Supportive Environments for Healthy Communities

Issue 73 October 5, 2012 | Focus on Water Technologies

This issue features 2012 manuals, reports, and blog posts about several water-related technologies. Future issues of the Weekly will feature other water and sanitation technologies. Resources include published manuals and reports as well as blog posts that feature new and innovative technologies such as the WaterWheel and PackH20. Some of the technologies covered in this issue are chlorine dispensers, hand washing stations, rainwater catchments, and rope pumps.

Please let WASHplus know at any time if you have resources to share for future issues of WASHplus Weekly or if you have suggestions for future topics. An archive of past Weekly issues is available on the WASHplus website.

OVERVIEWS/WEBSITES

- **Guidelines and Tools for Rural Water Supplies**, 2012. S Smith, Rural Water Supply Network. (Full text)|
  This directory consists of 42 sets of guidelines, manuals, and toolkits about the delivery of rural water supply services. Each resource has been categorized by its primary audience—international, national, organizational, or other. Icons and a summary table help users find guidelines relevant to their task. Links and references are provided to help users find the original documents quickly and easily.

- **Rural Water Supply Design Manual, Volume 1**, 2012. The World Bank. (Volume 1, pdf)
  The purpose of this manual is to introduce readers to the key design concepts of waterworks facilities. Geared toward nontechnical readers—managers and operators of small water supply systems rather than designers/builders—the text of Volume I will provide users with the background they need to engage in decision making and discussions with technical consultants and contractors in the field.

- **WASHtech**. IRC International Water & Sanitation Centre. (Website)
  The overall development objective of this new project is to strengthen sector capacity

to make effective investments in new technologies through research and development of a framework, which assesses the potential of new technologies introduced into innovative decentralized systems.

- **Water Supply: Sustainable Technologies**. WaterAid. (Link)
  This web page highlights WaterAid approaches that promote the use of technologies that are low cost and within the technical capacity of the benefitting community to operate and maintain. It also promotes the use of locally sourced materials and spare parts that can be easily purchased and transported.

HAND WASHING STATIONS

- **Enabling Technologies for Handwashing with Soap Database**. Water and Sanitation Program. (Website)
  Searching this database using the terms "handwashing stations" retrieves photos and descriptions of 16 different examples of hand washing stations and tippy taps.

- **Happy Tap: Handwashing Device Commercialization**. WaterSHED. (Link)
  Happy Tap is an innovative fixed-place handwashing device that blends durability and low cost with the unique preferences for functionality and aesthetics that base-of-the-pyramid consumers requested.

- **Togo – Children Design Hand Washing Stations**, 2012. UNICEF. (Video)
  This video shows winning entries by students of a hand washing contest organized by UNICEF/Togo.

HOUSEHOLD WATER TREATMENT

- **Dispensers for Safe Water Making Huge Strides in Kenya**. *WASHfunders Blog*, June 2012. (Blog post)
  This guest post was authored by Alexandra Fielden, policy coordinator for Dispensers for Safe Water at Innovations for Poverty Action (IPA). She discusses the benefits of IPA's Chlorine Dispenser System, an innovative water treatment solution, and how the system has been implemented in villages in western Kenya.

- **WASHplus Household Drinking Water Quality Updates**. (Link)
  This blog contains manuals, peer-review studies, videos, etc. about household water treatment technologies such as SODIS, Biosand filters, etc.

MOBILE PHONES

- **mWASH: Mobile Phone Applications for the Water, Sanitation, and Hygiene Sector**, 2012. Pacific Institute. (Full text, pdf) This report reviews the potential of mobile phones to improve governance in the development sector—a field termed "mobile phone for development" or M4D—with a special emphasis on the

water, sanitation, and hygiene or WASH sector.

RAINWATER CATCHMENTS

- **How to Make a Model Rainwater Harvester**, 2012. WaterAid. (Full text, pdf)
  These guidelines show you how to make a model to explain and demonstrate a rainwater harvester. The model can be as big or as small as you like, depending on the materials available.

- **Life-Cycle Costs of Rainwater Harvesting Systems**, 2011. C Batchelor, IRC International Water and Sanitation Centre. (Full text)
  Rainwater harvesting (RWH) is a centuries old technology that has the potential to play an increasingly important role in improving and sustaining water services delivery in many parts of the world. In the study reported here, the comparative utility and benefits of RWH are assessed from a life-cycle costs perspective. In addition, the study looks into historical trends and drivers of RWH adoption, and the life-cycle costs of RWH systems compared to life-cycle costs of other water supply systems.

- **Rainwater Harvesting Technical Brief**, n.d. WaterAid. (Full text, pdf)
  Rainwater can be collected from most roofs. Tiled roofs or roofs sheeted with corrugated mild steel, etc. are preferable, since they are the easiest to use and provide the cleanest water. Thatched or palm leafed surfaces are also feasible; although they are difficult to clean and can often taint the run-off.

- **Small Household Ferro-Cement Tanks**. Akvopedia, Aug 2012. (Link)
  The small ferro-cement tank or pitcher is a simple type of tank with several uses. It can be used as a triple septic chamber. It can also be used as an underground tank or domestically for water storage and can be produced in various different sizes to suit a particular need.

ROPE PUMPS

- **Increasing Children's Access to Safe Drinking Water through Low-Cost Technologies in Mali**, 2011. Oxfam. (Full text)
  This paper aims to share Oxfam's experience working in partnership with local authorities, communities, and other organizations to provide WASH facilities to villages and schools, using low-cost water technologies. In Mali, a pilot project has introduced the rope pump—a new, low-cost, easy-to-maintain type of technology, which has increased access to water and contributed to an increase in enrollment and better child health.

WATER STORAGE

- **An Engineer's Guide to Domestic Water Containers**, 2011. B Reed, WEDC. (Link)
  This booklet examines the range of domestic water containers commonly found in low-

income countries and explores the role that water containers have in ensuring that household water supplies are adequate and safe.

- **PackH2O Water Backpack to Be Showcased**. *New York Times, Oct 2012.* (Link)
  PackH_2O is a low-cost, durable water backpack that addresses the "Achilles' Heel" of the global clean water challenge—the human transport of clean water from access point to home in developing economies. More than 3,000 families in Haiti, Guatemala, Kenya, and Uganda currently use PackH_2O to easily carry up to 20 liters of clean water from access point to home.

- **Safe Storage of Drinking Water in Developing Countries**. Centers for Disease Control & Prevention. (Full text, pdf)
  This technical note gives brief descriptions of jerry cans, the Oxfam Bucket, and other methods for storing water in a hygienic manner.

- **Wello WaterWheel: A Social Enterprise That's Easing the Burden of Water Carrying Women Worldwide**. *Entrepreneurs for a Change, July 2012*. (Link)
  WaterWheel allows users to roll 25 gallons of water—which would otherwise weigh about 200 pounds—at a time. This allows women to transport more water in a single trip. Fewer trips to collect water means that women have more time to spend on income generating activities.

WELLS

- **Hand-Dug Wells in Tigray**, 2012. The Water Channel. (Video)
  This video taken in Kifle Awlaelo, Tigray Province, northern Ethiopia, follows the digging and shaping of a new well by 26 families to serve their community. Following the soil and water conservation measures taken in Tigray over the past 20 years, groundwater tables have risen making it easier for communities to access groundwater resources.

- **A Hidden Resource**, 2012. IRC International Water & Sanitation Centre. (Link)
  This report brings together the findings of two complementary research studies on the role of self supply in rural water services provision in two different regions of Ethiopia. It aims to help fill some of the gaps in knowledge about the existing performance of traditional wells, especially water quality, and the reasons that motivate families to build, improve, and maintain their own water sources.

- **Supervising Water Well Drilling: A Guide for Supervisors**, 2012. D Adekile, Rural Water Supply Network. (Full text)
  This guidance note assists geologists and engineers in charge of the supervision of borehole construction as well as project managers. It can be used to prepare for training and as a manual. It details the responsibilities of the drilling supervisor at the different stages of borehole construction and explains the actions to be carried out at

each stage that will ensure that the driller delivers the borehole as specified in the contract.

Each WASHplus Weekly highlights topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus knowledge resources specialist, at dacampbell@fhi360.org.

About WASHplus - WASHplus, a five-year project funded through USAID's Bureau for Global Health, creates supportive environments for healthy households and communities by delivering high-impact interventions in water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses proven, at-scale interventions to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit **www.washplus.org** or email: **contact@washplus.org**.