



## WESTON Uses INNOVATIVE TECHNOLOGIES TO ASSESS SUSTAINABILITY OF NON-PROFIT WATER AND SANITATION PROJECTS



Photo: Kate Fogelberg, Water For People

*WESTON helped the non-profit Water For People develop a structured monitoring program for its past water projects that would provide the ability to capture, analyze, display, and report geographic and water system information.*

Water For People is an international non-profit organization devoted to promotion of locally sustainable water resources and sanitation facilities. Since its inception in 1991, the organization has funded and supported the development of more than 700 water and sanitation projects around the world. While providing lasting, sustainable solutions has always been its goal, the organization had very little beyond anecdotal information about the ongoing performance of past initiatives. Water For People wanted to know about the use, functionality, quantity, and quality of the water systems it had put into place, but lacked a structured research methodology to implement a monitoring program to determine this information.

### Project Highlights

- Evaluated the sustainability of 33 previously completed water and sanitation projects
- Designed and implemented a pilot monitoring and evaluation program, determining which measurements were needed and how to best capture the data
- Developed an AuditFast® Web site to upload the data for analysis, using rugged GPS receivers and Tablet PCs to facilitate data collection in remote locations

Weston Solutions, Inc. (WESTON®) helped Water For People launch its first structured monitoring program to assess the functionality and long-term viability of its past water and sanitation projects. WESTON assisted in the assessment of the use, functionality, quantity, and quality of each of these water systems. The information gathered was used to evaluate the condition of the systems to determine whether they were working, whether the water source was protected, and whether it was providing potable water in line with national government standards. WESTON deployed an automated data solution for collection, analysis, and reporting of the assessment data. Providing this solution and making the information available via the Web and GIS has allowed for greater accessibility and transparency of such programs.

### Research Methodology

WESTON worked closely with Water For People staff to determine what measurements were needed and how to best capture the data. The pilot study was conducted using rugged handheld Global Positioning Satellite (GPS) receivers to pinpoint the location of each site. Tablet PCs were loaded with software to collect assessment data electronically and post

associated digital photos with the respective assessment record. The water quality itself was tested, with the results matched to the precise site and project. The technology gave Water For People the ability to capture, analyze, display, and report system information from anywhere on the planet. This now allows Water For People to view information gathered about each system and compare it across communities, regions, and eventually countries.

WESTON utilized its AuditFast® system and added the required data fields to create the field data tool and Web interface, which was available for the teams' use within 2 weeks.

### Data Collection and Analysis

When the methodology was completed and the Web site was ready to capture data, a team comprising WESTON staff and Water For People volunteers spent two weeks in Honduras, visiting 33 previously completed project sites in 31 communities that had received help from Water For People over the past 10 years.

Each project site was assessed to determine whether its water system was working, whether the water source was protected and providing potable water in line with national government standards, and whether systems were in place to address technical problems as they emerged. In addition to taking physical measurements, the team interviewed the villagers who used the systems.

Every night, the information gathered that day was uploaded to the AuditFast Web site and later compiled to create reports about the sustainability of the projects.

The results of the study were encouraging. Virtually all the water systems installed by Water For People were still functioning, and an overwhelming majority of people interviewed were still using their community water system as their primary source of water for drinking, cooking, bathing, and washing. The team also found that most community members were actively engaged in ensuring ongoing operations of their water system.

For problems in water quality or inadequate treatment that were found, Water For People provided guidance on repairs, as well as additional information that helped their community fine-tune their system to ensure the delivery of safe drinking water and improved sanitation for the long term. Discovering what problems did exist was as much a goal of the study as confirming continuing operations.

### Technology Makes It Possible

The technology used in this study gave Water For People the ability to capture, analyze, display, and report geographic and system information from anywhere on the planet. Based on the success of the program, plans are underway to roll out the full-scale monitoring program in other Water For People program countries. The new program will not only help Water For People from an operational perspective, but will enhance the quality of life of the thousands of people in the communities in which the organization works.



*Field data were collected at each of the 33 project sites, including assessing water potability in conformance to government standards.*



*The automated data system included GPS receivers, Tablet PCs, and the ability to upload data nightly to the AuditFast Web site to compile precise information about each water system.*

**W**"We are excited to have the support of WESTON and to be using state-of-the-art technology...to make this monitoring program a success. This project is...teaching us which parts of our approach are most effective, as well as those that need improvement. [It] enhances the quality of life of the thousands of people ...and will allow us to improve our work, based on lessons from the past, so that future recipient's of our support will benefit from our improved understanding."

**—Ned Breslin**  
Director of International Programs,  
Water For People

