities not fortunate enough currently to enjoy basic needs.

Considering the business processes that have been established by Rotary for project funding and accountability, and processes for project design, implementation, and quality control that have been established by EWB, FWA recognizes the value of adhering to those processes that are already in place and proven successful. FWA proposes to integrate our project planning, fund-raising, and volunteer service efforts into those business processes established by our partners to ensure maximum collaboration and cooperation.

In this manner, FWA anticipates that EWB will lead efforts to develop project designs and project construction. Then, EWB will be able to maintain the level of project quality control that has defined their efforts abroad in communities of need; therefore, after project identification and approval, it is anticipated that EWB will adopt projects for design and implementation and FWA will provide support through volunteer efforts consistent with the EWB chapter's efforts.

Also, Rotary International has established strict project controls for utilization and accountability of funds appropriated to specific projects, enabling Rotary to maximize the use of funds for the intended purposes and improve the success of projects. It is anticipated that FWA will follow the lead of Rotary in the disbursement and accountability of donated funds to projects scheduled for design and implementation.

The IRWA's major role will be to maintain sustainability through its circuit rider model and provide linkages with other partners such as the Peace Corps in the countries we serve. For instance, the IWRA through its local affiliate, Agua Para La Salud, has provided in-country contacts and has helped facilitate projects for the two Guatemalan projects that FWA has participated in to date.

FWA also recognizes the organizational protocols desired by Rotary as spelled out in its Water & Sanitation Rotarian Action Group (WASRAG) *Strategic Plan for the Implementation of Water, Sanitation & Hygiene Education Projects*. FWA endorses the strategy to work through regional teams formed of the most capable team members and will subscribe to this approach where FWA and Rotary's efforts merge.

It is apparent that FWA, Rotary, EWB and IRWA share a common vision and a desire to

work with other "like-minded" organizations. It is also apparent that the collective efforts of all the organizations working together will be significantly more effective and rewarding than the singular efforts of the individual organizations.

FWA desires strategic partnerships to expand our reach into developing countries and communities in need of clean water and sanitation facilities to improve the health of community residents. It is, therefore, the goal of FWA to foster those partnership relationships with Rotary, EWB, and IRWA to collaborate in developing countries and communities in need where the partnership can fund, develop, and implement clean water and sanitation projects successfully to realize our shared vision.

Scott Kelly, P.E., is vice president of water and wastewater systems for JEA, the electric/water/wastewater utility serving Jacksonville and other communities in Northeast Florida. He serves on the steering committee for Florida's Water Association Donor Group, on the Board of Governors of the Florida Section AWWA, and on the Board of Directors of the Florida Water Environment Association. He is chair of the Florida Water/Wastewater Agency Response Network and president of the Florida Water Resources Conference.