

Sandra Hayes



## Pump & Play

Finding potable water can be a difficult task for rural communities in sub-Saharan Africa. South African nongovernmental organization Roundabout Water Solutions (RWSSA) found an innovative method for communities to pump and store clean drinking water: playground equipment that doubles as a pumping apparatus. Raissa Rocha, editorial intern at *Water Quality Products*, recently checked in with Sandra Hayes, administrative and donor relations manager at RWSSA, to discuss the systems and the organization's efforts.

**Raissa Rocha:** How do these systems work?

**Sandra Hayes:** The PlayPump is a children's roundabout (merry-go-round) that is installed above a borehole. As the children play on the roundabout, water is pumped into a 2,500-liter (660-gal) storage tank accessible by tap. Water can then be drawn off either at the time the children are playing, or later from the storage tank.

**Rocha:** Who came up with the concept?

**Hayes:** A South African farmer, so it is an African invention for an African problem. In 1989 [PlayPumps Intl. founder] Trevor Field had stumbled upon a model of a roundabout attached to a water pump at an agricultural fair outside of Johannesburg. He saw that this could be a sustainable, child-friendly solution to address the need for more clean drinking water, a problem in the region. [Field] also decided to add a high-capacity water storage tank that could hold billboard spaces for advertising and public service announcements.

Roundabout Outdoor was launched to manufacture and install the new product, and Roundabout Water Solutions is the NGO enabling others, such as individuals, foundations, governments and companies to help donate PlayPump water systems to rural schools and communities in Africa.

**Rocha:** How do you determine where you will install a system?

**Hayes:** We install in South Africa, at primary schools where there is an existing borehole with a broken pump, where there is no other source of potable water and where the school and community often have to rely on collecting their water from rivers and dams, which are also used by animals for drinking, thus [causing] cases of waterborne diseases like diarrhea.

Testing is done for bacteria and chemicals on each borehole to ensure the water is fit for human consumption and also to ensure the flow would be sufficient to meet community needs. We [also] have installed in Malawi, Swaziland and Lesotho, but at present are concentrating on South Africa.

**Rocha:** How are projects funded and what have been the results thus far?

**Hayes:** The project is funded by donations from local South African companies and organizations overseas. To date we have installed more than 1,800 PlayPumps but there are still more than 3,000 schools in South Africa that do not have clean drinking water. Due to reductions in donor funding, at the moment we are waiting to continue in other countries such as Mozambique, Swaziland, Zambia, Lesotho and Malawi.

**Rocha:** How do you find enough

volunteers on a regular basis to keep the tank filled?

**Hayes:** We install the PlayPumps at schools where there are a minimum of 250 children to play on them. This number ensures that there are always children happy to play on it.

**Rocha:** How much merry-go-rounding does it take to fill a water tank?

**Hayes:** This depends entirely on the depth of the borehole and the quantity of water in that borehole. In a best-case scenario, a PlayPump can bring up 1,400 liters (370 gal) per hour, but in some cases the borehole is deeper or there is a need to restrict the amount of water brought up to ensure the borehole is not pumped dry and therefore each turn of the PlayPump would bring up less water. It depends on the borehole results. *wqp*

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