

# Water Drops

## CLEAN WATER FOR SCHOOLS PROGRAM SPOTLIGHT: REVISITING UTHANYA PRIMARY SCHOOL – TWO YEARS LATER

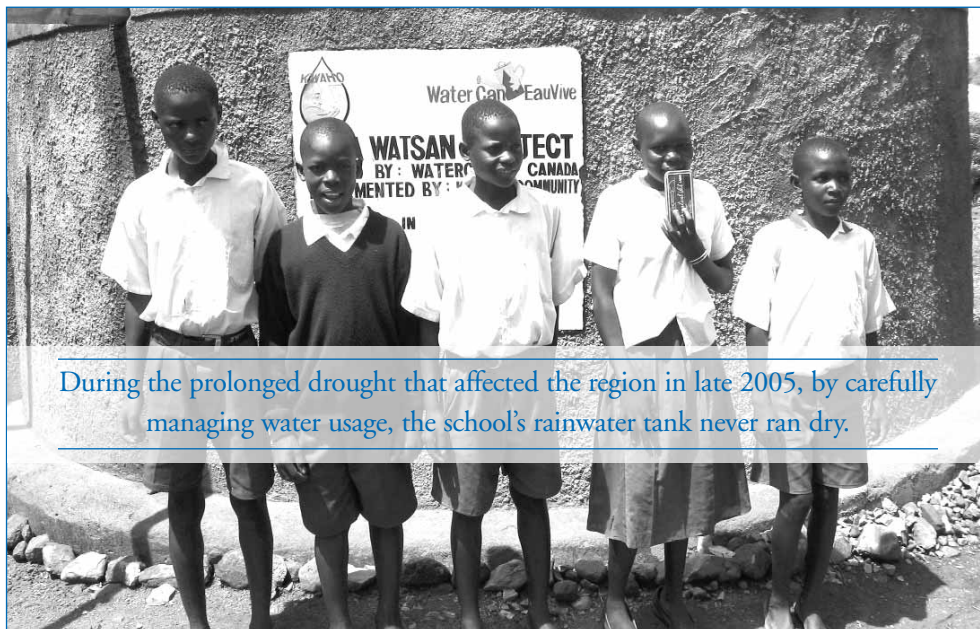
By George Yap, Program Director

Water, water, water.  
Water is life.  
Without it there will be no life.  
Without it,  
Mankind and plants will come to an end.  
(a poem recited by students from  
Uthanya Primary School, western Kenya)

In 2003, WaterCan began working with the local non-governmental organization Kenya Water for Health Organization (KWAHO) to provide water supply and sanitation services to poor communities in rural areas of Siaya District in western Kenya. Central to these efforts was assisting local primary schools. In early 2006, I had the opportunity to revisit one of the schools, Uthanya Primary, to see how things were progressing. Upon arriving, I was warmly greeted by Head Teacher Paul Okelo, whom I had met two years previously. Established by the local community in 1973, the modest school has eight mud-walled classrooms. It currently has over 300 pupils taught by seven dedicated teachers.

As we toured the school, Mr. Okelo explained that the development of water and sanitation facilities has created a tremendously positive learning environment for the children. Previously, the school had only two run-down latrines for boys and girls. As a result, pupils wasted a good part of their school day queuing to use them. The older pupils often chose to use the surrounding bush, upsetting the school's neighbours. The construction of four new ventilated improved pit latrines has greatly improved the situation.

Water was also a big challenge facing the school. Previously, pupils and teachers had to draw water from a polluted stream about two kilometres away, taking precious time and energy from learning and teaching. With the construction of a new 40,000-litre rainwater tank, this is no longer necessary. I learned that



During the prolonged drought that affected the region in late 2005, by carefully managing water usage, the school's rainwater tank never ran dry.

Students at Uthanya Primary School in front of a 40,000-litre rainwater tank.



Performance in the annual district examinations improved remarkably when students gained access to clean water and sanitation facilities.

even during the prolonged drought that affected the region in late 2005, by carefully managing water usage, the school's rainwater tank never ran dry. The formation of a school health club has also helped promote good hygiene practices

among pupils such as washing hands after using the latrines.

Since the water supply and sanitation facilities were installed 18 months ago, Mr. Okelo believes they have greatly helped improve the academic performance of Uthanya's pupils. In his modest dirt floor office, the head teacher proudly showed me the school's official performance ranking in the annual district examinations, which improved from 218<sup>th</sup> to 196<sup>th</sup>. This is an especially impressive achievement considering Uthanya's large class sizes, and the fact that even the most basic school supplies, such as paper and pencils, are often in short supply. Mr. Okelo adds that with these improvements, the students' parents and the general community are more keen to support the school because they see, more than ever, how doing so will help their children gain the skills for a better future. ☒

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WaterCan/EauVive Corporation publishes WaterDrops two times annually. Contributors to this edition of WaterDrops include: Marie Abbott, Michael Coo, Bob Strachan, Gary H.J. Pluim, George Yap, Jennifer Davis, Judy Lincoln, Emilie Hayes

WaterCan is a registered Canadian charity dedicated to providing clean drinking water and basic sanitation to the world's poor. Since its creation in 1987, WaterCan has assisted more than one million people.

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WaterDrops welcomes letters and comments from its readers. Please address all correspondence to WaterCan.

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WaterCan helps citizens of developing countries build sustainable water supply and sanitation services, and encourages Canadians to lend support.  
**Vision:** "Clean Water for All!"  
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## Letter from the Executive Director

The autumn season holds special significance for me, as the western hemisphere celebrates Thanksgiving. In reflecting on the highlights of recent months, I couldn't help but feel grateful for our supporters and how they continue to make a difference in the face of a growing gap between the rich and poor. I hope you will enjoy and reflect on the fascinating anecdotes, personal testimonies, and facts and figures that are in WaterDrops. Every article and picture is intended to be of interest and educational.

This edition of WaterDrops is no exception in relating stories of people for whom we at WaterCan are grateful – people who have made positive contributions to those who are vulnerable:

- Sixteen-year-old Marie Abbott, advocating for WaterCan, as she reports on visiting our project in Dar es Salaam
- Michael Coo, who completed the Tour d'Afrique while raising funds for WaterCan. We are amazed at the perseverance it took to cycle 12,000 kilometers through heat, drought, and danger; cognizant of the fact that the people he saw along the way were the very same people he would be helping
- Jennifer Davis, intensifying her resolve to make a difference for the people in developing countries, as she shares impressions of her visit to Ethiopia – the facts and figures becoming real to her.

Over the past year, board and staff members have been putting plans in place for the 20<sup>th</sup> anniversary of WaterCan, which will center on the vision of "Clean Water for All". It is our hope that 2007 will be a year of continued growth, renewed energy, reflection and education. In preparation for this celebration, if you, or someone you know, have a story or anecdote about WaterCan's history, we would love to hear from you.

An added bonus to our anniversary plans came by way of the Community Service Learning Program at the University of Ottawa. We have been assigned two students who will assist in archive research and in compiling a comprehensive history of WaterCan. Under the supervision of their university professors, these students will contact key alumni and personnel for historic information. Now is the time to capture this while we are still young at heart!

In closing, I would like to extend appreciation to our stakeholders, donors, and the board of directors for making 2005-2006 another successful year. We at WaterCan are thankful that you share in our vision of "Clean Water for All!"

Gary H.J. Pluim,  
*Executive Director, WaterCan*

**WaterCan is pleased to welcome the following individuals to our Board of Directors. Thank you for your contribution to our vision of: "Clean Water for All!"**



**Katherine Thomas**  
B.Comm (Hons)  
Senior Partner, Hamilton,  
Thomas & Associates, Ltd.



**Arlene McKechnie, BSc (Hons), LL.B.**  
Corporate Counsel, Mitel  
Networks Corporation

## Give the gift of clean water this holiday season

The season of giving is almost upon us and once again we are faced with the dilemma of what to get those special people in our lives. This year, why not include the gift of clean water? For \$25 you can provide clean water, sanitation and hygiene education to one person in a developing country. You can make your donation online or by calling our office. We will then send a certificate or card that notifies the recipient that you have made a donation in his or her name. Remember to make your donation by December 8<sup>th</sup> to guarantee delivery by December 25<sup>th</sup>.

**AN ETHIOPIAN JOURNEY** By Jennifer Davis, Communications and Events Coordinator

As communications coordinator, I am frequently called on to speak about WaterCan and our work overseas. Until recently, when asked, "Have you been there?" I had to say no - certainly lessening the impact of the discussion.

Before I went to Ethiopia, I knew the facts. Two years experience at WaterCan, a degree in Environmental Science, and much supplementary reading confirmed this. However, upon my return I felt lost for words when asked basic questions. Given the trip's purpose, this was slightly concerning.

Soon after, I was asked to give a presentation at WaterCan's Annual General Meeting. Its preparation forced me to examine the myriad of thoughts and emotions generated by the trip, allowing me to present what is hopefully a thoughtful description of some of WaterCan's Ethiopian efforts and an answer to the most-asked question - "How do I feel?"



**Water Action Field Visit**  
**Dessie area, 400km northeast of**  
**Addis Ababa, elevation: approx.**  
**2,300 m.**

All of WaterCan's overseas projects include three important and inter-related components: water supply, sanitation, and hygiene promotion. While most people equate water supply with wells, alternatives include protected springs and rainwater tanks. It is the role of WaterCan's local partners and recipient communities to determine which option best suits their needs.

Near the town of Dessie, WaterCan and local partner Water Action rehabilitated an existing protected spring, added a reservoir for continuous supply, and constructed three remote distribution points called standpipes. Constructed with four taps to shorten wait times, the standpipes allow containers to be rested during filling, and runoff to be directed to vegetable gardens and cattle troughs (see photo #1).

As George Yap, our Program Director, taught me, sanitation can be thought of as a ladder: the bottom rung being open field defecation and the top being a traditional toilet. There are many different types of facilities and again, it is



1. Constructed with four taps to shorten wait times, the standpipes allow containers to be rested during filling, and runoff to be directed to vegetable gardens and cattle troughs.



3. Jennifer receiving flowers from community members after a discussion session. Gift giving is a proud part of Ethiopian culture.

"We now wash our clothes frequently".  
 "Now we (the women) have more time to do other things like clean, cook and take care of our children".

each partner organization, in consultation with community members, who determine which type of facility is most appropriate, considering geography and social norms. The latrine in photo #2, constructed by a member of the community's water management team, serves as a model for other community members. Its owner explains the benefits and helps others construct latrines for use by their families. Changes to behaviour, such as moving from open field defecation to the use of a latrine, are incredibly difficult to affect, but such changes occur with more success when implemented in this demonstration fashion.



2. Constructed by a member of the community's water management team, this latrine serves as a model for other community members.



4. Jennifer and women from the community of Werebabo, near Dessie.

After viewing the water system, George and I sat down to talk with the local community members (photo #3) and hear their thoughts about the changes the project brought to their community. Through a translator we heard some very interesting observations:

"Before, when we only had one pipe, we had to wait hours to collect water...now there is no more wait..."

Because there is only one flight a week from Dessie to the capital, we made our way back to Addis Ababa by truck. During the seven-hour trip, I relished the opportunity to sit back, take in the beautiful scenery and watch farmers sow their fields, kids play in the streets, and baboons climb steep gorges.

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## AN ETHIOPIAN JOURNEY (continued)

### Chesire Foundation Ethiopia Field Visit

Addis Ababa, elevation: 2,600 m.

WaterCan's partner in Addis Ababa took us to see a project site located in an informal settlement (urban slum) area that is elevated from the city proper. The distribution point shown in photo #5 is connected to the municipal water system. However, because of its elevation, water rarely was accessible during the day. Part of the WaterCan project involved the construction of a reservoir on top of the distribution point, allowing water to fill up at night, providing access all day long. WaterCan will only support projects that emphasize community participation and decision-making by both men and women.



5. Part of the WaterCan project involved the construction of a reservoir on top of this distribution point, allowing water to fill up at night, providing access all day long.

Upon viewing the project's sanitation facilities (photo #6), we were very impressed that hand washing facilities had been constructed as part of the latrine itself, demonstrating innovation on the part of our partner.



6. Chesire Foundation constructed hand washing facilities as part of the latrine.

### COWDO Field Visit

200 km south of Addis Ababa, elevation: 2,281 m.

Visiting Meskan district in southern Ethiopia was tremendously exciting as I saw my first borehole well being drilled (photo#7). The result of several months of planning, WaterCan's partners and hired technicians worked together to accomplish this amazing feat in one day.



7. Drilling a borehole well.

It was near this site that I was able to go inside the home of a project beneficiary. Outside the dwelling, the sanitation and hygiene posters developed by our partner were posted. Hygiene promotion refers to a wide range of activities that encourage people to change behaviour to reduce their vulnerability to water- and sanitation-related diseases. Examples include drinking water only from safe sources, proper disposal of human waste, storing and protecting drinking water from contamination, washing hands after going to the toilet and before handling food.

In this particular home there was a sleeping area, cooking area, an area for coffee and one for cattle. The few dishes were either hung on the wall or placed on a shelving unit made out of the same material as the dwelling – a mixture of dung, straw and mud. Letters and pictures were drawn on the walls in chalk, announcing the presence of young children.

Close by we visited a water distribution point with a twist. Our partner found that if pumps are used to their full range of motion, they suffered wear and tear more quickly. So, rather ingeniously, they fashioned a restriction system. Two branches laid horizontally act to restrict the range of motion of the pump, (photo #8) while not reducing water flow. A simple, inexpensive, and easy to replace solution. I doubt we could have come up with something so uncomplicated.



8. A pump with a twist - two branches laid horizontally act to restrict the range of motion of the pump and extend its lifespan.

So to answer the question “How do I feel after this trip?”

Practically, the trip was incredibly successful. It was always somewhat difficult to talk about places, people and projects that I hadn't seen myself. I now have a great batch of personal photos, anecdotes, audiotape and memories that will serve me well in the upcoming season of speeches.

Emotionally, I struggled with the reality of the divide between our standards of living and how much we take for granted here.

In particular, there is one memory from the trip that deeply affected me. I was standing in a grade 2 classroom, filled with students singing me their alphabet. As I looked around, I saw a boy, or rather a man, at the back of the room, joining in with the class. For long after, this image saddened me because I knew how difficult life was for him, and yet, there he was trying to better himself in the face of seemingly insurmountable obstacles.

Then, after reading a quote by someone much smarter than me, I realized that I attaching the wrong emotions to this image. The quote was this:

“Hope doesn't come from calculating whether the good news is winning out over the bad. It's simply a choice to take action.”

It is this choice, the choice of action, that all of us in choosing to work with WaterCan make everyday. Without a doubt, this trip helped me realize how truly important this choice is. ☐

## IMPROVING WATER AND SANITATION CONDITIONS FOR KAMPALA'S URBAN POOR

By George Yap, Program Director

Following a prolonged period of upheaval, the last 20 years have been a time of remarkable achievement for Uganda, which now enjoys one of the strongest economies in sub-Saharan Africa. However, widespread poverty remains a major challenge. With one of the lowest water and sanitation coverage rates in the world, barely half the population has easy access to clean drinking water. One in five Ugandans cannot access some kind of toilet. As a result, the inability to properly dispose of human waste is one of the major causes of water pollution.

Kampala, home to more than one million Ugandans, is an attractive city that sprawls over seven hills, the tops of which are home to the wealthy and connected. The poor live in informal settlements (urban slums) in the flood prone low-lying areas. Because these areas are informal (not planned) and fragmented, the provision of water and sanitation infrastructure is particularly challenging for the local public water utility. High connection costs, and high prices charged by private or third party vendors, make it difficult for poor residents to access clean drinking water.



A typical neighbourhood in Lubaga's informal settlements.

In 2005, WaterCan began working with a local non-governmental organization called Community Integrated Development Initiatives (CIDI) to help bring clean water to residents living in Kampala's informal settlements. In Kampala's western area, Lubaga Division was identified as a high priority.

With an estimated population of 300,000, Lubaga is one of the city's most densely populated areas. Most residents earn less than a dollar a day and suffer from poor living conditions, poor health, and lack of access to basic social services. The HIV/AIDS epidemic has hit the community hard; orphaning over 20,000 local children. While about half the households have access to piped water, the municipal water network often experiences low water pressure,

impacting supply. As a result, the poorest households commonly fetch water from other sources including unprotected wells and distant springs.

To address the situation, WaterCan and CIDI initiated a water and sanitation project to assist residents of three of Lubaga Division's most disadvantaged parishes – Kasubi, Nakulabye, and Nateete. Preliminary sensitization and mobilization meetings were carried out with local leaders and residents, helping to identify locally appropriate water supply and sanitation technology options and facility locations. Local leaders, including councillors representing all 13 parishes of Lubaga Division, received training in planning, budgeting and resource mobilization. Good cooperation with local officials ensured that the project proceeded smoothly and without delay.



Residents of Lubaga meet to tackle the community's water and sanitation problems.

### Improving residents' access to clean drinking water

Drawing on the community consultation results, several hundred metres of high-pressure water lines were laid, connecting two newly constructed water kiosks to the main municipal water supply network. Each water kiosk has two taps and is managed by an attendant who collects water fees and keeps the facility clean and properly maintained. Each night before closing, the attendant reads the water meter to ensure that the day's water fees match the volume of water sold, and later, the monthly water bill sent by the municipality.

During a recent visit to Lubaga, I had the pleasure of officially opening one of these kiosks. As we walked around the neighbourhood, Mrs. Alice Zalwango, the Councillor for Nakulabye Parish, told me how the project helped the community come together. From women and children, I learned that the kiosks significantly reduce the time and distance required to fetch water and help alleviate

the large queues at existing water-points. Previously, people paid 100 Uganda Shillings (USh) (\$0.06) to fill a 20-litre jerry can; today, residents can purchase three jerry cans of water for the same price. While the poorest residents still favour a pay-as-you-go method, households now have the option of a monthly user fee. With water more affordable and accessible, residents are able to keep their homes cleaner and bathe and wash clothes more frequently. Small businesses such as restaurants and shops without water connections also benefit from the local water sources.

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Previously, people paid 100 Uganda Shillings (USh) (\$0.06) to fill a 20-litre jerry can; today, residents can purchase three jerry cans of water for the same price.

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While the community's contribution of subsidized labour resulted in significant savings, one of the project's most challenging aspects was getting local landlords to allow feeder pipes on their property free of charge.



Residents help dig trenches for water feeder pipes.

### Improving local environmental sanitation conditions

The challenges in Lubaga are made worse by the general lack of sanitation facilities and information on good hygiene practices. The absence or inadequacy of toilet facilities makes environmental conditions in some areas appalling. Not surprisingly, outbreaks of typhoid, dysentery and even cholera are common.

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## IMPROVING WATER AND SANITATION CONDITIONS FOR KAMPALA'S URBAN POOR (continued)

To address this, CIDI promoted two types of sanitation technologies in Lubaga. In Nakulabye Parish, a six-stall ventilated improved pit (VIP) latrine block with bathing rooms was constructed. In another area prone to seasonal flooding, an aboveground four-stall "eco-san" composting toilet block, also with bathing rooms, was constructed. After holding several meetings, the community decided to set a user fee at 100 USH (~ \$0.06) per visit, or a monthly flat fee of 3,000 to 5,000 USH (~ \$1.80 to \$3.00) depending on the size of the household. To facilitate the management and operation of the sanitation services, households were assigned a specific stall in the block.



A community "ecosan" toilet block nears completion.

The construction of water supply and sanitation facilities constitutes one of the easier aspects of the project. Ensuring that community members have the necessary organization and skills to sustain the facilities without WaterCan and CIDI's involvement is a much more complex challenge. At each site, five respected community members; at least two of whom are



A water kiosk attendant sells water to local residents in Lubaga.

women, were selected and trained as User Committees to ensure proper operation and maintenance. These committees are, in turn, integrated into local governmental planning bodies, further ensuring the project's long-term effectiveness.

During the meetings, residents frequently discussed garbage-related issues. One key problem identified was the indiscriminate disposal of waste and the resultant clogging of drainage channels and stagnant pools of polluted water. To help alleviate flooding problems in Nateete Parish, residents were organized into work groups and provided with wheel barrows

and hand tools such as shovels, rakes and hoes to de-clog drainage channels. However, in greater Lubaga, efforts to address waste problems have been hampered by the lack of garbage skips in the area. Unfortunately, even if more skips were available, the inconsistency of municipal garbage collection services discourages residents from offering land for the skips. Some households have attempted to earn a living by using solid waste to make and sell charcoal briquettes for cooking, as a cheaper alternative to fuel wood or paraffin.

### Promoting good hygiene practices in Lubaga

To help promote good personal hygiene practices, a series of community workshops were organized. Over 1,000 residents learned key messages such as the importance of hand washing after going to the toilet and before handling food, making sure containers used to collect and store drinking water are kept clean, and keeping open water covered. Various training methods were used including skits, music and poems. To support hygiene outreach activities in the wider community, 35 local residents (75% of whom were women) were provided with additional training to conduct community education sessions. In Nakulabye Parish, local community health workers mobilized residents to raise 150,000 USH (~\$90) to empty the only existing public toilet. In Nateete Parish, community health workers have been able to encourage many local families to ensure they have proper drinking water storage facilities in their homes. ☐

## WaterCan's 12<sup>th</sup> annual Embassy Dinner a great success!

We greatly appreciate the efforts and generosity of all those involved with the 12<sup>th</sup> annual Embassy Dinner, presented by MDS Nordion on Friday, May 5<sup>th</sup>, 2006. Certainly the capital city's most exciting culinary experience, it is also one of its most successful charitable events, raising an amazing \$132,000! To learn more about the results, please visit [watercan.com](http://www.watercan.com).

Our photographer Lois Siegel, of Lois Siegel Productions, took many beautiful and colourful photos at the event and has generously made them available for viewing and download on her website: <http://www.siegelproductions.ca/ottawarocks/embassydinner.htm>.

### Embassy Dinner Acknowledgements

43 Embassies and High Commissions  
650 guests  
19 live auction donors  
128 silent auction donors  
Over 100 planning and event volunteers

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**Do mark your calendars for the 13<sup>th</sup> annual Embassy Dinner, taking place Friday, May 4<sup>th</sup>, 2007.**



## A VISIT TO TANZANIA By Marie Abbott, guest author; age 16, Whitehorse, Yukon

When I was 12 years old, I attended the United Nations International Children's Conference on the Environment and heard a presentation by Ryan Hreljac, the founder of the Ryan's Well Foundation. This was the first time that I realized how lucky we are in Canada to have access to clean water.

However, I never truly appreciated this incredible gift until I travelled to Tanzania in August 2005 as a grand prize winner of the Canadian International Development Agency's Butterfly 208 contest ([www.bp208.ca](http://www.bp208.ca)). I had the opportunity to learn about many international development issues first hand and visit a number of projects and organizations. One of these was WEPMO, a local organization in Dar es Salaam that works in partnership with WaterCan.

We spent an afternoon with WEPMO staff and learned about the important work they do. I learned the successful provision of clean water involves much more than the installation of wells and reservoirs.

Sanitation systems need to be established to ensure that clean water remains clean. WEPMO works to fulfill this need by installing ecosans (above ground ecological sanitation toilets) in five communities in Dar es Salaam.

Hygiene education is another integral part of WEPMO's work. Children play a key role in disseminating knowledge in a process similar to that of a spider weaving its web. At school, children learn proper hygiene and sanitation practices then share this knowledge with their



Photograph taken by Marie Abott, winner of CIDA's Butterfly 208 contest, in Dar es Salaam, Tanzania (trip organized by Canadian NGO CODE).

family and community. WEPMO found this method worked better than trying to approach adults and asking them to change their ways. By working with the younger generation, change is happening!

While in Tanzania, I had the opportunity to see first hand the positive impacts of WEPMO's work. Their efforts to provide clean water reduce the outbreak of water-borne diseases. By involving the community in their initiatives, a sense of ownership and solidarity is created.

The Butterfly 208 contest is based on the theory that a butterfly flapping its wings on one side of the world can create a storm on the other. Our actions, though they may seem small, have the power to truly improve the lives of those who are less fortunate.

With the support of people like you, WaterCan is making a difference! ☑

## GLOBAL WATER INFORMATION

### WHO and UNICEF release new report: "Water for Life – Making it Happen"

To support the United Nations Water Decade (2005-2015), the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) released a 38-page report entitled "Water for Life – Making it Happen". The first half of this document provides a good overview of the global water and sanitation situation and identifies how dirty water and poor sanitation impose an especially heavy health and economic burden on poor people. The second half of the document summarizes specific actions and interventions that national governments, donor agencies, and non-governmental organizations can take to make progress on these issues.

The full report can be downloaded from: [www.who.int/water\\_sanitation\\_health/monitoring/jmp2005](http://www.who.int/water_sanitation_health/monitoring/jmp2005)

Key facts and figures from "Water for Life – Making it Happen":

#### Estimated drinking water and sanitation coverage (access) in developing regions (2002).

Region	% drinking water coverage	% sanitation coverage
Northern Africa	90	73
Sub-Saharan Africa	58	36
Latin America & Caribbean	89	75
Eastern Asia	78	45
South Asia	84	37
South-eastern Asia	79	61
Western Asia	88	79
Oceania	52	55
WORLD	83	58

- Over 90% of deaths from diarrhoeal diseases in the developing world occur in children under 5 years of age. A baby born in sub-Saharan Africa has 500 times the risk of dying from diarrhoea compared with a baby born in the developed world.
- Children, especially girls, mostly in Africa and Asia, are missing school because neither their homes nor their schools have adequate drinking water and sanitation facilities.
- Hundreds of millions of African, Asian and Latin American families are paying every day in lost income for their lack of access to improved drinking water and sanitation services.

## FAQ: IS THERE MORE THAN ONE KIND OF WELL?

All of WaterCan's projects involve three inter-related components - appropriate water systems, sanitation facilities, and hygiene education. The integration of these components has a tremendous impact on disease reduction. In fact, a review in 1991 of over 100 studies of the effects of clean water and sanitation on human health found that the median reduction in deaths from water-related diseases was 69% among people with access to potable water and proper sanitation.

Groundwater sources of drinking water that are reached by hand-dug or drilled wells fitted with hand-pumps are a common feature of rural water and sanitation projects in the developing world. While there are literally hundreds of different types of hand-pumps produced around the world, they can be generally divided into hand-pumps for shallow and deep wells. Shallow well hand-pumps include suction and direct action models, while deep well hand-pumps are typically lever action hand-pumps.

### Shallow Well Hand-Pumps

The suction type hand-pump is probably what most Canadians are familiar with, and works by suction whereby a plunger mechanism is located within the aboveground hand-pump. These pitcher-shaped hand-pumps were commonly used by Canadian family homesteads prior to the widespread adoption of electric pumps. Due to atmospheric pressure limits, a suction type hand-pump has a maximum pumping depth of 6 to 8 metres, so it cannot be used in places where the water table's location exceeds this range. The No. 6 Pump is a good example of a suction type hand-pump model that can be found in use in the developing world.

In contrast, a direct action type hand-pump's plunger mechanism is located in a cylinder below the level of the groundwater table. Rather than having a lever and bearing mechanism, direct action hand-pumps look like oversized T-shaped hand-pumps for automobile tires. When the hand-pump's handle is raised, the plunger lifts a column of water within a tube to the surface. At the same time, water is allowed to enter and refill the tube below the plunger. This type of hand-pump's can lift water from depths of up to 15 metres. Examples of direct-action hand-pumps include the TARA and MALDA models.

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A review of over 100 studies found that the median reduction in deaths from water-related diseases was 69% among people with access to potable water and proper sanitation.

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### Deep Well Hand-Pumps


Deep well hand-pump models such as the rugged India Mark II, Afridev, and U3 are conventional lever action models, and are commonly found in WaterCan projects. While more expensive than suction and direct action hand-pumps, deep well hand-pumps are physically more robust, can serve a larger number of people, and have pumping ranges of 10-45 metres. These models were developed as a result of extensive field-testing by researchers working in the developing world, and have been adopted by many governments as the standard hand-pump technology for medium to deep depth wells. Efforts to standardize hand-pump models in a country also have the benefits of encouraging the development of government and/or private sector spare-parts distribution networks, local manufacturing and servicing capacity, and lower production costs due to the realized scales of economy.

### Selecting the Right Hand-Pump

The selection of appropriate hand-pump technology is very important to ensure that a well continues to function properly in the long term. Key factors that influence the hand-pump type selection process include the size and preferences of the population to be served, depth of the groundwater table, and cost-effectiveness and availability of desired models of hand-pumps and spare parts. A cast-iron pump, for example, while suitable for meeting the needs of several households, would not last too long in a typical African village where the hand-pump would be expected to meet the water needs of several hundred inhabitants 12 hours a day throughout the year.

## WaterCan and Hand-Pumps

One of the most important things WaterCan looks at when developing projects is that the proposed hand-pump model has Village Level Operation and Maintenance (VLOM) capacity. Unfortunately, in many parts of the developing world, many hand-pumps are broken and inoperable since they relied on servicing by government water departments that are commonly severely under-resourced, or spare parts were not readily available or affordable. In contrast, VLOM-type hand-pump models are designed so that trained villagers – well caretakers in Uganda for example – can carry out basic operation and preventative maintenance activities without special tools and equipment.

WaterCan also requires that all wells fitted with hand-pumps have a drainage apron that properly disposes of spilt water so that it does not seep back into the ground and contaminate the well shaft and underlying groundwater table. This also prevents the formation of stagnant pools of water that can be breeding areas for disease-causing insects such as malarial mosquitoes. In some communities, the wastewater is diverted to adjacent garden plots where villagers can grow vegetables for sale in local markets. 



Deep well hand-pump models such as this rugged Afridev, and the India Mark II and U3, are conventional lever action models, and are commonly found in WaterCan projects.

## Did you know...?

A person living in Sub-Saharan Africa uses 10-20 litres a day; on average, a Canadian uses 326 litres a day.

## WATERCAN CELEBRATES ITS 20TH BIRTHDAY!

In 2007, WaterCan will celebrate 20 years of commitment to "Clean Water for All!" To mark this anniversary, WaterCan staff and board have put their heads together and developed an exciting range of events and activities to promote WaterCan across the country, increase name recognition and widen our circle of supporters.



Of primary focus is the launch of the WaterCan *Walk for Water*, a cross-Canada initiative that provides external groups such as schools, university chapters, faith-based organizations, and corporations the

opportunity to plan and implement an event in their community that will raise funds for WaterCan and awareness of the dire need for clean water and sanitation services in the developing world. During the week of World Water Day (March 22<sup>nd</sup>) individuals and groups from across the country will collect pledges for WaterCan and walk in support of clean water and sanitation projects in eastern Africa. The walk distance will have a symbolic connection to the distance travelled each day, usually by women and girls, to fetch water in African communities.

Other initiatives include the launch of a recognition initiative for outstanding contri-

butions to WaterCan and the field of clean water and sanitation in the developing world; a benefit concert in Calgary, Alberta; the re-launch of our public service announcement; and a 20<sup>th</sup> anniversary celebration at the Annual General Meeting.

If you are a long-time supporter of WaterCan and you have an interesting anecdote or story to share, we would love to hear from you. Hopefully, we can publish some in our 20<sup>th</sup> anniversary *WaterDrops* editions.

If you are interested in planning a Walk for Water in your community or for more information on our 20<sup>th</sup> anniversary celebrations, please visit the website or contact the office. ☒

## ANNUAL GENERAL MEETING

WaterCan's 18<sup>th</sup> Annual General Meeting was held on June 27, 2006, at Ottawa's Volunteer Place. It provided the opportunity for WaterCan's board of directors and staff to present the accomplishments of the past year and the audited financial statements (year-end March 31, 2006; for more information refer to the Annual Report box).

Highlights included a personal thank you from James Knight, Board Chair, to all staff and board and a presentation from Jennifer Davis, Communications and Events Coordinator, on her recent trip to Ethiopia. Gary H.J. Plum, Executive Director, showcased the year, which included reaching the \$1 million mark in

revenues. WaterCan's volunteers were specially thanked for their devotion and dedication, which helped WaterCan reach key milestones last year.

Special guests Margaret Trudeau, WaterCan's Honourary President; Abdurahim Mohammed Ali, Counsellor from the Embassy of the Federal Republic of Ethiopia; and representatives from WaterCan's corporate sponsors, joined in the celebration.

Finally, WaterCan welcomed two newly elected board members. Arlene McKechnie and Katherine Thomas were each given a three-year mandate, while Chairman of the Board, Jim Knight, had his appointment renewed. ☒



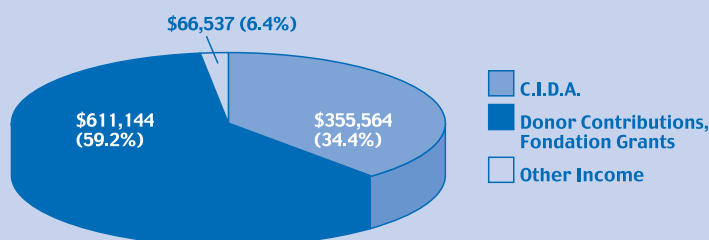
Communications and Events Coordinator Jennifer Davis presents her reflections on a recent trip to Ethiopia.

## 2005-2006 Annual Report

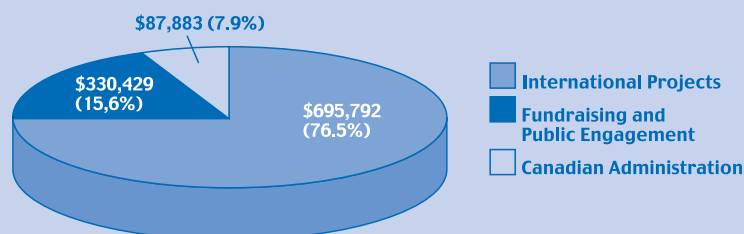
The 2005-2006 Annual Report is now available! Please visit [www.watercan.com](http://www.watercan.com) to download an electronic copy in English or French. If you would rather receive one by regular mail, please contact the WaterCan office and we will be pleased to accommodate. The report contains our audited financial statements and information on our international projects and Canadian programs. Report highlights include: • a 25% increase in donations • an overall growth of 18.2%, including income received from CIDA • a positive change in the lives of 20,000 people in Eastern Africa • an increased awareness among Canadians about WaterCan and its vision of "Clean Water for All".

### Summarized Statement of Revenue and Expenses:

2005/06 Revenue



2005/06 Expenditures



## RACING FOR WATER

By Michael Coo, guest author



Michael Coo participated in the Tour d'Afrique and raised \$6,500 for WaterCan.

We are biking across the desolate Sudanese desert, sun blazing down, temperature hovering just under 50 degrees. Our mouths are dry and salt stains decorate our gear. At this moment there is nothing more important than water, but there are no stores, vending machines or faucets here, only small mud shelters dotting the landscape. Venturing into one such shelter, my fellow bikers and I are amazed to find cool clay pots of icy-cold water. These pots are filled by rains or from local wells available for use by anyone who needs them. We sip from them gratefully and pour the refreshing liquid on our overheated heads.

This experience was far from common during the Tour d'Afrique, a 12,000 km bicycle tour from Cairo, Egypt, to Cape Town, South Africa. During this trip, I discovered that access to water that is clean and safe, available and affordable, is the key to health and

I saw first-hand how well this system works; residents have access to water that is safe and affordable, a feeling of ownership over a system they helped develop, and the pride of changing their families lives for the better.

progress. Unfortunately, throughout the continent, it is frequently dirty and dangerous, scarce and expensive.

I was riding to raise money for a WaterCan water and sanitation project in Kibera, an informal settlement (slum) in Kenya's capital Nairobi. It is, in fact, the largest such settlement in Africa. In Kibera, while the municipal water system runs through the settlement, the municipality has not invested in formal distribution points. Whether the reason is limited government resources, or the inherent difficulty in collecting fees in an informal settlement, residents are forced to rely on "private vendors" for their water needs. Most of these vendors tap illegally into the municipal system and sell the stolen water at hugely inflated prices to the people who need it most and who can least afford it. Unfortunately, this circle of poverty occurs in most urban centres throughout Africa.

When the tour arrived in Kenya, I was able to meet WaterCan's partner in Kibera and visit the project which is providing residents and school children with access to clean, safe water, sanitation facilities and better health through hygiene education. To date three connections (aka waterpoints) to the municipal system have been established. Each waterpoint is maintained by a community management team that monitors usage, charges appropriate fees (much less than those of "private" vendors) and ensures the upkeep and maintenance of the system. I saw first-hand how well this system works; residents have access to water that is safe and affordable, a feeling of ownership over a system they helped develop, and the pride of changing their families' lives for the better.

However, residents of informal settlements are still treated as second-class citizens. While I was visiting, Kenya was experiencing a fairly serious drought and the municipal water authorities decided to cut off supply to the Kibera water-



Michael visits Makina Baptist School, in Nairobi, Kenya.

points in the name of conservation. Of course the "private vendors" could still "access" the system and so, for a period of time, Kibera's residents were again forced to pay exorbitant prices for this basic human need. Uncontrollable forces such as drought and government intervention do at times affect WaterCan's projects, however, it is important to note the project's sanitation facilities and hygiene education initiatives continued.

The situation reminded me of a visit to Lima, Peru - a city that receives almost no rainfall but has over 6 million residents. I was being driven around the city by some local friends and asked what happened when the water supply was low. They gestured to the shantytowns on the hillsides surrounding the city and said, "they get cut off". It is a sad fact that throughout the world, governments continually subjugate those who need their help the most.

As I write this I am back in Toronto as we experience one of the hottest and driest summers in history. As I pour a nice glass of cold, clean water from my tap, I am reminded of Africa and how much I take this simple act for granted. If only all the people of Kibera were so lucky. ☐

## Why do you support WaterCan?

WaterCan wanted to learn about the reasons people support the organization, and so in February 2006, we sent out a survey with our quarterly appeal letter. We received 182 responses and thought it would be great to share our favourites with you. Do any of them reflect your motivation for supporting WaterCan?

- "A little donation goes a long way. You explain what difference a small amount makes. Also, you have a small overhead; so more of your money goes to the people than is the case in other charities. Finally, it's a great cause."
- "Access to clean drinking water is a basic human right. To lessen the burden of the women who must carry water long distances each day"
- "Because clean water is essential and WaterCan delivers it cheaply, makes it easy to maintain and supplies it to those who need it most. You also do not send labels, cards, or notepads."
- "Clean water is the number one priority for everyone. I have been to Africa and seen the necessity for providing something we take for granted and is wasted all too often. Of all donations, a gift of water does more good than any other."
- "I believe in the kind of help - direct and using local talent as much as possible."
- "You were mom's favourite charity, I continue in her memory."

## DONATING APPRECIATED SHARES TO CHARITABLE ORGANIZATIONS

By Bob Strachan, Investment Advisor and Financial Planner, BMO Nesbitt Burns

Charities play an invaluable role in assisting Canadians and in contributing to our sense of community. They are also important to projects in the cultural, education and social sectors.

On June 22<sup>nd</sup> 2006, Royal Assent was given to Federal Government Bill C-13 eliminating the capital gains tax on donations of publicly traded securities to public charitable organizations.<sup>1</sup>

BMO Nesbitt Burns is highly supportive of this Bill as it has the potential to generate a substantial increase in charitable giving to

health care, education, social services and culture across Canada.


### Listed securities include:

- Shares, rights, and debt obligations listed on most Canadian and certain foreign stock exchanges ;<sup>2</sup>
- Prescribed debt obligations
- Shares of the capital stock of a Canadian public mutual fund corporation
- Units of widely held Canadian mutual fund trusts
- Interests in related segregated fund trusts

### The benefits of these gifts include:

- Immediate donation receipt for fair market value of security, determined for most securities from their closing price on the date of the gift
- Favourable reductions in capital gains taxation
- Increase in the donation claim limit
- Charity pays no tax on sale
- Gifts can be given during donor's lifetime or after, through their estate.

### Securities may be transferred to a charity in either of the following ways:

- The donor delivers endorsed certificates to the charity. The gift is complete the day the certificate is delivered. A donation receipt is based on the value of the security that day.
- The donor transfers the securities from his/her brokerage account to the charity's account. The gift is complete when the securities are actually transferred to the charity's account. 

<sup>1</sup> Publicly-listed shares that are acquired under an employee stock option plan may also qualify for this incentive provided certain criteria are met.

<sup>2</sup> Securities that are listed on Toronto, Montreal and tiers 1 and 2 (but not 3) of the TSX Venture Exchange qualify for this incentive, as do those that are listed on the NYSE, Nasdaq (excluding the Over-the-Counter Bulletin Board) and most other major foreign exchanges.

	GIFT CASH	SELL SHARES & GIFT CASH	GIFT THE SHARES: CAPITAL GAIN IS NOW ELIMINATED
Proceeds/deemed proceeds of sale/donation	\$25,000	\$25,000	\$25,000
Cost	\$25,000	\$1,000	\$1,000
Capital gain (proceeds less cost)	N/A	\$24,000	\$24,000
Tax on capital gain	N/A	(21.7%) \$5,208	(0%) Nil
Donation tax credit	(\$10,000)	(\$10,000)	(\$10,000)
Net tax savings from donation (available to shelter other income)	\$10,000	\$4,792	\$10,000

## Water for Life Postcard Campaign

WaterCan's Water for Life Campaign asks Canadians from all walks of life to encourage the federal government to increase foreign aid for safe and affordable drinking water and basic sanitation for the world's poorest people. Launched on World Water Day, March 22, 2005, the campaign coincides with the United Nations International Decade for Action – Water for Life (2005-2015).

Have you signed the 2006-2007 postcard yet? If not, please contact the WaterCan office to receive one by mail.

To help even more, why not organize a postcard signing campaign in your place of work, school, or through a community group? To receive a campaign kit, please contact the WaterCan office.



## WaterCan appreciates its volunteers!



WaterCan's Volunteer Appreciation BBQ was a pleasant evening spent in Vincent Massey Park. Approximately 35 hard working volunteers from various WaterCan activities indulged in hamburgers and veggie dogs cooked by our very own grill master, Gary Plum. A special thanks goes to Dave Smith of Nate's Deli for donating the food, to Vaughn McKinney of Parliament Cleaners for his pick up and delivery services, and to Matthew Knight, our summer co-op student for organizing the event. Thank you to all our volunteers who attended and to those who were unable to make it...we couldn't do it without you!



WaterCan would like to thank Advanced Business Interiors of Ottawa, whose generous donation to WaterCan has increased the capacity of the office to have volunteers on site. In May 2006, Advanced Business Interiors donated five workstations to WaterCan. The office now has custom furniture for the space, and we are able to accommodate three additional volunteers, while presenting a professional work environment.

Advanced Business Interiors took the time and dedication to ensure that WaterCan was able to use current furniture to their maximum capacity, while providing the most efficient use of space, for our offices in one of Ottawa's historic buildings.

This very generous donation has permitted WaterCan to keep our administrative costs low, but still provide a great place for volunteers and staff to interact.

Please join WaterCan in thanking Advanced Business Interiors for their generosity and for sharing our vision of "Clean Water for All."

Thanks to the generous support of our donors, WaterCan accomplished a significant milestone this past year by surpassing the one million dollar mark in revenue. This would not have been possible without the tremendous support shown by Canadian faith-based organizations and foundations. WaterCan would like to thank the following organizations for their generosity and commitment to our vision of "Clean Water for All!"

**Faith-based organizations**

Beacon United Church; Yarmouth, NS | Central Baptist Church; Victoria, BC | Central United Church; Unionville, ON | Church of Christ; Kentville, NS | Congregation of Notre Dame Visitation Province; Bedford, NS | First Presbyterian Church, Mission & Outreach Committee; Winnipeg, MB | Grace-St. Andrew's United Church; Arnprior, ON | Immanuel Christian Reformed Church; Cornwall, ON | Knox Presbyterian Church, Women's Ministry; Manotick, ON | Knox United Church; Edwards, ON | MacKay United Church Women; Ottawa, ON | Miramichi Presbyterial UCW; Miramichi, NB | New World Island East Central United Church of Canada; Herring Neck, NL | Sisters of Charity of the Immaculate Conception; St. John, NB | Sisters of Instruction of the Child Jesus; Coquitlam, BC | Sisters of St. Joseph of Toronto; Oakville, ON | St. Andrews Anglican Church ACW; Nipigon, ON | St. Andrew's United Church; Niagara Falls, ON | St. Andrews United Church W.U.C.C.; Tobermory, ON | St. David's Anglican Church; Orillia, ON | St. Edmund Anglican Church Women; Toronto, ON | St. Mary's Anglican Church; Kippen, ON | Wesminster Prebyterian Church; Ottawa, ON.

**Foundations**

Wild Rose Foundation; Edmonton, AB | Howick Foundation; St. Laurent, QC | RBC Foundation; Montreal, QC | The Derick Brenninkmeyer Charitable Foundation; Mississauga, ON | N.A. Taylor Foundation; Toronto, ON | The Laura L. Tiberti Charitable Foundation; Winlaw, BC | The Ali Khan Foundation; Nepean, ON | The Ottawa Jewish Community Foundation; Ottawa, ON.

Return Undeliverable Canadian Addresses to:



321, rue Chapel Street  
Ottawa, Ontario Canada K1N 7Z2

