



Water Solutions



Residential
Water

Partnership in Action: Innovative Project Brings Clean Drinking Water to Local Kenya Community

Over 6,000 Nairobi-area students, hospital patients and residents gain access to safe, reliable fluoride-free water through collaboration with Water Solutions, USAID and the Little Sisters of St. Francis

With a population of 46 million, 41 percent of Kenyans still rely on unimproved water sources, such as ponds, shallow wells and rivers. And, only nine out of 55 public water service providers in Kenya provide a continuous water supply, leaving locals in search of their own solutions to meet this basic human need.¹ In Kasarani, Kenya – a residential district within the capitol city of Nairobi – the Little Sisters of St. Francis (LSOSF) were determined to provide safe, potable water to St. Francis Hospital Training Center.

More than half of the groundwater in Kenya contains dangerously high levels of fluoride, which has resulted in an estimated 20 million Kenyans who

suffer from teeth and bone fluorosis. In an attempt to access an underground reservoir, LSOSF initiated a borehole with a rig shelter. Borehole water typically contains large amounts of fluoride, and, unfortunately, the concentration in their water was far above safe levels.

LSOSF reached out to the U.S. Agency for International Development (USAID) and their Kenya-Integrated Water, Sanitation, and Hygiene (KIWASH) Project for assistance. Together, they formed a cooperative team that included Water Solutions and Davis & Shirliff, a regional East African contractor, to commission the installation of a filtration system that would remove the fluoride from their drinking water source.

Through this partnership, Water Solutions donated their extensive water purification expertise, as well as high-recovery water purification technologies: PVDF ultrafiltration units for pretreatment and a nanofiltration train for further purification and fluoride removal.

“This was a challenge that could not be easily addressed by USAID or KIWASH alone,” said Joe Sanders, USAID/KIWASH Chief of Party. “In collaboration with Water Solutions and LSOSF, we were able to meet the immediate needs of the hospital and help improve the quality of life for the broader community who face similar water quality and accessibility issues.”

¹Source: Water.org



Installed in just 20 days, the new water treatment facility can produce approximately 44,000 gallons of purified drinking water per day. USAID also provided direct infrastructure investments, including pipeline expansion, an efficient pumping system and construction of water kiosks to increase water access to the neighboring community. Together, Water Solutions and USAID offered training to various engineers onsite, to ensure the sustainability of the project.

The U.S. Under Secretary of Commerce, Gilbert Kaplan, and the U.S. Ambassador to Kenya, Robert Godec, were among the guests in attendance at the plant's commissioning ceremony in June 2018. In seven months' time, the facility has produced approximately 2.8 million gallons of clean water.

"Our first connections were to the hospital, the local schools and the refugee programs," said Sister Waithera, LSOSF. "It is wonderful to see our patients enjoying safe, clean water, and our pupils are very excited. Once the parents became confident in our water quality, our school quickly filled to capacity with new students."

Soon after startup, the Sisters started selling water to the community through the kiosks. A water ATM machine was installed at the kiosks in January 2019 to automate the process, allowing residents to purchase clean water 24 hours a day. Now, the kiosks are used by 50 - 75 customers every day.

"This project serves as an example of how we can apply technology and expertise to encourage the growth

of sustainable communities and advance human progress," said Dave Govender, Managing Director, Water Solutions East Africa. "Partnerships like these are key to developing a more equitable, long-term water future."

The project has become a reference point for other communities and organization in the region – in fact, LSOSF regularly host visitors interested in learning about the innovative clean water program.

"Water is life. Thanks to the partnership initiated by Water Solutions and USAID, our long-awaited need for safe, adequate drinking water has been met," said Sister Irimina Nungari. "One day soon, we hope to package our water and distribute it far beyond Kasarani so we can serve as many people as possible."

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Sister Esther Waithera
Little Sisters of St. Francis



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