

The Niagara Peninsula Conservation Authority and Niagara Region, along with their partners, are pleased to present the third annual Report Card on the environmental health of the Niagara watershed. The Report Card is intended to inform residents on the state of water resources, stimulate government action, and encourage public stewardship initiatives.

Take a moment to read the Report Card. In many areas we are doing quite well. In others, we need improvement. It is through the continual support and involvement of all of us that we can improve the Niagara Watershed.

INTERPRETATION OF GRADES ASSIGNED

The ratings, or grades, are used to track changes and provide updated information in future reports.

Due to various factors, including the slow rate of change associated with some indicators and in some cases, the lack of 'meaningful' short-term data, the 2007

Report Card only reports on a subset of the original 18 indicators from 2005.

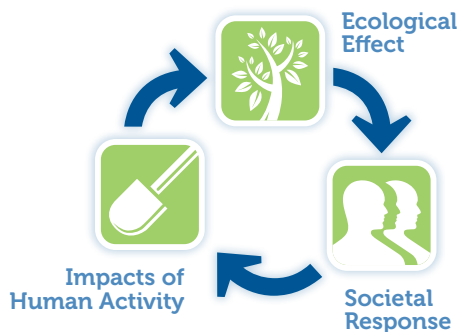
Indicators not included will be reported on when additional or more trend-orientated data has been collected.

Niagara WATERSHED Report Card 07

"High quality water is more than the dream of the conservationists; more than a political slogan; high quality water, in the right quantity, at the right place, at the right time, is essential to health, recreation and economic growth. Of all our planet's activities, no force is greater than the hydrological cycle."

Richard Bangs and Christian Kallen
Rivergods, Exploring the World's Great Rivers, 1985.

In a watershed, the flow of water through the water cycle links everything together. This web of linkages is referred to as an ecosystem. The six theme areas from the Niagara Water Strategy are linked into the ecosystem, as are watershed residents, businesses and agencies. Human Activities either harmonize with natural processes and help to maintain the web, or they conflict with them, thereby causing stresses and potentially harming the water and the systems, that rely on it. 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.



REPORT CARD INDICATORS

The Niagara Watershed Report Card provides an overview of watershed health by reporting on various water issues and impacts within the Niagara watershed. The indicators used to assess watershed health have been organized according to the primary themes and associated goals developed through the *Niagara Water Strategy*.

INDICATORS		WHAT IS THE CURRENT STATUS?	2006	2007
HUMAN HEALTH				
	BOIL WATER ADVISORIES	No community Boil Water Advisories were issued by Public Health in 2007.	A-	A-
NATURAL ENVIRONMENT				
	COMBINED SEWER OVERFLOWS (CSO)	Niagara Region and its area municipalities are continually investing resources to reduce the impact of CSO's through ongoing initiatives. An investment of over \$26 Million has been made over the last two years.	C-	C
	PROTECTED NATURAL AREAS	This indicator has not changed since 2006, but when additional information is available from the Natural Heritage Areas Inventory study, this indicator will be more accurately represented.	C	B
	INDICATOR SPECIES ABUNDANCE	In 2007, the indicator abundance score was 3.7, a score of poor. In comparison, an excellent score would be between nine and twelve	C+	D
	STREAM QUALITY	Stream quality is a function of the levels of pollutants, types of aquatic species and vegetation found along the stream bank.	D	D
	GROUNDWATER QUALITY	The Groundwater indicator grade has diminished as a result of the continuous nitrate exceedances in the Niagara-on-the-Lake well and rising nitrate concentration at Fonhill.	B	B-
AGRICULTURE				
	ENVIRONMENTAL FARM PLANS	There have been over 343 completed Environmental Farm Plans in the Niagara watershed since the program started in 2005. The number of new programs for 2007 has remained close to the 2006 value.	B	B
FLOODING AND EROSION				
	FLOODING ADVISORIES	The Niagara Peninsula Conservation Authority issued five General Watercourse Safety Bulletins in 2007. A decrease from nine to five from 2006.	I	D
RECREATION				
	BEACH POSTINGS	In 2007, thirty six public beaches were monitored including thirty three by the Region and three by the City of St.Catharines. There were 3924 bathing days with 810 days lost due to posted beaches. This equals a 20.6% loss of bathing opportunity days.	D	C-
	USE OF PROTECTED NATURAL AREAS	Visits to natural areas increased by 6.5% in 2007 for a total attendance of 541,800 people.	B	B+
WATER USE				
	TOTAL WATER DEMAND	In 2007, the Region's Total Water Demand increased from 424 litres per capita per day to 431 litres per capita per day. The 2007 rate is still lower than the rate reported in the 2005 Watershed Report Card.	B	B-

Note: A number of indicators were originally included in the 2005 Watershed Report Card. Due to various factors including the slow rate of change at Drinking Water Wells and Cisterns, Urban Infill and Green Field Development, Wetland Change, Stream Erosion, Water

NWS THEME-BASED GOALS

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.

AGRICULTURE

Clean and abundant water for agriculture operations.

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.

WATER USE

Clean and abundant water for commercial users.

EACH INDICATOR HAS BEEN 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
- ↔** No Change
- ↑** Improvement
- ↓** Downwards Trend

TREND	MORE INFORMATION
	<ul style="list-style-type: none"> Boil Water Advisories are issued by the Niagara Region Public Health Department. A Boil Water Advisory remains in effect for the lakeshore community in Wainfleet. Additional information can be found at www.niagararegion.ca
	<ul style="list-style-type: none"> For further information or to see what we are doing, please visit the Region's website at: www.niagararegion.ca or WaterSmart Niagara at www.watersmartniagara.ca or the NPCA's website at: www.conservation-niagara.on.ca
	<ul style="list-style-type: none"> The Niagara Peninsula Conservation Authority, in partnership with Peninsula Field Naturalists and others, is preparing an Inventory of Natural Areas for the Niagara Watershed. This project will be completed in 2009. For results from the 2006 sampling season, please go to: www.conservation-niagara.on.ca
	<ul style="list-style-type: none"> The Marsh Monitoring Program was developed by Birds Studies Canada in partnership with Environment Canada. For more information on how you can get involved with this program, please visit: www.bsc-eoc.org/volunteer/glmmmp/
	<ul style="list-style-type: none"> The Niagara Peninsula Conservation Authority has updated the Annual Water Quality Report. Please visit: www.conservation-niagara.on.ca/water_management/surfacewater.html
	<ul style="list-style-type: none"> The Niagara Peninsula Conservation Authority is working with the Province and others to better understand groundwater resources. For further information on what the Niagara Peninsula Conservation Authority is currently doing, please visit: www.conservation-niagara.on.ca/water_management/surfacewater.html
	<ul style="list-style-type: none"> The Environmental Farm Plan program is administered by the Ontario Soil and Crop Improvements Association. For additional information on Environmental Farm Plans, please visit the Ontario Soil and Crop Improvement Associations website at: www.ontariosoilcrop.org/cms/en/ProgramsaboutEFPP.aspx?menuid=61
	<ul style="list-style-type: none"> The Niagara Peninsula Conservation Authority administers and operates a flood warning system to reduce the risk to life and property due to riverine and shoreline flooding. For additional information, please visit the website at: www.conservation-niagara.on.ca/water_management/floodwarning.html
	<ul style="list-style-type: none"> For further information on beach postings, visit the Niagara Region website at www.geosmartniagara.ca/beachmonitor/
	<ul style="list-style-type: none"> The Niagara Peninsula Conservation Authority manages/owns thirty six conservation areas encompassing approximately 2,870 hectares of environmentally significant and natural lands. For additional information on conservation areas in your neighbourhood, please visit the Niagara Peninsula Conservation Authority website at: www.conservation-niagara.on.ca/conservation_areas/
	<ul style="list-style-type: none"> There are many factors that influence the rate given for Total Water Demand. While usage is high from a global perspective, there is an increasing awareness by consumers of the benefits associated with conserving this important natural resource. Many municipalities have installed water meters. This provides data to allow us to track usage more accurately. Please visit the Niagara Region website to learn more on how you can reduce your water consumption at: www.niagararegion.ca

associated with these indicators have not been incorporated in this report, however, they will be reported on at a later date. These indicators include: Water Restrictions, Number of Water Efficiency Plans, Nutrient Management Plans/Strategies and Commercial Water Use.

GET INVOLVED IN PROTECTING AND ENHANCING THE WATERSHED

"YOUR ACTIONS TODAY WILL MAKE A BETTER TOMORROW."

- Join and support local and national environmental groups that work to solve environmental problems; they are always in need of more volunteers and different talents.
- Don't dump hazardous products such as oils, paint compounds, solvents into storm drains or ditches.
- Stoop and scoop animal waste.
- Disconnect your home's eavestrough downspouts from the sewer and install a rain barrel.
- Use native trees and shrubs in your gardens to restore the natural water cycle on your property. Replace hard surfaces with natural groundcovers and porous paving to allow rainfall to soak into the ground.
- Support your municipality in implementing best management practices in parks, municipal yard maintenance, water conservation programs and garden/yard waste pick-up.
- Water efficiency saves money and reduces the demand on our waterways and treatment plants.
- Maintain your septic system in good working order; have the septic system pumped every three to five years. Most importantly, upgrade a leaky system to minimize leaching of nutrients.



THANKS TO OUR PARTNERS AND STAKEHOLDERS FOR THEIR COOPERATION AND CONTINUED SUPPORT.

Watershed Partners: 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, City of Hamilton and Haldimand County.

Watershed Stakeholders: local, provincial and national environmental, agricultural, recreational groups and associations, Niagara Escarpment Commission, Ministry of Natural Resources, Ontario Ministry of Agriculture, Food and Rural Affairs, Environment Canada and the Ministry of the Environment.

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We are interested in hearing from you. Contact us at:

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