



## CHECK YOUR WATERSHED DAY 2009 EVENT SUMMARY REPORT

Saturday, July 18, 2009

**Cold Creek:**

Goodrich-Loomis Conservation Area  
Brighton, Ontario

**Graham Creek and West Lake Ontario Tributaries:**

Ganaraska Forest Centre  
Campbellcroft, Ontario

**Nonquon River:**

Greenbank Community Hall  
Greenbank, Ontario

**Uxbridge Brook:**

Uxbridge Public Library  
Uxbridge, Ontario

**Sixteen Mile Creek:**

Kelso Conservation Area  
Milton, Ontario

Prepared by: Citizens' Environment Watch, July 2009

## Acknowledgements

Check Your Watershed Day 2009 was made possible through the support of the Oak Ridges Moraine Foundation, the George Cedric Metcalf Charitable Foundation, the Durham Land Stewardship Council and Human Resource and Skills Development Canada.



**METCALF  
FOUNDATION**



Human Resources and  
Skills Development Canada

Ressources humaines et  
Développement des compétences Canada



## Check Your Watershed Day 2009 Partners

This project was a collaborative effort between the following partners (listed alphabetically):

- Citizens' Environment Watch (A partner with STORM Coalition on the MTM project)
- Conservation Halton
- Ganaraska Region Conservation Authority
- Kawartha Conservation
- Lake Simcoe Region Conservation Authority
- Lower Trent Conservation



Lake Simcoe  
Region  
Conservation  
Authority



Check Your Watershed Day project partners would like to acknowledge the ongoing support of the Ministry of Natural Resources for contributing technical expertise and support to the project, including data management and analysis. The Partners also thank the Ministry of the Environment for their support as well.

Check Your Watershed Day 2009 would not have been possible without the support of local partners, including the Community Stream Steward Program, the Ted Knott Chapter of Trout Unlimited Canada, Sheridan College Institute of Technology and Advanced Learning and the Uxbridge Watershed Advisory Committee.



## HISTORY OF CHECK YOUR WATERSHED DAY

Check Your Watershed Day was piloted on Saturday, July 22, 2006 in the Wilmot Creek watershed and parts of the adjacent Graham Creek in the Regional Municipality of Durham, Ontario. Twenty-two volunteers attended the inaugural Check Your Watershed Day, putting their all into covering 116 sites over 150 km<sup>2</sup>. Upping the ante in 2007, 124 volunteers came out to help check Bronte Creek, Duffins Creek, Oshawa Creek, and Ganaraska River watersheds. Nearly 1000 km<sup>2</sup> were covered in visiting 179 sites and the bar was set high for next year's event. Focusing on checking the health of Cobourg Creek and Bronte Creek watersheds in 2008, 60 volunteers helped to check 215 sites covering 427 km<sup>2</sup>, bringing the tally to 518 sites visited on over 1500 km<sup>2</sup>! For more information on past Check Your Watershed events, please visit [www.MonitoringTheMoraine.ca](http://www.MonitoringTheMoraine.ca).

## CHECK YOUR WATERSHED DAY 2009

On Saturday July 18, 2009, 184 people were out simultaneously checking the health of Cold Creek, Graham Creek and the West Lake Ontario tributaries, Nonquon River, Uxbridge Brook, and Sixteen Mile Creek. Check Your Watershed Day 2009 included morning training for the Stream Team Leaders, a free lunch for all volunteers and an afternoon dedicated to checking the local watersheds. In total 1073 km<sup>2</sup> were covered and 520 were sites visited!



Group Photo of Graham Creeks and West Lake Ontario Tributaries Check Your Watershed Day  
Photo Courtesy of Ganaraska Region Conservation Authority

Check Your Watershed Day 2009 was a great example of local commitment to gaining a better understanding of the environment and contributing to its safekeeping. The attendees' enthusiasm for learning about their watersheds yielded scientifically useful data, which will be used to manage the watersheds checked in 2009 (see **Data**, pg. 7).

## Partnership and Support

We welcomed back Ganaraska Region Conservation Authority and Conservation Halton as partners in Check Your Watershed Day. Ganaraska Region Conservation Authority has been involved with the monitoring event since its inception four years ago. For Conservation Halton this is the second Check Your Watershed Day held in their region.

This project was a product of 6 partners coming together from various groups including NGOs and Conservation Authorities. This partnership is a testament to the importance of this project as a community-based environmental monitoring event, where valuable data can be collected in a short time frame. On Check Your Watershed Day residents of a watershed can directly contribute to scientific data collection and watershed management. Due to this there is tremendous community support, both from volunteers and local event supporters.

## Volunteer Turnout

There was an amazing volunteer turnout this year (Table 1). With 65 volunteers, Sixteen Mile Creek enjoyed the largest turnout for an individual watershed in Check Your Watershed Day history! Old and new volunteers alike got into the action across the five watersheds, with great representation from the post-secondary student population. Students from Fleming College, Sheridan College, and the University of Toronto came out to benefit from the chance to learn hands-on environmental monitoring techniques and apply them in real world, scientific, data collection.



Volunteers Kick Off Registration at Cold Creek  
Photo Courtesy of Lower Trent Conservation

**Table 1.** A breakdown of area covered and the number of people and sites visited for each watershed.

	<b>Cold Creek</b>	<b>Graham Creek &amp; West Lake Ontario Tributaries</b>	<b>Nonquon River</b>	<b>Uxbridge Brook</b>	<b>Sixteen Mile Creek</b>	<b>Total</b>
<b>Area</b>	261 km <sup>2</sup>	90 km <sup>2</sup>	187 km <sup>2</sup>	178 km <sup>2</sup>	357 km <sup>2</sup>	1073 km <sup>2</sup>
<b>Sites Visited</b>	167	92	63	48	150	520
<b>Turnout</b>	42	28	23	20	71	184
<b>Volunteers</b>	36	21	19	18	65	159

Executive Director Meredith Cochrane of Citizens' Environment Watch came out for her second Check Your Watershed Day, monitoring streams in the Uxbridge Brook watershed. General Director of Lower Trent Conservation Jim Kelleher took part in his first Check Your Watershed Day, at Cold Creek.

Local decision-makers also came out to show their support for the environmental monitoring event. Brighton Councillor and Chair of the Lower Trent Conservation Authority Craig Kerr spent the day volunteering as a Stream Team Leader in the Cold Creek Watershed. Mayor Bob Shepherd of the Township of Uxbridge dropped in on his way to a trail opening to speak with the Stream Team Leaders. He welcomed everyone to the town of Uxbridge and thanked the volunteers for giving their time to monitor the watershed.



General Director Jim Kelleher Welcomes Participants  
Photo Courtesy of Lower Trent Conservation

Due to the smaller turnout in the Wilmot and Graham Creeks watershed, the Wilmot Creek monitoring sites had to be cut from this year's Check Your Watershed Day. Nonetheless, whether volunteers turned out in a group of 17 or 60, they did a great job of checking their watersheds, covering over 1000 km<sup>2</sup> and 500 sites!

*"Thanks, it was an awesome experience." – Participant Comment*

## Preliminary Data

Check Your Watershed Day volunteers collect important information, such as: which streams are wet or dry, the location of perched culverts, and where and in what quantity water is flowing. The search for this information consists of fun, hands-on monitoring, and yields scientifically useful data. By knowing if streams are wet or dry, stagnant or flowing, a picture is painted of water movement throughout the watershed, an indicator of watershed health. By knowing how the water moves, along with the location of perched culverts, barriers to fish movement can be identified and potentially resolved.



Stream Monitored in Uxbridge Brook Watershed  
Photo Courtesy of J. Gilchrist

Overall, 520 sites across five watersheds were visited for Check Your Watershed Day 2009. Over 400 of the 520 sites visited were sampled. Approximately 40% of the sites sampled were found to be dry. More than 99 perched culverts were counted (Table 2).

**Table 2.** Flow conditions of small streams sampled in the Check Your Watershed Day 2009 event. Percentage of Dry Sites and Wet Sites calculated from number of Sites Sampled. Percentage of Perched Culverts calculated from number of Sites Visited.

	Cold Creek		Graham Creek, WLO Tributaries		Nonquon River		Uxbridge Brook		Sixteen Mile Creek		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
<b>Sites Visited*</b>	167	-	92	-	63	-	48	-	NA	-	520	-
<b>Sites Sampled</b>	124	100	92	100	48	100	27	100	144	100	435	100
<b>Dry Sites</b>	41	33	40	43	7	15	5	19	83	58	176	40
<b>Wet Sites</b>	83	67	52	57	41	85	22	81	61	42	259	60
<b>Perched Culverts</b>	40	24	30	33	19	30	10	21	NA	NA	+99	-

\*“Sites Visited” refers to the sites that each field crew went to. It does not add up to the number of dry and wet sites, e.g. the sampled sites, as some sites were inaccessible and/or inappropriate for monitoring, e.g. sites in a wetland.



## Sixteen Mile Creek

With the largest volunteer turnout Sixteen Mile Creek had the largest number of sites sampled. Sixteen Mile Creek was also the driest watershed, with 58% of sites sampled found dry.



### **Additional Measurements**

Agency staff were out in Graham Creek, the West Lake Ontario tributaries, Uxbridge Brook and Sixteen Mile Creek collecting additional measurements with the use of sophisticated equipment (e.g. velocity and flow meters), whose handling requires more training than one day will allow. These measurements are done to verify the data, checking sites to ensure repeatability of results.

### **Data**

Currently, the data collected from Check Your Watershed Day is being scanned and entered into a database. Once the data has been entered it needs to be analyzed. The analysis will eliminate corrupt data and calculate the amount of water flowing in the streams monitored. Specialized software is then used to map the location of perched culverts, the flow of water throughout the watershed, and other points of interest revealed by the data, like sources and sinks for groundwater. These maps and data points are important for water budgets and to identify and link sensitive fish habitats. After being analyzed the data will be integrated into the databases of the local Conservation Authorities.

These findings will be presented in a report, and will be used to inform watershed management in the future. A special thank you is owed to Les Stanfield at the Ministry of Natural Resources for his involvement with the project, as well as the Southern Region IM & Spatial Analysis Unit of the Ontario Ministry of Natural Resources for their work on the scannable datasheets.

### **The Weather Report**

The data collected from Check Your Watershed Day attempts to quantify the stream flow that comes directly from groundwater. Rainfall, just before or on the day of the event, can render data inaccurate as it means that measurements include flow from precipitation as well as groundwater. Light rain fell in Cold Creek, Graham Creek and the West Lake Ontario tributaries on the Wednesday and Thursday before the event. Graham Creek also got a light sprinkling of rain near the end of Check Your Watershed Day. The rainfall amounted to less than 1mm in all cases and is not enough to affect the data collected.

## What's New for 2009

Check Your Watershed Day 2009 was the largest Check Your Watershed Day event to date. Event growth for 2009 is discussed below.

### *Scannable Datasheets*

Check Your Watershed Day 2009 marks the pilot run for the event's scannable datasheets. These datasheets can be filled in by the volunteers and scanned straight into a database by the Ministry of Natural Resources. These forms will cut down the data entry time and in doing so shorten the time between data collection and data mapping. To format the datasheets for scanning they were laid out in a very clear-cut manner. This made the datasheets easier for participants to follow and encouraged them to write more neatly than in previous years.

Overall the clearer layout of the datasheet and ease of scannable data entry were a hit. Minor datasheet errors found (e.g. incorrect units of measurement) will be corrected for Check Your Watershed Day 2010.



An Uxbridge Brook Volunteer Checking His Watershed  
Photo courtesy of D. Burnett

### *Check Your Watershed Day Expansion*

Lower Trent Conservation, Kawartha Region Conservation Authority and Lake Simcoe Region Conservation Authority joined us as first time partners in Check Your Watershed Day 2009. The event expanded farther into the Niagara Escarpment, thanks to Conservation Halton's partnership at Sixteen Mile Creek, and saw the introduction of north-flowing headwaters into the monitoring conducted on the Oak Ridges Moraine. Check Your Watershed Day will continue to grow in 2010.

*"I really enjoyed this volunteer opportunity. I have never done anything like this before." – Participant Comment*

## CHECK YOUR WATERSHED DAY 2010

### Next Steps

Given the enthusiastic response from participants of Check Your Watershed Day 2009 we hope to see many volunteers come back for the event in 2010. Based on participant and partner comments, improvements to be made for Check Your Watershed Day 2010 include: fixing minor errors on the scannable datasheets, beginning volunteer outreach earlier so as to reach more volunteers as well as local organizations (e.g. Service clubs), allotting more time to stream sampling and clarifying site locations on maps. These suggestions will be taken into consideration when planning for next year's Check Your Watershed Day.



Group Photo of Nonquon River Watershed Volunteers and Agency Staff  
Photo Courtesy of Kawartha Region Conservation Authority

### Get involved in 2010!

Check Your Watershed Day will take place on Saturday, July 17 in 2010. The watersheds are yet to be determined. Please check the project website for updates ([www.monitoringthemoraine.ca/cywd](http://www.monitoringthemoraine.ca/cywd)) and to get involved next year. If a local group or organization would like to host a Check Your Watershed Day event in your community, please contact [info@monitoringthemoraine.ca](mailto:info@monitoringthemoraine.ca).

*“A Great Day, thanks for everything!” – Participant Comment*