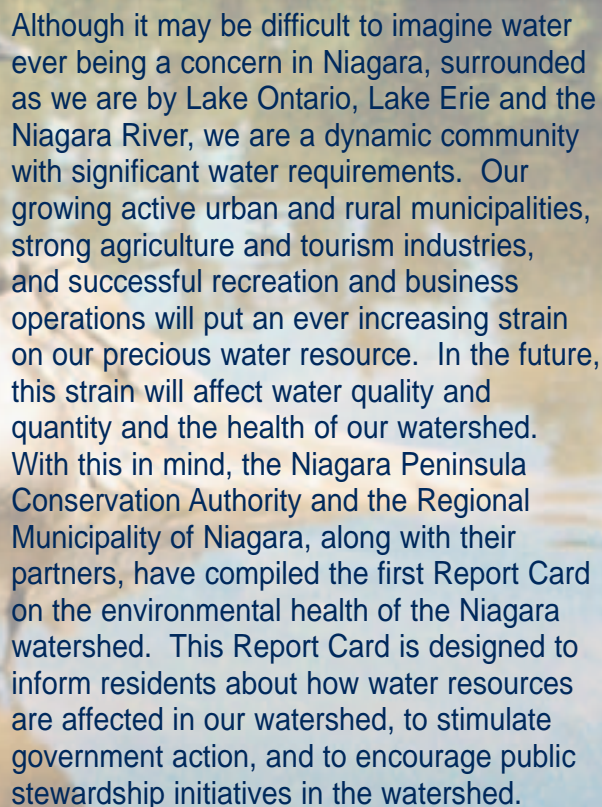


NIAGARA WATERSHED

REPORT CARD

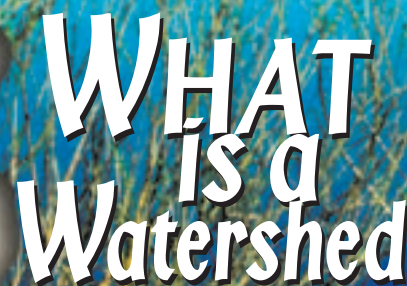


Although it may be difficult to imagine water ever being a concern in Niagara, surrounded as we are by Lake Ontario, Lake Erie and the Niagara River, we are a dynamic community with significant water requirements. Our growing active urban and rural municipalities, strong agriculture and tourism industries, 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 area of jurisdiction is 2,424 km²

encompassing the whole of the Region of Niagara, 21% of the City of Hamilton and 24% of 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.

REPORT CARD INDICATORS

The Niagara Watershed Report Card provides an overview of water issues and impacts within the Niagara watershed. The indicators that we are reporting on were identified as key goals developed through the *Niagara Water Quality Protection Strategy*.

HUMAN HEALTH: Clean and abundant drinking water for our 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, commercial, industrial 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 commercial users

AGRICULTURE: Clean and abundant water for agriculture operations

INTERPRETATION OF GRADES ASSIGNED

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 Niagara Peninsula Conservation Authority or the Region of Niagara. Each indicator is rated or graded using the following scale:

A Very Good

B Satisfactory

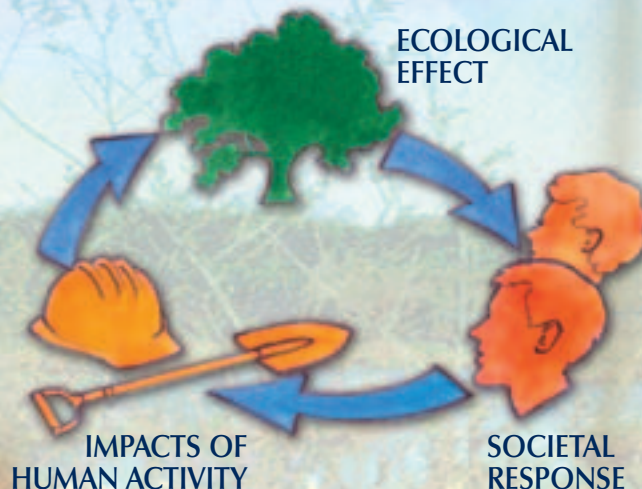
C Needs Some Improvement

D Needs Lots of Improvement



























I Insufficient Data Available At This Time

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 conflict with them, thereby unraveling the web and harming the water. When the Impacts of Human Activities are harmful, the Ecological Effects can eventually reach a level that triggers a Societal Response to reduce these detrimental effects.



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.	I	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%.  Although much has been done in the past decade, in Niagara the average level of sewer bypassing is at 3%, or 10 times above the provincial average.	D	Disconnect your downspouts to prevent overflow into municipal sewers. 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.	I	Protect wetlands – they are one of the most valuable ecosystems for filtering water borne pollutants and for moderating floods.
Protected Natural Areas 	 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 creeks and 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, types of aquatic species and vegetation found along the stream bank.  Current data indicates that stream quality is negatively impacted by nutrients 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 groundwater is characterized as good quality according to the preliminary data of the Provincial Groundwater Monitoring Network.	B	Understand what you do to your land affects your water and learn about this connection. Properly decommission abandoned wells on your property.

NIAGARA WATERSHED REPORT CARD

INDICATORS	WHAT'S THE SCOOP?	GRADE	HOW WE CAN BE PART OF THE SOLUTION
FLOODING AND EROSION			
Stream Erosion	 <ul style="list-style-type: none"> Stream erosion is a key indicator of the effects of land use changes and human activities that are occurring within the watershed. To better understand the effects of flooding and erosion, broader data are needed. The current data available is for selected watercourses throughout the watershed. 	I	<ul style="list-style-type: none"> Protect stream vegetation. Plant vegetated buffers along streams and watercourses. Do not increase the rate of surface water runoff.
Flooding Advisories	 <ul style="list-style-type: none"> The Niagara Peninsula Conservation Authority issued four Flood Bulletins in 2005. 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 flooding events. 	I	<ul style="list-style-type: none"> 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.
RECREATION			
Beach Postings	 <ul style="list-style-type: none"> The Niagara watershed has over 50 public beaches. The overall loss of public beach time in the watershed was 11% in 2004 and 19% in 2005. 	D	<ul style="list-style-type: none"> Respect beach postings. Support your municipality in the development of policies to reduce the level of CSO discharge and pollutant runoff.
Use of Protected Natural Areas	 <ul style="list-style-type: none"> Visits to natural areas increased by 7% from 2004 to 2005. Data is based on the visitors to Conservation Areas protected and maintained by the Niagara Peninsula Conservation Authority. 	B	<ul style="list-style-type: none"> Take part in local community activities and enjoy your natural areas. Support municipal efforts to reduce water use.
COMMERCIAL WATER USE			
Water Restrictions	 <ul style="list-style-type: none"> A formal process for addressing Regional water restrictions is being developed by the watershed partners. 	C	<ul style="list-style-type: none"> Respect water restriction notices.
Number of Water Efficiency Plans	 <ul style="list-style-type: none"> Water Efficiency Plans are designed to reduce water demand for residential, commercial and industrial water uses. Water Efficiency Plans are a fairly recent initiative and will continue to be implemented across the Niagara watershed. 	I	<ul style="list-style-type: none"> Learn how you can develop and apply a Water Efficiency Plan for your home or business.
AGRICULTURE			
Environmental Farm Plans	 <ul style="list-style-type: none"> Approximately 260 Environmental Farm Plan projects were implemented in the Niagara watershed in 2005. The Environmental Farm Plan projects are promoted by the Ontario Soil and Crop Improvement Association. 	B	<ul style="list-style-type: none"> Participate in an Environmental Farm Plan workshop.
Nutrient Management Plans/Strategies	 <ul style="list-style-type: none"> To enhance environmental protection, the <i>Nutrient Management Act</i> sets out the proper management of nutrient containing materials. The Region's Biosolids Master Plan provides an environmentally effective strategy for the disposal of Biosolids including proper nutrient management. This is a recent initiative and data will be collected to monitor the number of plans being implemented in the Niagara watershed. 	I	<ul style="list-style-type: none"> Find out how your farm can participate in the Nutrient Management Strategies.



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.









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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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