

# OUR WATER FUTURE

SPRING 2011



**FROM EVERYDAY EFFICIENCY  
TO GLOBAL CHANGE:  
PASSIONATE CITIZENS AND EXPERTS  
EXPLORE THE FUTURE OF WATER.**

AN INITIATIVE OF THE REGIONAL MUNICIPALITY OF YORK  
LONG-TERM WATER CONSERVATION STRATEGY





# THE FUTURE OF WATER

Water has fast become one of the hottest topics of the 21st century with water-related news, studies and publications receiving regular media attention. Mostly we hear about global issues, with scarcity as the focus and crisis as the driver of discussion and innovation.

Although we have had our times of drought and floods, most Canadians have a different experience with water. If anything, the Canadian perspective has been one of abundance. After all, our wealth of lakes and rivers forms a key part of our national identity. Yet as Oliver Brandes, Associate Director at the University of Victoria's POLIS Project on Ecological Governance and Water Sustainability, points out, "even Canada, with its apparent water wealth is increasingly facing the prospects of a water-scarce future, a result of relying too heavily on large-scale build infrastructure and the mentality of limitless supply."

In an era of globalization, Canada is certainly not immune from experiencing global water crises. Our position as one of the world's water-rich nations provides us with both a responsibility and an opportunity to lead the world in new approaches to conservation, preservation and planning.

It is in this context that The Regional Municipality of York has launched the Long-term Water Conservation Strategy, an initiative designed to engage citizens in shaping the Region's water future.

York Region is a vibrant diversity of towns, suburban communities and rural areas, with a robust multicultural population, strong First Nations community and a prosperous business sector. The Region is also blessed with a magnificent natural heritage that includes the Oak Ridges Moraine, the Humber and Rouge Rivers and Lake Simcoe. **In envisioning the role water will play in our lives 40 years from now, York Region has put out a challenge to its citizens: Imagine how future generations will be living and working in the Region.** Now, define the importance and role of water in shaping that future. As Oliver Brandes says, "we need to think about water in a different way than we have been. We need to invest in a new kind of technology and

innovation, one that places communities and citizens at the forefront. This new 'soft path' requires us to think beyond pumps and pipes and instead rely on conservation, efficiency, reuse and rainwater as the 'new' sources of water for the 21st Century."

As Ontario's Green Energy and Economy Act gains traction and The Water Opportunities Act comes into being, there will be a deluge of opportunities for new forms of localized economic development, new types of businesses, new careers and jobs. Yet while we work to reconfigure our water future and seize the incredible opportunities that await us in York

Region, there is a simultaneous need to redesign our mindsets when it comes to water. This means more than just retrofits. Exploring a new frontier can transform our very relationship with, and beliefs about water.

That is what this 'Special Report' is all about: to stimulate new thinking and provoke a different stream of thought with respect to the future of water in York Region. We've asked a group of passionate Canadians to provide

their perspectives, examples, advice and views about this new world of water. All are specialists in water, in their own right. Some pieces are conceptual, some personal and some highly practical.

York Region has a track record of leadership in the area of water conservation. The Region is now poised to lead in water innovation, and this will need players from all sectors to join the conversation about the future: business, non-government organizations, all levels of government and you. To have your say, visit [www.openwater.ca](http://www.openwater.ca). Water has always been a connector, drawing people and communities together. As a source of life, water flows throughout all significant issues; it is a messenger of climate change, a co-creator of energy and in York Region, it is the agent of innovation and change. ♦

**"Incredible opportunities await us in York Region"**



# PIONEERING A NEW AND PROFITABLE FRONTIER

## How York Region is positioning itself as a leader of water innovation in Canada.

The Ontario government is making a big move to position the province as a global leader in water innovation, new technologies and responsible water stewardship. On May 18, 2010, the province introduced the *Water Opportunities and Water Conservation Act*. If passed, this legislation will become the core of a strategy to put Ontario at the forefront of the global market for innovative water solutions. This market is projected to rise from \$522 billion (U.S.) to nearly \$1 trillion (U.S.) over the next decade.

If the provincial legislation works the way it is intended, one can anticipate jousting within the province among progressive-

minded cities and regions that sense the opportunity to become Canada's "bluest community," the hub for discovering and demonstrating new practices, technologies and employment opportunities associated with water. Given that water touches countless day-to-day activities, from local residents and small businesses to international mega-companies, the employment opportunities are endless. It's almost a frontier mentality.

York Region has a strong vested interest in this emerging blue economy as its demand for water is increasing exponentially as a result of a growing population and urban expansion. As such, the timing

BY TIM MORRIS

Program Manager, Fresh Water Protection at the Walter & Duncan Gordon Foundation, an independent Toronto-based organization dedicated to the development of innovative public policies.

could not be better for water innovation. In the same way that Waterloo has become the tech capital of Canada and a vibrant hub in North America, York Region has an opportunity to mobilize its energies to become the water innovator of Canada. York Region has already initiated the process of securing a leadership position: It is embarking on a best-in-class review of municipal policies, regulatory initiatives, water pricing and water conservation innovation. At the same time, the Region is engaging residents, innovators and entrepreneurs to join in pioneering this new frontier. ♦

## Water Innovation: A Corporate Success Story

BY DAVID HENDERSON

Managing Director, XPV Capital Corporation, experts in ethical entrepreneurial investing.

Energy consumption has long been a significant cost for wastewater treatment plants. The bulk of this energy is used to pump air into large tanks in order to feed aerobic bacteria that consume organics found in wastewater.

This organic matter contains various levels of energy that could be extracted instead of destroyed. Israel-based Emefcy is developing microbial fuel cells that can convert these organics directly into electricity. In theory, it could be possible to generate six times the amount of energy from wastewater than is used in the treatment process.



## Smart Ideas From Across Canada

Vernon, British Columbia High-quality treated water is used to irrigate more than 970 hectares.

Anticipated savings are 50 per cent of its capital expenditures on wastewater infrastructure over the next 20 years.

# A BETTER WAY TO SAVE ON WATER COSTS

**Embracing a new vision for water stewardship to create new jobs and save money.**

According to a recent poll by RBC and Unilever, one in three Canadians does not know what they pay for their water. This is not particularly surprising; water, after all, has historically been cheaper than dirt in Canada. But water rates are on the rise to a level that may soon alarm Canadians.

The increasing price of water in many Ontario cities stems from the need to rein in Ontario's \$40 billion water infrastructure deficit. This deficit represents the amount needed to repair and upgrade our distribution pipes, sewer systems and treatment plants, and to better reflect the true cost of providing safe, clean water.

The problem is that Ontario's water infrastructure deficit is also a symptom of an outdated supply-oriented approach that places too much emphasis on building expensive and energy-intensive pipes and pumps and too little on using existing supplies more efficiently. Continuing along this track will only serve to deepen our urban debt, resulting in skyrocketing prices today or an unmanageable bill for our children and grandchildren.

As Albert Einstein said, "We can't solve problems by using the same kind of thinking we used when we created them." We need a better way, one that delivers on both environmental and economic sustainability.



BY CAROL MAAS

Innovation and Technology Director at the POLIS Water Sustainability Project and a steering committee member of the Ontario Water Conservation Alliance

Water conservation programs are delivered at less than the cost of building new water systems. In only six short years, for instance, The Regional Municipality of York *Water for Tomorrow* conservation program has deferred an estimated \$40 million in new infrastructure at a cost of only \$10 million.

Saving water also reduces energy consumption. An estimated 40 per cent of Ontario's natural gas and 12 per cent of our electricity are consumed for water-related activities such as heating water and steam and powering pumps. Conservation will naturally lower these costs.

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**"We can't solve problems by using the same kind of thinking we used when we created them."**

Albert Einstein

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Investing in conservation also supports quality local jobs. Plumbers, landscapers, planners, marketers, engineers and architects are all needed to provide the many services that save water. Entrepreneurs and innovators are also presented with an unprecedented opportunity to generate new ideas for saving water in an expanding global market. These ideas will also reduce costs for ratepayers.

For York Region, one word comes to mind: Opportunity. By embracing a new vision for water stewardship, the Region is saving money, creating jobs and becoming an international pioneer in innovative and sustainable water solutions. It's an exciting prospect and it's time to move on it. 💧



# ENGAGE IMMIGRANT COMMUNITIES

**Using cultural values and traditional knowledge about water to reach a wider audience with the conservation and innovation message.**

**Water issues are one** of the most immediate challenges we face today because of their impact on food security, health and economic growth of countries. With booming populations and the dangers of climate-change, water is one of the most vulnerable resources on this planet. For solutions, we need to look at change-makers. In a community as vibrant as The Regional Municipality of York, the catalysts in propelling change are the people, specifically, the considerable immigrant population\*.

Like me, these immigrants come from some of the world's most water-deprived regions: South Asia, China and sub-Saharan Africa among them. They have first-hand experience in living with water scarcity. They have learned valuable lessons on how to be more efficient in using water. The real challenge is to figure out how to engage the skills and knowledge of this huge population. One big step in this direction is to identify and bring together the change-makers. Change-makers can be from any part of society: science, government, education, non government organizations and residents.

Incorporating cultural values and traditional knowledge about water into our policies can allow us to find comprehensive and holistic solutions, reaching a wider audience with the conservation and innovation message.

By studying the complex relationship between water and cultural diversity, there is an opportunity to gain case-specific insights and develop strategies to address expected and emerging challenges. For instance, on my recent trip to India, I was struck by the enormity of water challenges facing the South Asian

countries, especially the dynamics between India, Pakistan and Bangladesh. The geopolitics of that area, such as who controls the headwaters in the Himalayan region and consequently, the entire river-system, play a significant role in water distribution and availability in that region. Understanding water-sharing between countries can be an asset to Canadians negotiating with the U.S. and other countries over the Great Lakes and the Arctic region.

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**“...when you only get one bucket of water a day, it can lead to some wonderful conservation techniques...”**

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Change-makers could also address the psychological impacts due to natural disasters such as the recent floods in Pakistan. How will people be impacted once the water recedes? How prepared are we for the increasing incidences of natural disaster in North America? These are vital questions to developing a resilient population.

In many parts of the world, frugal use of water is ingrained, because when you only get one bucket of water a day, it can lead to some wonderful conservation techniques, such as collecting rainwater to brush your teeth. Does this sound far-fetched for Canadians? Maybe, but every drop counts. In many parts of the world, this is the mantra people live by. ♦

*\*Statistics Canada reports that in 2006, 43 per cent of York Region inhabitants were born outside of Canada.*

BY DR. ROMILA VERMA

Assistant Professor, Department of Geography, Brock University, and Lead Researcher, Canadian Institute for Environmental Law and Policy





## Smart Ideas From Across Canada

**Calgary, Alberta**  
Windmill Developments  
implemented a rainwater  
harvesting system for toilet  
flushing and outdoor irrigation.

Buildings will use 53 per  
cent less water than in a  
traditional design.

## The Soft Path Approach: Changing Mindsets About Water

**H**istorically, the value of water has been determined by how much water we use and the system of pumps, pipes and storage that contains it. The Soft Path approach fosters new thinking about how we use water—life-sustaining drinking water versus the water we use for watering our garden.

Are there alternative sources or different levels of water quality we can use? For example, why do we need to flush our toilets with drinking water? This shift will change pricing, land-use regulations and how we actually work with water – as a service, not a commodity.



What can individuals do to make a difference when it comes to securing our water future for generations to come?

Kids water wish:  
"If I were water...  
I would wish that I  
could marry thunder."



# FOLLOW THE SMARTEST, MOST EFFICIENT UTILITIES

BY MARY-ANN DICKINSON

Founder and Executive Director of the Alliance for Water Efficiency, based in Chicago, Illinois.

## The five characteristics of the most successful urban water utilities around the world.

The days of assuming that we have unlimited amounts of fresh water to do with as we chose are long gone. The bottom line is that given the way our water use is growing, the way our climate is changing, and given the difficulty in developing new water supplies, we are at a crossroads.

The solution, however, is surprisingly simple. Being more efficient with the water we have saves us money, is better for the environment, and is entirely possible, easily, without sacrificing our lifestyle. Many communities are already leading the way for their residents.

Here are five characteristics of the most successful urban water utilities around the world:

### 1. THEY MAKE SURE THAT THEIR CUSTOMERS UNDERSTAND HOW MUCH WATER THEY USE.

Bills are sent monthly, with graphs showing comparative consumption, not only with respect to the same time last year, but also in comparison with their neighbors. Smart meters are used which allow the consumer to check their daily water use online or on a dashboard.

### 2. THE MOST SUCCESSFUL UTILITIES SET GOALS FOR REDUCTIONS IN WATER USE.

Consumers respond to a target. Especially if they receive regular information on how well they are doing. The media must be a partner in this effort.



## LEADING THE WAY IN WATER INNOVATION

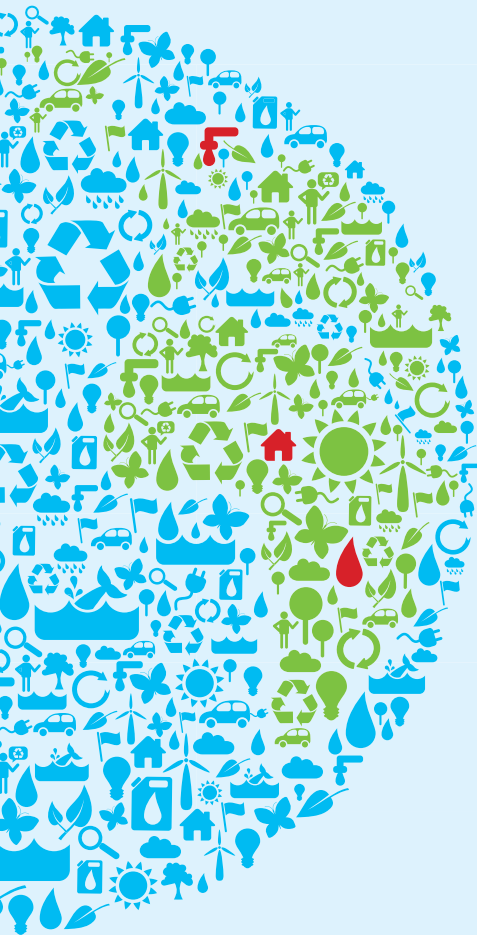
**York Region** is exploring a wide range of options to increase the efficiency of its water system as well as planning for growth by studying future water-use targets and water infrastructure needs.

Residents and businesses in York Region are already helping to promote a sustainable water future through their participation in *Water for Tomorrow*. It's a commitment to helping York residents and businesses save water by:

- ◆ Offering rebates and incentives on water-efficient fixtures for homes and businesses
- ◆ Providing high water-use businesses with an opportunity for free water-efficiency audits and financial incentives for switching to more water-efficient practices
- ◆ Providing public and youth education through seminars and community events







### 3. THEIR WATER UTILITY SYSTEMS HAVE A VERY LOW LEAKAGE RATE.

It's difficult to ask customers to be efficient if the water utility itself has not done the analysis and the system repair work to minimize leakage in its pipes. Reducing water loss is a key priority in places like York Region, Peel Region and the City of Toronto.

### 4. OUTDOOR IRRIGATION IS LARGELY DONE WITH NON-POTABLE WATER.

Why do we continue to water our lawns and gardens with drinking-quality water? Progressive water utilities are increasingly promoting rainwater, grey water and recycled water irrigation options for their consumers.

### 5. A LARGE PORTION OF HOUSEHOLDS AND BUSINESSES ARE RETROFITTED WITH WATER EFFICIENT FIXTURES AND SYSTEMS.

Innovative water utilities like The Regional Municipality of York have quickly figured out that it is cheaper to fund water efficiency improvements in homes and businesses than funding new water supply development. It's an investment in the water future of the community.

The cheapest water that York Region will ever have is the water that it already has. Consumers should be partners in helping promote a sustainable water future. York Region's *Water for Tomorrow* program is a model example of the principles above. Every York Region resident should take advantage of this opportunity! ♦



## Smart Ideas From Across Canada

Sooke Harbour House, a resort near Victoria, B.C., is a shining example of the private sector's leadership in water conservation.

Here, a state-of-the-art reclamation centre has reduced the property's potable water use by 90 per cent through reuse and retreatment of water for toilets and irrigation.

Kids water wish:

"If I were water... I would wish to be in a wishing well"

# RESPECT, REFLECT AND WATCH THE IDEAS FLOW

## What can our First Nations teach us about respecting and protecting water?

**Native people have** a deep sense of reverence for the waters that surround us. They never forget that from the first spark of life, we are buffered and protected from harm by water, that we are gently washed as we take our first breath, that water sustains us as we move along the continuum of living each and every day, and that when we leave this life, a cedar bath will cleanse away the profane and prepare us to meet the Sacred.

It is this reverence for water that can help to inform a discussion about York Region's water future.

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**“If you take care of the water spirit, it will remain happy and will provide for your needs.”**

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As Violet Poitras of the Paul First Nation reminds us, “If you take care of the water spirit, it will remain happy and will provide for your needs.” This sense of respect is essential to understanding that if you destroy the gift of water, you will destroy yourself.

We live in a restless age where innovation is typically defined by a frenzied rush toward the new. But reverence means appreciating the silence, learning to be still, and creating a consciousness about who you are and where you are. To this end, while water issues can be multifaceted and complex (and how to protect our water inspires a range of passionate opinions) sometimes the answers lie in simplicity and grace.



To me, real innovation comes from appreciating the sacred. After all, the best ideas are usually preceded by a period of calm reflection—or reverence. While there is certainly merit in looking forward and striving for new ideas, some of our innovations are very “old school”—such as putting water tanks beside the house to catch rain run-off for watering gardens, reusing water for toilets or washing clothes like we used to do in antiquated tubs.

We have ceased to value water as sacred in so many ways today. We rush to make money, to consume, to have bigger, better, and more. This has made many of the water issues we face invisible to us. By looking to our water future, we have a collective opportunity to look within, to pause and reconnect with the one element that serves our every basic need, from enabling our ceremonial sweats to quenching our thirst and growing our food. ♡

BY DR. CYNTHIA WESLEY-ESQUIMAUX

She is holder of the Nexen Chair in Aboriginal Leadership at the Banff Centre, sits on the Lake Simcoe Science Advisory Committee, and is a member of the Chippewa of Georgina Island First Nation



### Smart Ideas From Across Canada

**City of Vaughan,  
York Region, Ontario:  
The Community Environmental  
Centre achieved LEED®  
(Leadership in Energy and  
Environmental Design)  
GOLD certification.**

**In addition to other stellar  
environmental features it has  
a 69 per cent water savings.**

# IN YORK REGION: ONE HOMEOWNER'S INGENUOUS EFFICIENCY PLAN

As the executive director of the Sustainable Housing Foundation and publisher of Sustainable Building magazine, Lenard Hart promotes water conservation at work. But talk to him about his LEED (Leadership in Energy and Environmental Design) Platinum rated home in the Town of Newmarket, Ontario, and you will quickly see that Hart practices what he preaches. His four-bedroom house was built in 2009 by Rodeo Fine Homes as part of a 34-property subdivision. Along with others in the subdivision, it is designed to increase water conservation by 60 per cent and features:

- ◆ 10,000 litre rain water harvester for toilets and irrigation
- ◆ Drought-resistant lawn
- ◆ Ultra low-flow everything
- ◆ Energy Star front-load washer
- ◆ Hot-water recirculation pump
- ◆ Grey-water recycling system

It is the greenest home in Canada's greenest subdivision that actually uses 65 per cent fresh water and has 45 per cent less storm and sewage outflow than the building code requires in new homes.

For someone in the business of promoting sustainable housing, the motivation to own such a home is clear. However, Hart's reasons for conserving energy and water use run deeper. As a father of two children, ages 12 and 14, he sees his home not just as a showcase of what can be done, but rather what we all must do to secure a sustainable future. Apart from long-term savings (Hart saves about 70

per cent on energy bills and about 66 per cent on water), the real benefits lie in feeling good about reducing his load on an already strained system.

As he says, "It's hard to get too excited about flushing a toilet, but in a way, you do," especially when you consider that since moving into the house, Hart has never had to use the rainwater harvester's municipal water backup system. The home is definitely a conversation starter; Hart has provided many home tours to friends and individuals interested in sustainable housing.

He is also quick to point out that there is really no sacrifice associated with water conservation. His rainwater harvesting system is pretty much maintenance free and his water bill is next to nothing at only \$6 a month.

Hart's advice to anyone looking to take the first step toward water conservation is to switch to low-flow showerheads and install dual-flush toilets. You won't notice a difference in quality but you will save a significant amount of water. The next step might be to install a grey-water recycling system that uses shower drain water to flush toilets.

The house represents the future of new building in York Region, but Hart himself represents something more: Our water future will be shaped by individuals like him, who choose to embrace conservation and drive demand for innovation both at work and at home. ◆



*Water for Tomorrow* is an ongoing water conservation program in The Regional Municipality of York that began in 1998 and is designed to help residents make easy changes at home to start conserving water. The program has replaced more than 106,000 showerheads with low flow models and more than 25,000 toilets have been replaced with water-efficient models. Through such initiatives, the program is saving more than 20 million litres of water per day, enough water for a town of 90,000 people.

To learn more visit [waterfortomorrow.ca](http://waterfortomorrow.ca)



Kids  
water wish:  
"I wish that  
water doesn't  
dry out"



# THE POWER OF COMMUNITY ACTION

The Ladies of the Lake bare it all to build awareness for the protection of Lake Simcoe and our water resources.

BY ANNABEL SLAIGHT

Co-founder of Owl Magazines, Books and Television, co-founder “Ladies of the Lake” Conservation Association, member of the provincial Lake Simcoe Coordinating Committee and the federal Lake Simcoe Clean Up Fund PROPEL Committee, Chair of the Committee to Establish an Ontario Water Centre



Five years ago, I took off all my clothes in a forest and posed for a photographer. I wasn't the only one—30 other women went “in the buff” that year, as did another 20, two years later. We all did this for the sake of water and Lake Simcoe, in particular.

We were frustrated by the lack of attention that politicians were paying to the stinking weeds, the invasive zebra mussels, the pollution and the garbage in Lake Simcoe. So we formed a new group called Ladies of the Lake and proceeded to create a signature project: our Naked Truth calendars raised \$450,000 and shook up complacency, people say, with humour and grace. There are, of course, no fast cures for decades of water abuse, but the calendars became a spark for change in our York Region community and demonstrated the role citizen groups can play in protecting our water resources.

This year I am turning 70, and after a life of dashing forward, I am taking some time to reflect on things. As I look back, I realize how important water has been to my life, not just as something to use but as an inspiration.

Water brought the Ladies of the Lake together in a demonstration of what can happen when ordinary citizens mobilize around a common cause. And today, water has again brought a group

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**“...the calendars became a spark for change in our York Region community and demonstrated the role citizen groups can play in protecting our water resources.”**

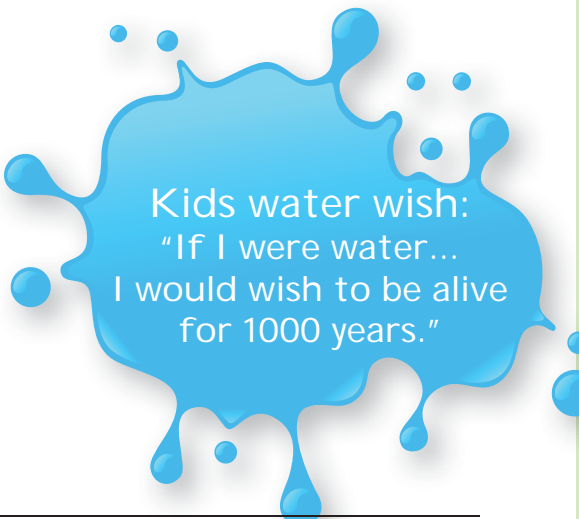
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of us together to think and act big. This time, our goal is the creation of a new Ontario Water Centre on Lake Simcoe. The centre, which is currently in the concept stage, will be a place that advances knowledge and understanding about water and seeds interdisciplinary innovation in science, health, the arts, creative design, engineering and business.

Water has so much more to give than being a daily shower, the thing that soaks our lawns or what we dash over

in fast boats. If people were able to have more opportunities to relate to water, it could help enhance their very understanding of life.

As Leonardo da Vinci said, “water is the driver of nature.” And so while it is of prime interest to users from a quality and quantity standpoint, it equally involves aesthetics and psychology. It is about cleansing and healing, and its magic inspires art and invention. Water can also inspire community action, leading to such wonderful outcomes as the collaboration of diverse members of our community, innovative projects and restoring the vulnerable parts of our communities. ♦



Kids water wish:  
“If I were water...  
I would wish to be alive  
for 1000 years.”

## East Gwillimbury: New Sustainability Standards For Development

In an area Governor John Graves Simcoe named in honour of his wife in the early 1800s, a 'made in East Gwillimbury' Sustainable Development Evaluation System is being developed that is leading the way for 21st century development. The Sustainable Development Evaluation System is an important tool that developers in East Gwillimbury will be required to complete when seeking approval of development applications. Town staff will use the system to evaluate overall sustainability of applications for approval. The review process will enable staff to test and document that each new development has fully considered innovation in sustainable design. This is a highly unique system – both in its comprehensiveness and its emphasis on innovative design.

The system includes state-of-the-art requirements with respect to water – for example, the use of water consumption reduction strategies are encouraged. Such strategies may include low-water landscap-

ing, use of grey water, recycled wastewater and captured rainwater, among other measures. Water-efficient fixtures are standard requirements and there is a consideration of integrated water infrastructure systems, such as non-potable water sources, including treated wastewater for use in appropriate industrial processes and wetland flow stabilization. Landscaping plays a key role in water conservation through the use of native species, rainwater harvesting, stormwater and/or grey water for irrigation. Post development run-off is also covered through restrictions. Along with stormwater retention systems, these restrictions may include measures such as use of permeable materials, infiltration trenches/biore-tention along with rain gardens/absorbent landscaping.

East Gwillimbury will be the place to watch as the standards covering the full range of sustainable development take form in emerging vibrant and innovative communities.



How can we plan new developments to ensure everyone's water needs are met 40 years from now?



# REMEMBER THE PAST, BUILD FOR THE FUTURE

**Making changes now to provide our future generations with the experiences we had as children.**

**There was a pond**—a swamp actually, at LaSalle Park, down the road from our home in Burlington, Ont. My brother and I would spend hours catching minnows and pollywogs, hauling them home in jars only to have my mom march us back and release them again. She would explain how the swamp was their home; that they were part of a very big family that lived in the water and, like us, needed to remain with their mothers, fathers, brothers and sisters. At my mom's urging, we stood and watched as our catches swam away. The swamp literally teemed with life—all just under the surface, a liquid dimension that fascinated me then as it does today.

I have spent years working on water issues and thankfully, I am not alone. Many around the globe have developed new methods of conserving, protecting and restoring fresh water sources.

In Tucson, Arizona, for instance, all new homes are built with grey-water capabilities (plumbing to allow for the reuse of wash water). The Pimpama Coomera area of the gold coast of Australia requires all homes and businesses built since 2005 to be

**“Many around the globe have developed new methods of conserving, protecting and restoring fresh water sources.”**

connected to a 3,000-litre rain harvesting tank, which feeds their cold-water washing machine and outdoor faucets. In Germany, officials collect a “rain tax” from homes and businesses that have impermeable surfaces—roofs, for instance, that don't catch rainwater and instead pump run-off into the sewer system. This tax encourages

BY TRACY PATTERSON

A principal with Freeman Associates and specialist in market transformation and strategic planning for water management, ecosystem protection and low impact development.

the installation of green roofs and rain gardens. In Oakland, California, a suite of water conservation programs includes rebates for high-efficiency fixtures and washing machines, sustainable landscape conversions and free on-site water surveys. And finally, in 2012, NASA will launch a satellite to monitor water consumption to help resource managers determine which conservation measures are most effective.

The solutions are readily available. All that is required is leadership—so easily said, so rarely realized—and a willingness to interact with the natural world in a more productive and less injurious way.

We have separated ourselves from this planet and from the earth, the atmosphere and the water that truly sustain us. We must find our way to reconnect—to pause before we run the tap, turn on the sprinkler or buy that six-faucet rain shower we saw in the designer magazine.

Forget that saving the planet saves money. We are rewarded by the dew on the grass, wind through leaf-filled trees, sunsets and harvest moons. This is the stuff of life. ♦



## Thinking Big

The Bank of America Building in New York is being designed to be one of the world's most environmentally responsible and energy-efficient high-rise office buildings that includes:

- ♦ Waterless urinals
- ♦ Rain collection
- ♦ A grey-water treatment plant



LONG TERM

# Water

Conservation Strategy



York Region has developed the *Long-term Water Conservation Strategy*. This 40-year Strategy identifies new and innovative approaches to water efficiency and conservation and builds on the success of current *Water for Tomorrow* programs.

For more information, please visit [www.openwater.ca](http://www.openwater.ca) to see what your water future holds.



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Dr. Cythinia Wesley-Esquimaux

Kids water wish:  
"If I were water...  
I would wish for global  
warming to stop."

## Glossary of Terms

### Wastewater

Water that has been used, as for washing, flushing, or in a manufacturing process, and so contains waste products; sewage.

### Grey water

Wastewater generated from domestic activities such as laundry, dishwashing, and bathing, which can be recycled on-site for uses such as landscape irrigation and constructed wetlands. Grey water differs from water from the toilets which is designated sewage or blackwater to indicate it contains human waste.

### Sustainability

Refers to a quality and system of life that allows people to meet their current needs without compromising the resources available for future generations to meet their future needs.

### LEED

Leadership in Energy and Environmental Design – an independent certification program that provides voluntary guidelines for developing high-performance, sustainable buildings.

### Smart Meters

An electrical meter that records consumption in intervals of an hour or less and communicates that information, at least daily, back to the utility for monitoring and billing purposes.

### Non-potable

Water that is not fit for consumption without treatment that meets or exceeds drinking water standards. Grey water and rainwater are non-potable waters that can be used in toilets, for washing cars, etc.

Over the course of the summer and fall of 2010, work proceeded on developing the *Long-term Water Conservation Strategy*. Stimulated by the type of thinking housed in this Special Report, citizens rose to the challenge of envisioning the role water will play in our lives in 40 years.

A 40-year strategy is now emerging that not only houses global and local best practices, it describes a dynamic bright green and blue future for York Region that water will help shape, motivated by the vision: Water. Reviving the Way We Live....

For more information, please contact:

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