



**CHECK YOUR WATERSHED DAY 2008
EVENT SUMMARY REPORT**

Saturday, July 19, 2008

Cobourg Creek Watershed:

Cold Springs Memorial Hall,
Cold Springs, Ontario

Bronte Creek Watershed:

Conservation Halton Administrative Office
Burlington, Ontario

Prepared by: Citizens' Environment Watch, July 2008

Acknowledgements

Check Your Watershed Day 2008 was made possible through the support of the Oak Ridges Moraine Foundation, the George Cedric Metcalf Charitable Foundation, and the Human Resources and Social Development Canada.



**METCALF
FOUNDATION**



Human Resources and
Social Development Canada

Ressources humaines et
Développement social Canada

There was also local support for Check Your Watershed in Cobourg Creek from the Township of Hamilton, the Township of Alnwick-Haldimand, the Town of Cobourg, the local A&P Food Store in Port Hope and Sav-A-Centre in Cobourg. For Check Your Watershed Day in Bronte Creek, there was local support from the City of Burlington.

Check Your Watershed Day 2008 Partners

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

- Citizens' Environment Watch (a partner with STORM Coalition in the Monitoring the Moraine Project)
- Community Stream Steward Program
- Conservation Halton
- Ganaraska Region Conservation Authority
- Ted Knott Chapter of Trout Unlimited Canada



HISTORY OF CHECK YOUR WATERSHED DAY

Check Your Watershed Day (CYWD) first took place in 2006 in the Wilmot Creek watershed as well as parts of the adjacent Graham Creek in the Regional Municipality of Durham, Ontario. Twenty-two hard-working volunteers visited 116 sites, covering an area of 150 km². The following year, the event grew to attract 184 volunteers who simultaneously checked the health of Duffins Creek, Oshawa Creek, Ganaraska River, and Bronte Creek watersheds. In total, nearly 1000 km² were covered and over 600 sites were visited, and the second annual Check Your Watershed Day had been declared a success. For more information on past Check Your Watershed Day events, please visit www.MonitoringTheMoraine.ca.

CHECK YOUR WATERSHED DAY 2008

On Saturday, July 19, 2008, 60 people were out simultaneously checking the health of Cobourg Creek and Bronte Creek watersheds. In total, 427km² were covered and 215 sites were visited. Refer to Table 1 for this breakdown for each watershed. For the first time, Check Your Watershed Day had become a full day event, providing a morning training session for Team Leaders, lunch for all volunteers and an afternoon of stream monitoring.

Nearly ninety people, including staff, were out demonstrating interest in their watersheds. Check Your Watershed Day 2008 was a fantastic example of people coming together to better understand their environment and contribute to its safekeeping.



Stream Team Leaders receive morning training at Cold Springs Memorial Hall in Cold Springs.

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

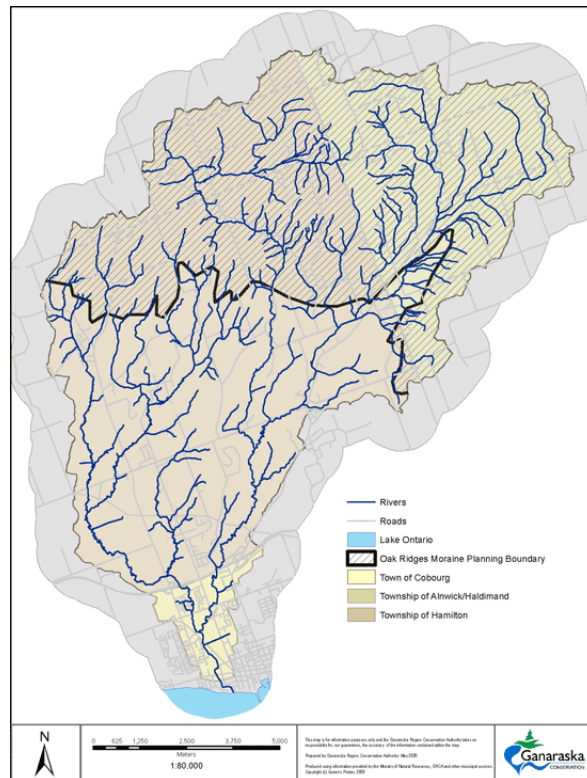
	Cobourg Creek	Bronte Creek	Total
Area Covered	123km ²	304km ²	427km ²
Sites Visited	115	112	227
Turnout	49 ppl	35 ppl	84
Volunteers	35 ppl	25 ppl	60

The project was the product of five partners coming together from various groups including NGOs and Conservation Authorities. This unprecedented partnership is a testament to the potential of this project as a community-based event and to the valuable information that can be collected in a short amount of time. There was also tremendous community support for Check Your Watershed Day 2008.

Cobourg Creek Watershed

The Cobourg Creek watershed is located on the north central shore of Lake Ontario and covers portions of the Town of Cobourg, Township of Hamilton and Township of Alnwick/Haldimand all within Northumberland County. This watershed originates from the Oak Ridges Moraine and covers an area of 123 km². Cobourg Creek contains many important moraine features such as the Northumberland forest. It has also been a focus for Atlantic Salmon Restoration (www.bringbackthesalmon.ca). This watershed is under the management of the Ganaraska Region Conservation Authority.

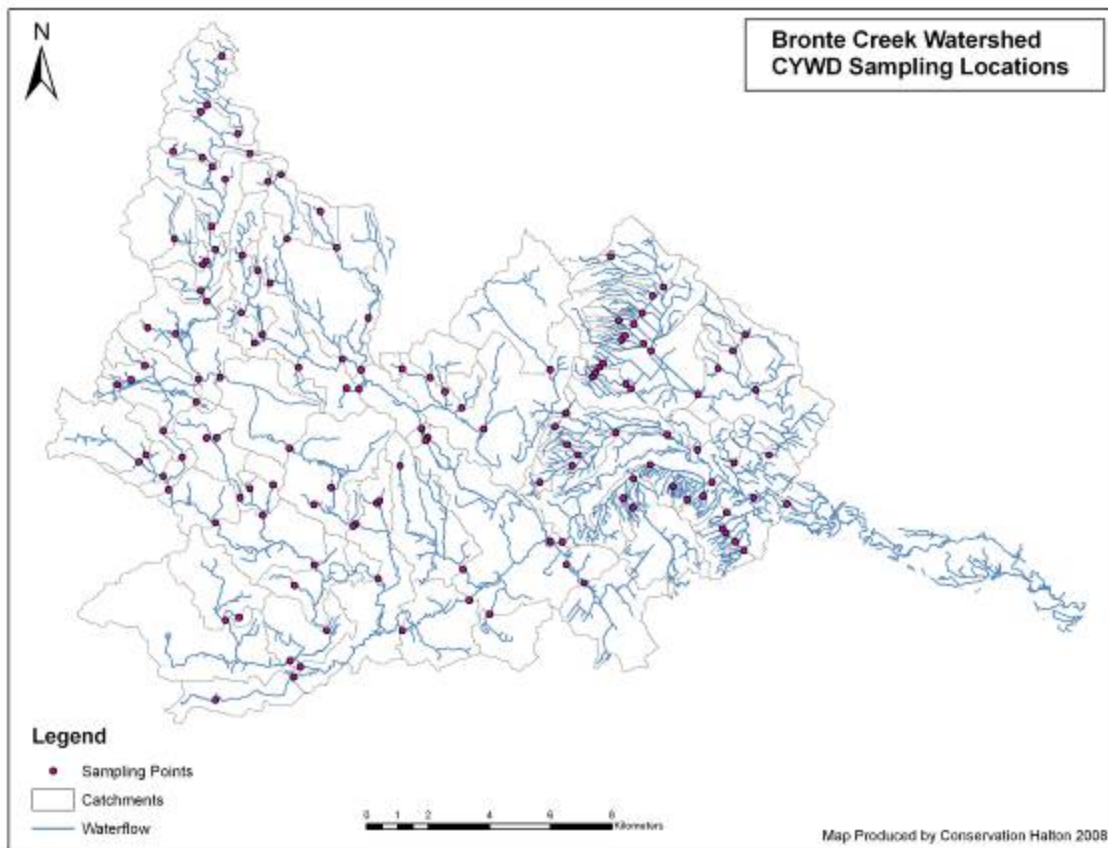
Check Your Watershed Day in Cobourg Creek coincides with the Ganaraska Region Conservation Authority's Cobourg Creek Watershed Planning Process to develop a watershed plan as required under the Oak Ridges Moraine Conservation Plan. Having local residents get their feet wet in Cobourg Creek is a great way to solidify the commitment from interested volunteers in participating in this process.



Cobourg Creek

Bronte Creek Watershed

The Bronte Creek watershed is located at the western end of Lake Ontario and covers portions of Wellington County, the City of Hamilton, Burlington, Oakville and Milton. Bronte Creek covers an area of 304 km². The main branch of Bronte Creek is 48 km long and there are 12 primary subwatersheds that feed into the creek, each with its own unique streamflow and morphology. The Niagara Escarpment also crosses the middle of the entire watershed. Draining into Lake Ontario, this watershed contains mainly rural landscape and residents rely on groundwater sources for irrigation, drinking water and the watering of livestock.



Bronte Creek illustrating all the CYWD sampling locations

Participation Goals

The total turnout includes both volunteers and agency staff who participated in the afternoon of stream monitoring. In all there were approximately 60 volunteers out checking their watersheds (Table 1). Each watershed was divided into sampling zones for a field crew of three people: one leader and two members. There was a crew designated to each zone, and an additional crew focused on quality control.

The goals for volunteer turnout were to have all the zones covered with a field crew of at least 2 people, and have an extra crew for quality control and assurance. This was about 40 people for each watershed. Another outreach goal for the year was to re-engage previous volunteers as well as include new volunteers local to the area. A fourth goal for turnout was to have municipal representation at each watershed location. These outreach objectives were successfully reached in both watersheds. The outreach strategy from the previous year was adapted to these new goals by including a summer intern dedicated to volunteer registration and outreach.

Volunteers

A diverse group of volunteers came together this year to participate in Check Your Watershed Day. Volunteers from Toronto worked together with local community members to demonstrate their appreciation of the Oak Ridges Moraine.

Local councillors also came out to show their support for protecting the local landscape. Ward 6 Councillor Carol D'Amelio from the City of Burlington joined the Check Your Watershed Day activities in Bronte Creek. Mayor Mark Lovshin from the Township of Hamilton, Mayor Peter Delanty from the Town of Cobourg both spoke to the importance of volunteerism and the need to maintain the environmental integrity of the Cobourg Creek watershed. Councillor Stan Frost of Cobourg was part of a steam team in Cobourg Creek.



Cobourg Councillor, Stan Frost, Derrick Luetchford of Ontario Federation of Anglers and Hunters, and Meredith Cochrane of Citizens' Environment Watch receive their certificates of participation.

“Educational, good job” – Participant comment

Rain, rain, go away...

As this event is attempting to quantify the stream flow that is coming directly from the groundwater, it is important that there is no significant rain events that would alter the information collected on Check Your Watershed Day.

For this year's event, the rain held off and it was dry or there were only trace amounts of precipitation (less than 1mm) in both areas in the days leading up to Check Your Watershed Day. In Bronte Creek, the majority of rainfall held off until the end of the day after sampling. In Cobourg Creek, there were two brief rain events in the afternoon. Because it takes a long time for the rain water to seep into the ground and then into the streams, the rain did not affect the sampling results. In addition, the rain falling directly into the streams was not enough to have a significant influence on the data.



A field crew in Bronte Creek ready to start sampling.

Preliminary Data

The goal in Check Your Watershed Day is not only to provide a great hands-on experience for people to learn about their watershed, the collected information also tells a story about the watershed. For example, where are the wet and dry sites in the watershed? Having the ability to identify these sites is necessary before asking the question "Why?" – why are these sites wet or dry and are they naturally this way? In addition, how many barriers, e.g. perched culverts, are there to fish movement? This information tells us how the watershed is functioning as an aquatic corridor for fish.

Based on the submitted datasheets, project partners are able to do a quick survey to see the quality of flow at each site. Overall, nearly 230 sites were visited for Check Your Watershed Day between the two watersheds and almost three-quarters of the sampled sites had flowing water. In total, 49 perched culverts were found (32 in Cobourg Creek and 17 in Bronte Creek) and 15 sites were sampled for QA/QC**.

In Cobourg Creek, about 86% of the documented sites were visited. Of these sites, six of them were inaccessible. Of the sampled sites, most of them were wet had some measurable stream flow (~63%). About 26% of the sampled sites were dry.

In Bronte Creek, about 65% of the marked sites were sampled. Twelve sites were not sampled because they occurred at wetlands or were inaccessible. Of the sample sites, 72% had measurable flow and 13% of sites were dry.

Table 2. The flow conditions of the small streams sampled in culverts of the Cobourg Creek and Bronte Creek watersheds.

	Cobourg Creek	Bronte Creek	Total
Sites to be visited	134	173	307
Sites visited*	115	112	227
Sites sampled	109	100	209
Dry sites	28	15	43
Wet sites with no flow	12	13	25
Wet sites with flow	69	72	141
Perched culverts	32	17	49
QA/QC sites**	6	9	15

*“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.

** “QA/QC sites” refers to sites that were re-sampled on CYWD by QA/QC crews (Quality Assurance/Quality Control) to test the repeatability of the protocol. These were not unique sites and are not included in the sites visited values.

A crew member measuring volume/time at a perched culvert in Bronte Creek.



Improvements 2008

Based on the previous year's evaluation of Check Your Watershed Day, many of the suggestions were implemented for 2008. These improvements are listed below.

Outreach

In addition to the outreach goals mentioned above, other changes had been made to streamline the registration and training process in order to encourage inclusion of volunteers. There was an opportunity for volunteers to register in advance on line. As well, an updated version of the monitoring protocol was circulated to volunteers in advance, as well as supplementary materials (e.g. cheat sheet and online quiz to test understanding of the protocol). This worked to prepare volunteers as well as address any concerns before the event.

Field Crew Leader Training

The Stream Team Leader training took on a different form this year. Rather than hold the training on a separate day before the event, team leaders met in the morning of Check Your Watershed Day 2008 to receive their training. This schedule was able to accommodate more volunteers and allowed leaders to apply their knowledge right away. In addition, lunch was served before teams left for monitoring

Both team leader trainings included a hands-on demonstration of the field techniques. This was important in addressing questions of the volunteer leaders in advance, as well as being aware that participants may require a visual aid in order to best retain the information learned.



Stream Team Leaders practice a technique for measuring stream flow in Cobourg Creek.

Quality Control and Additional Measurements

In order to ensure quality of data received, data submitted by Field Crew Leaders at the end of the day was checked by an agency staff to verify that all notations were legible and understandable.

In addition to updating the monitoring protocol this year, groups from both Conservation Authorities worked to provide additional information. This group went to large streams in the watershed to determine the stream flow using complex and expensive flow metres. They are frequently used by Conservation Authority staff for stream discharge measurements. This information was used to compare the flow data collected in large and small streams on the same day for a complete story of the state of the water flow on Check Your Watershed Day.

*“Thank you, we appreciate your efforts and service in our community.”
- Participant comment*

CHECK YOUR WATERSHED DAY 2009

Based on the evaluations from the past three years of Check Your Watershed Day events, the volunteer response has been incredibly positive. Participants have enjoyed the opportunity to spend a day outdoors, learn about the environment and how to sample, as well as meeting new people. However, there were suggestions that will be taken in account for the planning of Check Your Watershed Day 2009. For example, it was difficult for some groups to visit all of their sites within their sampling zones in the time allotted. As well, due to rainy weather some volunteers mentioned difficulty in reading and writing on the given forms. Several volunteers also expressed their frustration at their inability to fully understand the maps and location of specific sites.

These concerns will be taken into consideration during the planning of next year’s event. This will include providing waterproof paper in the case of rainy weather. Organizers will also stress the importance of returning at the assigned time, in order to prevent frustration among volunteers who could not complete every site in their zone. A more detailed map will also be provided to volunteers, in order to ensure no time is used by being lost or unable to find a specific culvert.

Next Steps

Plans for Check Your Watershed Day 2009 are clear. The next steps to be taken include making improvements to the materials, such as improving pictures, graphics and maps. A greater effort will be made to reach out to more local groups (e.g. Rotary clubs etc.). A schedule will be developed to monitor more watersheds, and connections with different Conservation Authorities in other watersheds will be made. And lastly, efforts will be made to streamline the data analysis process.



Data

Currently, the data collected from Check Your Watershed Day is being entered into a database. Then, the data will be integrated into the databases of local Conservation Authorities, analyzed and a report will be produced to document the findings. This information will be used to inform how those watersheds will be managed in the future.

Get involved in 2009!

Check Your Watershed Day will take place on Saturday, July 18 in 2009. The watersheds are yet to be determined. Please check the project website for updates

(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.



**Group Photo from Cobourg Creek Check Your Watershed Day.
Photo Courtesy of Dave Copplestone.**

“Awesome day” –Participant comment