

NIAGARA WATERSHED

REPORT CARD

Although it may be difficult to imagine water ever being a concern in Niagara, surrounded as we are by Lake Ontario, Lake Erie and the Niagara River, we are a dynamic community with significant water requirements. Our growing active urban and rural municipalities, strong agriculture and tourism industries, and successful recreation and business operations will put an ever increasing strain on our precious water resource. In the future, this strain will affect water quality and quantity and the health of our watershed. With this in mind, the Niagara Peninsula Conservation Authority and the Regional Municipality of Niagara, along with their partners, have compiled the first Report Card on the environmental health of the Niagara watershed. This Report Card is designed to inform residents about how water resources are affected in our watershed, to stimulate government action, and to encourage public stewardship initiatives in the watershed.

BE PART OF THE SOLUTION

Take a moment to read the 2005 Niagara Watershed Report Card. The environmental indicators used in the Report Card are designed to be meaningful to you and to illustrate the significant current and changing conditions across our watershed. Although we are doing quite well in some areas, there is room for improvement in others. It is only through the efforts of each and every individual that we will be able to improve on these areas in the future.

WHAT is a Watershed

A watershed is an area of land over which rain and snowfall drain into a common water body such as a river, creek or lake. You are sitting in a watershed right now, since homes, farms, businesses, forests, small towns and big cities are all part of a watershed. Watersheds support our lives, and our lives affect our watersheds.

WATERSHED PARTNERS

The Niagara watershed covers an area of 2,424 km² of which 1,850 km²

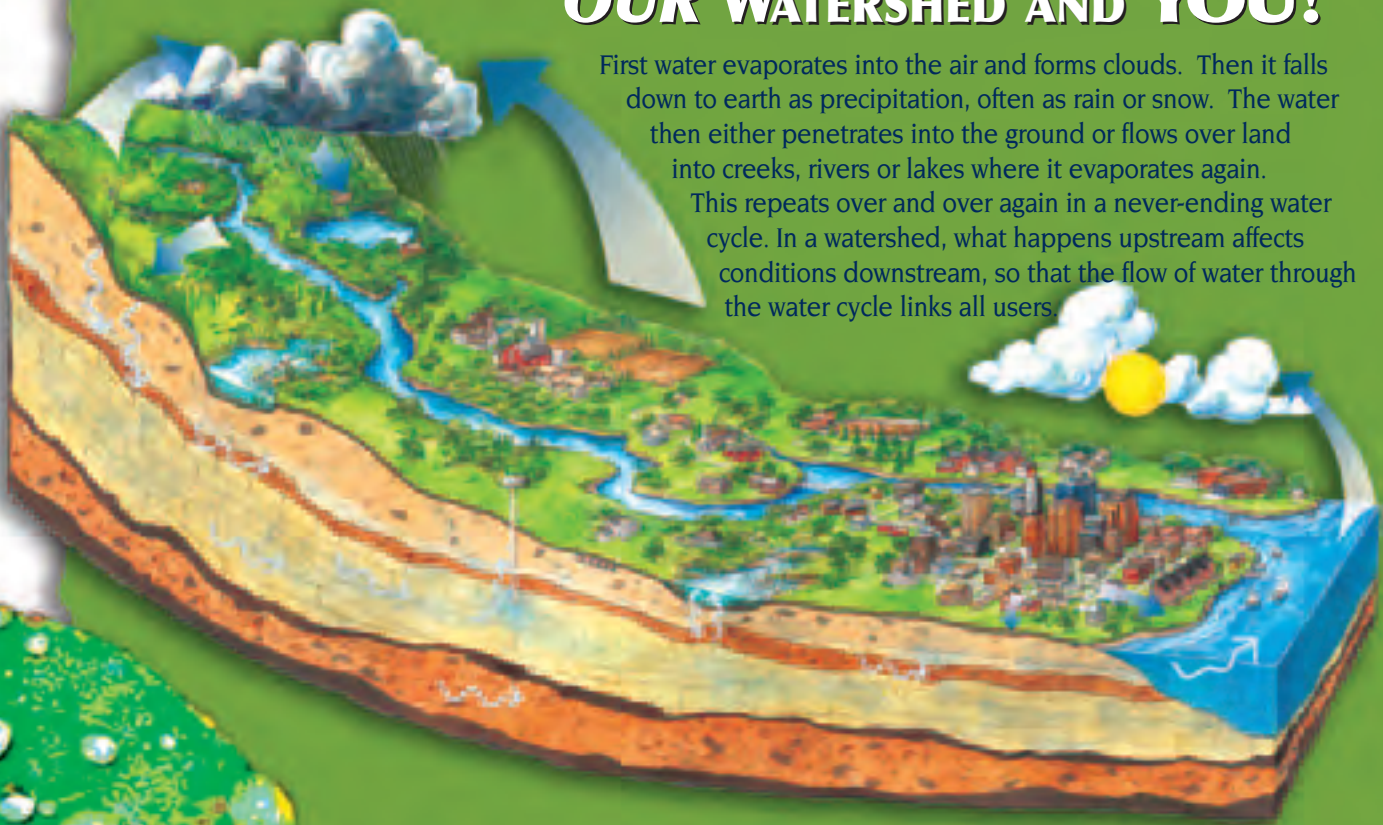
lies in the Region of Niagara, 243 km² in the City of Hamilton, and 340 km² in Haldimand County.

The Niagara Watershed is composed of three main sub-watersheds: Lake Ontario, Niagara River and Lake Erie. The Niagara watershed encompasses 14 municipalities: Fort Erie, Grimsby, Lincoln, Niagara Falls, Niagara-on-the-Lake, Pelham, Port Colborne, St. Catharines, Thorold, Wainfleet, Welland and West Lincoln, along with the City of Hamilton and Haldimand County.

THE WATERCYCLE: OUR WATERSHED AND YOU!







First water evaporates into the air and forms clouds. Then it falls down to earth as precipitation, often as rain or snow. The water then either penetrates into the ground or flows over land into creeks, rivers or lakes where it evaporates again.

This repeats over and over again in a never-ending water cycle. In a watershed, what happens upstream affects conditions downstream, so that the flow of water through the water cycle links all users.



How You Can Help

Whether you live, work or play in the Niagara watershed, everyone has a vital role in protecting our natural resources. Here are a few suggestions on how you can help:

-  Conserve water around your home by fixing leaky faucets, taking short showers and turning off the tap while brushing your teeth
-  Landscape using native species of plants and flowers
-  Conserve wetlands, woodlands and meadows on your property
-  Reduce your use of chemicals including fertilizers and pesticides
-  Create a plan to help your business use water efficiently and reduce waste
-  Spread the word – talk to your family and friends about the importance of protecting the environment and our water resources and join local community environmental stewardship initiatives

For more information, contact:



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Tel 905-788-3135
www.conservation-niagara.on.ca

We are pleased to acknowledge the cooperation and support of our watershed partners.

City of Hamilton
Haldimand County
Town of Fort Erie
Town of Grimsby
Town of Lincoln
City of Niagara Falls
Town of Niagara-on-the-Lake
Town of Pelham
City of Port Colborne
City of St. Catharines

City of Thorold
Township of Wainfleet
City of Welland
Township of West Lincoln
Ontario Ministry of the Environment
Environment Canada
Ontario Ministry of Agriculture,
Food and Rural Affairs
Niagara Escarpment Commission
Ontario Ministry of Natural Resources



The *Niagara Water Quality Protection Strategy* was released in 2003, the result of a 14 month multi-stakeholder consultation effort. The intent of the Strategy is to work towards a common goal of protection, restoration and management of water resources across the Niagara watershed. The Niagara Peninsula Conservation Authority, the Regional Municipality of Niagara and their project partners are implementing the recommendations from the Strategy.



REPORT CARD INDICATORS

The Report Card indicators come from the goals outlined in the *Niagara Water Quality Protection Strategy*:

HUMAN HEALTH: Clean and abundant drinking water for your safe consumption

NATURAL ENVIRONMENT: Water of a sufficient quantity and quality in natural areas like wetlands and streams ensuring healthy plants, species and the integrity of the ecosystem

FLOODING AND EROSION: Protection for our residential, employment and public land uses from detrimental flooding and erosion

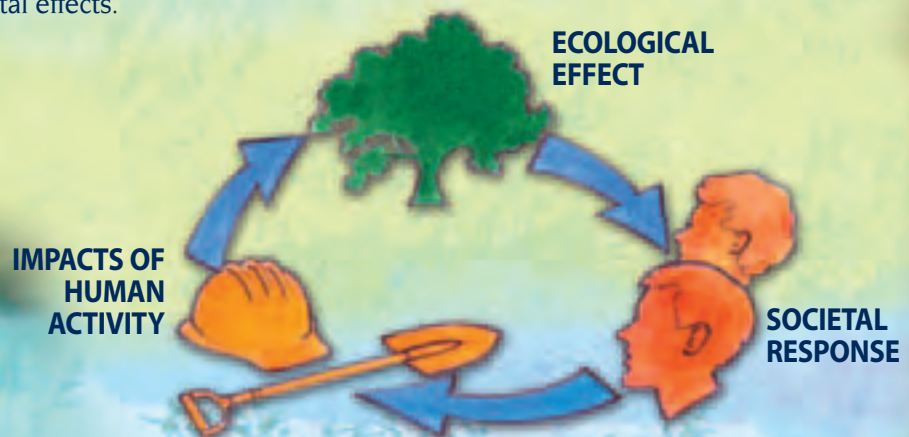
RECREATION: Sufficient, clean water to support and sustain our recreational uses, such as beaches and natural areas

COMMERCIAL WATER USE: Clean and abundant water for economic opportunities

AGRICULTURE: Clean and abundant water for agriculture opportunities

PEOPLE AND OUR ECOSYSTEM

In a watershed, the flow of water through the water cycle links everything together. This web of linkages is referred to as an ecosystem. Incorporated into that web are the six indicators outlined above, as well as all watershed residents, businesses and agencies. Human Activities either harmonize with natural processes and help to maintain the web; or they clash with them, thereby unraveling the web and harming the water. When human activities are harmful, the Ecological Effects can eventually reach a level that triggers a Societal Response to reduce these detrimental effects.



INTERPRETATION

The ratings, or grades, in the report card are meant to indicate the current state of our watershed, but will also be used over time to track changes and provide information on its future. Additional information on the rationale for each rating is available in the 2005 *Niagara Watershed Report Card Background Report*, available online at www.conservation-niagara.on.ca or by contacting the Partners listed on the back of this brochure. Each indicator is rated or graded using the following scale:

A Very Good

B Satisfactory

C Needs Some Improvement

D Needs Lots of Improvement








ND Insufficient Data Available

NIAGARA WATERSHED REPORT CARD






INDICATORS	WHAT'S THE SCOOP?	GRADE	HOW WE CAN BE PART OF THE SOLUTION
HUMAN HEALTH			
 Boil Water Advisories	 No advisories were issued in 2005 for municipal water supplies.	A	Respect advisories.
 Drinking Water Wells and Cisterns	 The Public Health Department provides a free drinking water testing program for people with private water supply in order to detect bacteria.  It is estimated that only a small portion (10%) of private water supply owners took advantage of the free service in 2005.	C	If you are a private water system owner, use the Public Health Department's free testing program and test your water on a regular basis (at least seasonally, four times per year).
NATURAL ENVIRONMENT			
 Urban Infill and Greenfield Development	 The proposed provincial <i>Places to Grow</i> legislation, Provincial Policy Statement and the <i>Greenbelt Protection Plan</i> cover all or part of the Niagara watershed.  Watershed partners are currently implementing policies to protect natural resources, while allowing for planned growth.	ND	Work with your municipal officials to examine redevelopment opportunities within existing urban areas.
 Combined Sewer Overflows (CSO)	 The provincial average of wastewater that bypasses treatment through Combined Sewer Overflows (CSO) is 0.38%.  In Niagara, the average level of bypass is at 3%, or 10 times above the provincial average.	D	Disconnect your downspouts to prevent overflow into municipal drains. Conserve water at home. Support your municipality in the development of policies to reduce the level of CSOs.
 Total Water Demand	 The watershed partners are working to develop water efficiency strategies that will encourage municipalities to reduce water consumption by at least 20%.	C	Think about your water use and implement water efficiency within your home.
 Wetland Change	 Wetlands are estimated to cover 6.36% of the Niagara watershed. The recent change to the <i>Conservation Authorities Act</i> will help to protect this valuable resource.	ND	Protect wetlands – they are one of the most valuable ecosystems for filtering water pollutants and for moderating floods.
 Protected Natural Area	 It is estimated that 18.5% of the watershed is covered by natural areas. The long-term target is a considerable increase to 30%.  Protected natural areas include Conservation Areas, provincial parks, the Niagara Escarpment, Provincial Greenbelt Plan areas and local creek valleys. In 2005, both the Province and the Niagara Region strengthened natural heritage protection with enhanced environmental policies.	C	Enjoy and protect natural areas. Find out about land donation opportunities and respect protection policies.
 Indicator Species Abundance	 The general health of aquatic and wetland areas are about average, according to the results of the current Marsh Monitoring Program.  These findings are based on the abundance of amphibians such as frogs and toads.	C	Plant natural buffers along creeks. Reduce your use of chemicals including fertilizers and pesticides.
 Stream Quality	 Stream quality is a function of the levels of pollutants, bugs and vegetation found there.  Current data indicates that stream quality is negatively impacted by nutrient overflow from surrounding land use.	D	Realize that what you put in the water is what you eventually drink. Leave buffers of natural vegetation along streams to improve their health. Participate and learn about local environmental stewardship initiatives.
 Groundwater Quality	 Our natural groundwater is characterized as good quality according to the preliminary data of the Provincial Groundwater Monitoring Program.	B	Understand that your land is your water and learn about this connection. Properly decommission abandoned wells on your property.

INDICATORS	WHAT'S THE SCOOP?	GRADE	HOW WE CAN BE PART OF THE SOLUTION
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FLOODING AND EROSION

Stream Erosion 	 Stream erosion is a key indicator of land use changes and activities that are occurring within the watershed.	ND	Protect stream vegetation.
	 Broader data are needed. The current data available is for selected watercourses throughout the watershed.		Plant vegetated buffers along streams and watercourses.
Flooding Advisories 	 The Niagara Peninsula Conservation Authority issued four Flood Bulletins in 2005.	ND	Do not build in floodplains or alter any streams, ponds or drainage ditches on your property without consulting your Municipality or the Niagara Peninsula Conservation Authority.
	 No storm events exceeded the 100-year regulatory floodplain limits.		
	 Currently, there is no data collection process to determine the number of properties or people affected by a flooding event.		







RECREATION

Beach Postings 	 The Niagara watershed has over 50 public beaches.	D	Respect beach postings. Cooperate with your municipality in the development of policies to reduce the level of CSO discharge.
	 The overall loss of public beach time in the watershed was 11% in 2004 and 19% in 2005.		
Use of Protected Natural Areas 	Visits to natural areas increased by 7% from 2004 to 2005.	B	Take part in local community activities and enjoy your natural areas. Support municipal efforts to reduce water use.
	 Data is based on the visitors to conservation areas protected and maintained by the Niagara Peninsula Conservation Authority.		

COMMERCIAL WATER USE

Water Restrictions 	 A formal process for applying Regional water restrictions is being developed by the watershed partners.	C	Respect water restriction notices.
Number of Water Efficiency Plans 	 Water Efficiency Plans are designed to reduce water demand for residential, commercial and industrial water uses.	ND	Learn how you can develop a Water Efficiency Plan for your home or business.
	 Water Efficiency Plans are a fairly recent initiative and will continue to be implemented across the Niagara watershed.		

AGRICULTURE

Environmental Farm Plans 	 Approximately 257 Environmental Farm Plan projects were implemented in the Niagara watershed in 2005.	B	Participate in an Environmental Farm Plan workshop.
	 The Environmental Farm Plan projects are offered by the Ontario Soil and Crop Improvement Association.		
Nutrient Management Plans/Strategies 	 To enhance environmental protection, the <i>Nutrient Management Act</i> sets out the proper management of nutrient containing materials.	ND	Find out how your farm can participate in the Nutrient Management Strategies.
	 This is a recent initiative and data will be collected to monitor the number of plans being implemented in the Niagara watershed.		