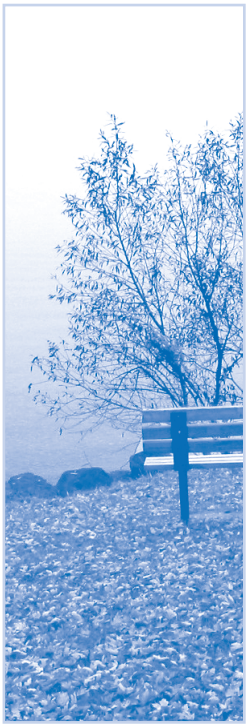
KEY FINDINGS

# Highlights and OBSERVATIONS

# 7.0 KEY FINDINGS: highlights and observations

Natural systems are dynamic and complex and it is not easy to measure their health. That is why so many indicators have been used in this report to try to understand the health of our land, water and air resources, the stresses on them, and our responses. There is not a simple, easy answer to the question, "How healthy is the environment in York Region?"



The information gathered for this report tells us that some indicators show relatively good environmental health and others show poor environmental health. Some indicators tell us that great progress has been made by the Region and its partners, other government agencies, organizations and the public since the 2000 State of the Environment Report. Other indicators, however, show us that some things are worse than they appeared five years ago. For a few segments of the environment, we still lack the data and information that will allow us to track changes effectively.

What should the "take home message" be from this Report? Residents should know that we are blessed with many diverse, beautiful and important natural resources in York Region. Some of these resources are relatively healthy, and others are not. Many are getting better and some are getting worse. Residents should understand that we have made significant progress over the past five years in protecting and restoring our natural resources, and that there are many stiff challenges ahead of us. This chapter provides detail on these observations.

## 7.1 INDICATORS of GOOD ENVIRONMENTAL health

### land

**Greenland System:** Over a third (34%) of the land base of York Region is now designated as part of the Regional Greenlands System. The Regional Greenlands System includes many nodes of high quality habitat that support a variety of plants and animals, including some that are rare, threatened and/or endangered. It also includes important links between the nodes that allow for the movement of plants and animals.

**ESAs:** About 5% of the total land base is designated and protected as Environmentally Significant Areas.

**Farmland:** 37% of the land base of York Region remains as farmland, and this generates about $179 million annually in gross farm receipts.

### water

**Drinking Water:** The quality of municipally-supplied drinking water is excellent. The drinking water supplied from York Region sources and treatment plants is of a consistently high quality relative to health-related Ontario Drinking Water Standards (ODWS). The percentage of adverse water quality reports from the York Region Water System relative to the number of samples from 2000 to 2004 was consistently very low and corrective action and re-testing resulted in the ODWS being met.

**Fish Habitat:** There is good quality fish habitat found in substantial parts of the Humber and Rouge Rivers and the rivers that flow into Lake Simcoe.

**Warmwater Fishery:** The warmwater fishery in Lake Simcoe appears to be doing well, and populations of smallmouth bass, largemouth bass and yellow perch attract much fishing interest.

### air

**Some Air Pollutants:** Concentrations of three key air pollutants - sulphur dioxide, nitrogen dioxide and carbon monoxide - consistently meet provincial air quality criteria.

# 7.2 INDICATORS of IMPROVING trends

## all

**SOE 2000 Recommendations:** The Region has made considerable progress in addressing the Recommendations from the SOE 2000 Report through its many strategies, initiatives and partnerships.

## land

**Greenlands:** Since 2001, the extent of designated greenlands has increased significantly (by 29%) as has the extent of protected wetlands (by 38%). Additional lands continue to be added to the Regional Greenlands System through the Greenlands Property Securement Strategy.

**ANSIs:** Since 2001, the extent of ANSIs (in hectares) has increased by 45%.

**Agricultural Practices:** There has been an increase in low and no till farming by farmers, which is environmentally preferable to traditional tilling practices.

**Agricultural Pesticide Use:** Between 1993 and 2003, there was a 48% decrease in the amount of pesticides used for agriculture.

**Live/Work:** There has been an increase in the percentage of residents who both live and work in York Region.

**Density:** Population density in urban areas and villages has increased by 17% between 1999 and 2004.

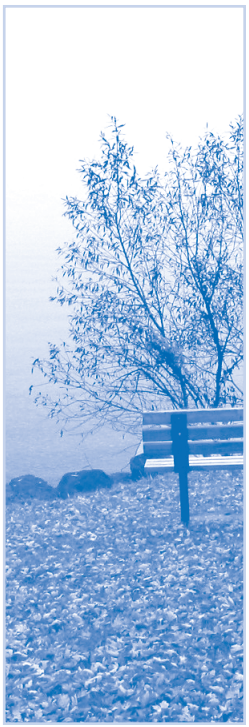
**Housing Types:** The mix of housing types in York Region continues to diversify. In 2004, 58% of the housing built were single detached homes - this represents a decreasing trend from the 1990s.

**Transit Ridership:** Since the amalgamation of local transit systems in 2001, transit ridership has increased dramatically - by 44%. The start up of Viva Rapid Transit in the fall of 2005 is expected to further increase transit ridership.

**Proximity to Transit:** The Region is close to meeting its target of proximity of houses and employment areas to transit. In 2005, 86% of houses are within 500m of transit.

**Road Salt:** The Region now uses 7% less road salt on its roads than it did in 2000.

**Recycling and Yard Waste:** Between 1997 and 2004, the amount of blue box materials processed increased by 65% and the amount of yard waste centrally composted increased by 54%



## water

**Water Conservation:** The Region's water efficiency program has been incredibly successful and conservation targets have been met. In 2004, residents and businesses saved 22.4 million litres of water per day, or 7.4% of the estimated daily usage of treated water.

**Beach Water Quality:** At some beaches, water quality has improved since 2000.

**Loadings from WPCPs:** Since 2000, there has been a decrease in the loadings of nutrients from the Region's Water Pollution Control Plants to rivers and streams. This includes a 4% reduction of phosphorus loading, a 30% reduction of nitrogen loading and a 44% decrease of ammonium loading.

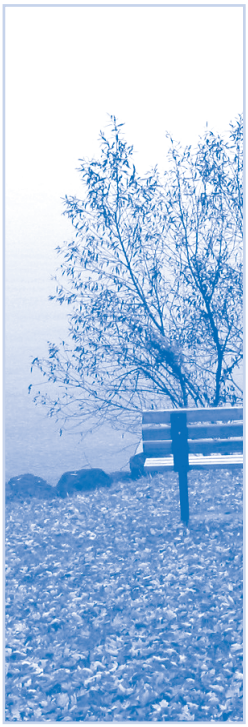
**Phosphorus Loading to Lake Simcoe from WPCPs:** Since 2000, there has been an 8% reduction in phosphorus loading from the Region's Water Pollution Control Plants to Lake Simcoe.

**Spills:** The number of reported spills in York Region has decreased from 47 in 2000 to 23 in 2004.

## air

No improvement noted

# 7.3 INDICATORS of POOR ENVIRONMENTAL health



## land

**Solid Waste Diversion:** The overall rate of diversion from landfill has increased only slightly since 1997.

## water

**Unregulated Communal Water Systems:** These small, non-municipal systems such as those in community halls, churches and trailer parks experienced high numbers of Boil Water Advisories between 2002 and 2004.

**Total Phosphorus Loading to Lake Simcoe:** Levels increased from 100 tonnes/year in 1990 to 102 tonnes/year in 1998, and have since decreased to 72 tonnes/year in 2004. As the reduction in loading is mostly attributed to the decrease in precipitation amounts between 1998-2004, continuing efforts must be made to reduce loading into the lake.

**Phosphorus Levels in Rivers:** These frequently exceed the Provincial Water Quality Objectives. In the Don, Humber and Rouge Rivers, where we have information, this also is the case for *E. coli* bacteria.

**Fish Habitat in the Don:** Good quality fish habitat is limited in the Don River watershed within York Region.

**Coldwater Fish in Lake Simcoe:** Populations of lake trout and lake whitefish in Lake Simcoe are not self-sustaining, and are maintained through stocking.

**Contaminants in Fish:** Because of contaminants, there are some restrictions on eating some sizes of 20 species of fish caught in various water bodies in York Region, and some sizes of 8 species from some locations should not be eaten at all.

## air

**AQI:** As measured by the Air Quality Index, air quality was "poor" at the Newmarket air monitoring station on 26 days in 2002 and 10 days in 2003. The two pollutants responsible for this are ground-level ozone and fine particulate matter ($PM_{2.5}$).

**Smog Advisories:** The MOE issued smog advisories for York-Durham on 14 days in 2004.

# 7.4 INDICATORS of WORSENING trends

## land

**Automobile use:** In York Region, **more** people are driving **more** cars **more** often. This increases local emissions of air pollutants, increases traffic congestion, and increases the use of fossil fuels. The average number of vehicle trips per day has increased by 6% from 1996 to 2001.

## water

**Private Wells:** Fewer owners of private wells are getting their well water tested in 2004 than in 2002. (24% )

**Chlorides in Rivers:** Concentrations of chlorides in rivers in York Region continue to rise as urbanization increases.

**Beach Postings and Closures:** Despite the fact that water quality at some beaches has improved, overall there has been an increase in postings and closures of beaches in York Region since 2000.

## air

**Ozone Levels:** There has been an increase since 2000 in the number of times per year that ground-level ozone concentrations exceed the Ontario Ambient Air Quality Criteria.

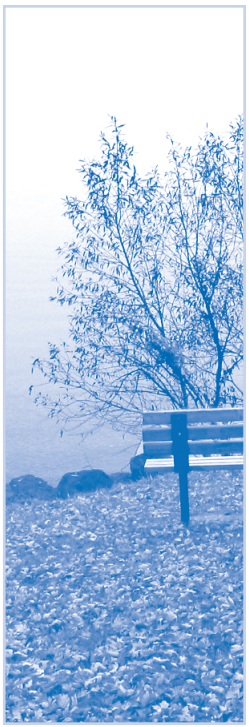
# 7.5 BETTER ABLE to MONITOR and MEASURE progress

Sound information provides the basis for sound decision-making. One of the greatest differences noticed while developing the SOE 2005 Report is the substantial improvement that has been made in the Region and elsewhere in information collection and analysis since 2000. This has resulted in a dramatic improvement in our ability to assess the status of our environment and to measure status changes since the SOE 2000 Report. The type and the complexity of the information, data and indicators we have been able to include in this Report are much more sophisticated than the Region's previous SOE Report and set a very solid base from which we can monitor and evaluate our environment in future years. Extensive reviews resulted in an increase in the number of indicators included in the Report (from 80 in 2000 to 85 in 2005) and to refinements to many of the indicators used.

Examples of improved expertise include, but are not limited to the following:

- TRCA and LSRCA's Monitoring Programs provide annual data on water quality, river flows and the health of aquatic systems.
- The MOE's establishment of an air monitoring station in Newmarket in 2001 has allowed the Air Quality Index to be calculated here.
- Comparability of data from various sources has also improved, and this is most obvious in the ability of the two conservation authorities (TRCA and LSRCA) to provide equivalent monitoring information.
- At the Region itself, the Geomatics Division has gained much expertise over the last five years in digitizing and mapping information. This means that we now have accurate information on many key aspects of environmental health such as the extent of greenlands, wetlands and forest cover.

Together, this means that the SOE 2005 Report contains more information and better data than was contained in the 2000 Report.



However, there are some areas where we have noted gaps in either the availability of data or relevant indicators. An action plan to address these areas needs to be undertaken in the very near future so that data and/or indicators will be available for future SOE Reports.The areas include:

## land

**Health of Wetlands:** While we now have good information on the location and extent of provincially significant and evaluated wetlands, and unevaluated wetlands on the Oak Ridges Moraine, there is little current information on the health of these important features.

**Animal Species:** Updated information is not available on the number of mammals, reptiles and amphibians in York Region. This means we do not have a good understanding of which species live here, which ones have been lost and which are at risk.

**Pesticide Use:** We do not know the amount of pesticides used by the public.

## water

**Groundwater:** Regional-scale data on groundwater quantity and quality are not yet easily available and meaningful indicators have not been developed.

**Private Well Water Quality:** There is limited information available on water quality in private wells.

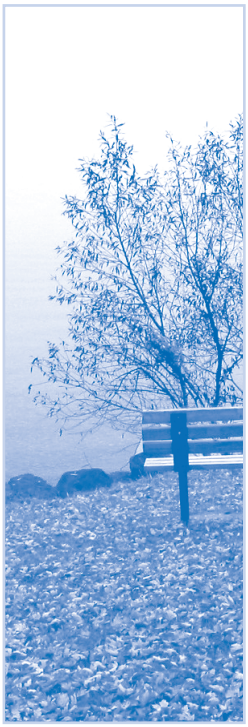
**Kettle Lakes:** We have limited information on the health of kettle lakes in York Region other than Lake Wilcox.

## air

**Trends in AQ:** Because of the lack of a continuous air monitoring station in York Region before 2002, we do not know if the frequency of "poor" air quality days as measured by the Air Quality Index is increasing or decreasing.

**Trends in Ozone:** Because of the lack of a continuous air monitoring station in York Region before 2002, we do not yet know whether average annual concentrations of ground-level ozone are increasing or not.

## 7.6 MORE INITIATIVES INVOLVE partnerships



The responsibility for environmental protection is shared by dozens of federal, provincial, regional and municipal governments and agencies. Increasingly, these bodies are working together to tackle the complex environmental problems that we face. Some of the partnership-based initiatives mentioned in this Report include:

- the Tri-Regional Oak Ridges Moraine Strategy;
- Greenlands Securement;
- Naturalization initiatives;
- the program to eradicate the Asian Long-Horned Beetle;
- the Lake Simcoe Environmental Management Strategy;
- the York Peel Durham Toronto Groundwater Management Strategy;
- watershed planning, water budget and water conservation planning under the *Oak Ridges Moraine Conservation Act;*
- participation in the GTA Agricultural Working Group; and
- member of the GTA Clean Air Council.

In addition to the above, of course, the Region works constantly with its municipal partners and their respective Environmental Advisory Committees and the two Conservation Authorities on a host of issues. Landowners in York Region are also involved in naturalization and Greenlands Securement projects, and non-governmental and environmental organizations are involved in many educational and advocacy initiatives.

## 7.7 KEY CHALLENGES FOR THE future

Although significant progress has been made over the five year period 2000-2005, there are many steep challenges ahead. Some of these include:

- **Balancing Growth and the Environment:** The single biggest challenge facing the Region is how to balance the continued high rate of population growth and the related need for services with the need to protect natural systems and the environment.
- **Implementing the Centres and Corridors initiative and intensification targets:** Steering growth and intensification efforts to meet the province's Places to Grow Act and Greenbelt legislation will be challenging for the Region and the nine area municipalities.
- **Reforestation:** More than 4,400 hectares of reforestation is needed to meet the Regional Official Plan target of 25% forest cover.
- **Transit:** In 2001, 8% of trips were made using transit. The Regional Transportation Master Plan goal is 17% and meeting this will be a great challenge. By the next State of the Environment Report, we will understand what impact Viva Rapid Transit and other transit initiatives will have made in terms of meeting this goal.
- **Solid Waste Diversion:** The current solid waste diversion rate in York Region is 25.8%. Meeting the proposed Provincial target of 60% diversion will require significant efforts by the Region and area municipalities.
- **Phosphorus Loading to Lake Simcoe:** Reducing total phosphorus loadings to Lake Simcoe to remain below the target of 75 tonnes/year will be a great challenge, considering the increasing development throughout the Lake Simcoe watershed and the multiple sources of phosphorus, which include agricultural runoff, stormwater, atmospheric deposition, septic tank leakage and discharges from Water Pollution Control Plants.
- **Air Quality:** Given the regional nature of airsheds, the transboundary movement of air pollutants and the multiplicity of sources, it will be a great challenge to meet provincial air quality criteria and federal standards for ground-level ozone and fine particulate matter.

## 7.7 KEY CHALLENGES FOR THE future
continued

- **Greenhouse Gases:** It will also be difficult to reduce emissions of greenhouse gases to meet the reduction targets set through the Kyoto Agreement.
- **Encouraging individual responsibility for the protection and enhancement of the environment:** Although much progress has been made by individuals, organizations, governmental and non-governmental agencies over the past five years, there is much more to be done. Further lifestyle and behaviour changes are required to improve, even to maintain, the status of the natural resources described in this chapter.

## 7.8 recommendations

Analysis of the monitoring and evaluation efforts presented in this 2005 State of the Environment Report have resulted in 33 recommendations for action. These are found in the next chapter.