



A TIME FOR BOLD STEPS:
THE DON WATERSHED REPORT CARD 2000
Prepared By The Don Watershed Regeneration Council

*the*Don

Front cover: Drawing of proposed mouth of the Don River, prepared for The Task Force to Bring Back the Don, by Hough Woodland Naylor Dance Leinster, February 2000.

Facing page: Gray treefrog.

A close-up photograph of a green tree frog with dark spots, perched on a thin brown branch. The background is a soft, out-of-focus green.

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*Renewing and protecting the natural environment
in our living city and region.*

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Frogs, including species like the gray treefrog pictured here, are key indicators of a healthy environment for plants and animals, including humans. For many people, the presence of frogs in the Don watershed has come to symbolize hope for a clean and healthier future.



INTRODUCTION AND OVERVIEW

Giving Back

Let's ignore, for a moment, the Don watershed's integral place in nature, and all the ways it supports the lives of countless plants and animals. Let's look at it instead through a decidedly selfish and human-centred lens. It truly must be said that the Don watershed ecosystem has been very good to us. Very good indeed.

For centuries before and after European settlement, the Don has provided food and resources for generations of people to live. The river itself has irrigated our lands, powered our mills and graced our landscape. We've swum there, fished there and walked there. Today, the River's valleys are used for many of these same activities and many new ones.

For the past 50 years, Federal and Provincial agencies and the Don watershed's municipalities have been cooperatively pursuing land conservation by acquiring and protecting vital valley lands. The result of these and other collective efforts can be seen in much of the green space we have left in this highly developed watershed. Nevertheless, by the late 1980s, it was clear to many people that more effort was needed and the community once again banded together to call for substantive improvements to the Don. In 1992, the Don Watershed Task Force, later named the Don Watershed Regeneration Council, was formed by the Toronto and Region Conservation Authority. In 1999, the City of Toronto's Task Force to Bring Back the Don celebrated its 10th anniversary. During the past decade, many other community groups have adopted specific areas of the Don and have contributed mightily to the watershed's rebirth.

Yet, ten years of activity pales in comparison to the millennia it took to form the Don watershed and the centuries it took to almost destroy it. The fortunes of an urban watershed don't turn around instantly, by mere command or force of will. Restoration of an ecosystem in a built up watershed like the Don is a long term prospect. But, however slow it may be, progress must be sought and it must be measured. We must continually assess the Don's health in order to modify our approach and take new actions to continue its rebirth.

In the strategy document, *Forty Steps to a New Don* (1994), the Don Watershed Regeneration Council, a watershed wide advisory committee comprised of elected representatives as well as representatives of the general public, municipalities, agencies and environmental groups, was instructed to "publish a Report Card every three years to mark and celebrate progress in the Don's

regeneration." This report is the second such report card, following the inaugural, *Turning the Corner, The Don Watershed Report Card*, (1997).

This is the state of the Don at the turn of the new millennium. This is *A Time For Bold Steps*.

Why Bold Steps

In reading this report card you will find that in many ways, the Don is still turning that metaphorical 'corner' that was referred to in the last report card. Since 1997, meaningful progress has been made. More people are volunteering for the Don than could have been imagined even three years ago. Salmon are once again gaining access to the river and are trying to spawn. The 31 hectare Baker Sugar Bush in Vaughan came into public ownership and is now protected. In the Lower Don, The Don Valley Brick Works site is being transformed from a wasteland into a cultural and natural urban oasis. One hundred and thirty new regeneration projects have been undertaken throughout the watershed. Public support for the sustainable development of the Oak Ridges Moraine, the headwaters of the Don and many of Toronto's other watercourses, has gelled into a true movement.

But all is not well. Provincial and federal cutbacks have (in part) severely limited monitoring, to the point where it is difficult to keep track of what is happening in the Don ecosystem. Today, the Province monitors only one

water quality station in the Don and there is still no Provincial policy in place to adequately protect the Oak Ridges Moraine. In 1997, we called for a funded plan to eliminate combined-sewer overflows in the City of Toronto; in 2000, much background work has been done to develop that plan, but funding is not yet a reality.

Increasingly, we are finding that our collective actions are falling short of the ecosystem approach to regeneration we've been advocating. The vast majority of the 130 regeneration projects undertaken between 1997 and 1999 are small scale projects such as planting 50 trees or creating a wildflower garden. There is concern that the potential cumulative benefits of these small actions will not be fully realized until they are complemented by larger scale ecosystem restoration projects designed to improve the River's water quality and reduce its destructively high peak flows. These major issues, including the periodic overflow of raw sewage into the River, and the inconsistent and inadequate state of stormwater control, must be addressed. In essence, it means taking bold steps now, while the opportunity for regeneration still exists.

*We've taken a lot
from the Don,
but we're only
just beginning to
"give back."*



Yes, this is the Don (at Pottery Road).

Larger-scale action is also required in the Don's fishery. The successful mitigation of five weirs on the Don should now allow salmon to access the Don's upper reaches in York Region for the first time in over a century. Unfortunately, successful spawning is virtually impossible due to the River's high peak flows and its high level of suspended sediment.

Large scale water quality and quantity measures are essential in order to address the Don's destructive flow regime and support the extraordinary habitat work of the Don's committed and passionate community volunteers. We need a more integrated focus that balances local site specific actions with watershed-scale improvements.

We've also come to recognize the need for a Natural Heritage Strategy to direct regeneration action as well as the need for Stormwater Management Upgrade Plans to help prioritize activities on a site-by-site and a regional basis.

And finally, while volunteerism in the community and stewardship activities of municipalities are up, awareness and understanding of watershed issues is unchanged from 1997. The majority of respondents to the 2000 public opinion survey cannot correctly define a watershed. The general public doesn't understand the vital connection

between the River's health and their own behaviours and actions. WE don't understand that WE, and not industry, are the primary polluters of the Don.

Ten years of action to restore the Don has taught us all many things and has greatly emphasized the limitations of our current efforts. It's time to redefine the way in which we approach urban watershed revitalization, using a more holistic and integrative methodology. It's time for governments to recommit to water quality monitoring and to provide a sustainable urban green infrastructure that will, among other things, help ensure the GTA's economic competitiveness in the future. It's time to act on the large scale water quality and water flow issues that must be addressed in order to support the smaller regeneration achievements we've already realized.

The three years since the last report card have been witness to many political and environmental changes. A new City of Toronto has been created. The issue of climate change and its potential harmful impacts on our country, our communities and our River has come into greater focus. These were years of change and upheaval, yet many important and innovative new initiatives were undertaken during this time. The new City of Toronto initiated an



unprecedented list of innovative environmental actions that, if pursued and effectively implemented, will establish Toronto as a world leader in urban sustainability. York Region municipalities also continued their progression toward sustainability by launching a number of exciting initiatives. The need for bigger actions has been recognized and these past three years have laid much of the foundation on which to build a new future for the Don.

The time is ripe for revitalizing our commitment, for taking the Bold Steps.

How to Read This Report Card

This 2000 report card provides an updated assessment of the Don's health as determined by measuring progress on the 18 indicators, or signs, of watershed health originally assessed in 1997.

Most of the indicators in the Report Card are interconnected. For example, increasing the amount of **wetland** in the watershed (Indicator 6) should also improve **water quality for aquatic habitats** (Indicator 3), increase and diversify **frog and fish** populations (Indicators 9 and 10), improve the Don's flow regime (Indicator 1) and enrich people's **responsible use and enjoyment** of the Don (Indicator 13). Everything really is connected to everything else!

Like the 1997 Report Card, this report is organized into six major chapters. The first three chapters are based on the three themes of *Forty Steps*: Caring for Water, Caring for Nature, and Caring for Community. The final three chapters are based on the three "principles" of *Forty Steps*: protect what is healthy, regenerate what is degraded, and take responsibility for the Don.

The first three chapters are primarily concerned with the condition of the watershed and the community's relationship to it. How clean is the water? How much of the land space do wetlands occupy? How often do local schools use the Don as a teaching tool? The final three chapters focus more on our actions to regenerate the Don. How well are natural areas protected? What regeneration projects are underway? Are residents good stewards of the Don in their daily lives?

Targets

Each of the 18 indicators is accompanied by three sets of targets or specific aims to be achieved by the years 2003, 2010 and 2030. The year 2003 targets are ones that we believe are achievable by the next Report Card. The targets for 2010 and 2030 are set to guide improvement over the medium and long terms.

Evaluating Progress

This report card judges progress, wherever possible, by determining how much has been accomplished since the last report card in 1997. For each indicator, trends in improvement or decline are expressed as arrows pointing up, down or sideways (no-change), as follows:



UP ARROW - Making progress



DOWN ARROW - Losing ground



SIDEWAYS ARROW - Breaking even

And Finally

In 1994, the Don Watershed Regeneration Task Force asked everyone "to take 40 steps to a new Don". Thousands of people, from many cultures and backgrounds, have taken those steps. There have been over 230 regeneration projects completed or initiated since 1994. These small steps are vital. But in the end, the success of our efforts hinges on our ability to complement these first steps with some much bigger strides.

It's now time to take the Bold Steps.

Volunteer and Municipal Initiatives Need Provincial and Federal Support - NOW!

Canada's future economic competitiveness and continuing quality of life for its citizens rests in large part on protection and restoration of a healthy natural environment.

Tomorrow's centres of business and commerce will thrive only if they are places where people want to live. Clean air, clean water and a green mosaic of valleys, parks and beaches are as critical in nurturing well-being as jobs and housing. The time for planning and acting "sustainably" has come.

Only with a renewed commitment of assistance for funding and policies from the Provincial and Federal governments can we move forward.

Caring for Water

📍 Charles Sauriol Conservation Reserve (near Don Mills Road and the Don Valley Parkway).

There is No New Water

Water is the lifeblood of the earth. Humans, like most other land-based animals and plants, need fresh water — the world's rarest type of water — to survive. Sadly, we have taken our fresh water for granted and human-made pollutants have contaminated much of our supply.

In the Don, contaminated runoff from urban pavements remains as the river's single largest source of pollution. Huge volumes of dirty water wash a host of pollutants into the Don's network of streams. These volumes worsen the watercourse's flooding, which is already far greater than in a natural river system.

Bacteria levels remain high in the entire Don watershed, particularly during wet, rainy periods. Untreated human sewage still occasionally flows into the Don from combined sewers. When heavy rainfalls occur, these combined sewers, which carry raw sanitary wastes and dirty stormwater, exceed their capacity and overflow into the river through outfall pipes. Illegal cross connections between sanitary and storm sewers, dog feces and waterfowl excrement also contribute to bacterial pollution in the Don.

Small strides to improve the health of the water in the Don have been taken, but can we sincerely say that the water is healthier today than it was three years ago? We can't. We still hold out hope that children will be able to once again swim in the Don, and our spirits have been lifted by the return of migrating salmon — yes, salmon — to the lower and middle Don. Our climb to cleaner, healthier water is a slow one.

Flow Pattern

Today, most of the Don is urbanized. When a city and its suburbs are built in a watershed, they forever alter the natural flow of the water in the system. Hectares and hectares of paved surfaces — rooftops, roadways, sidewalks, plazas, parking lots and driveways — prevent rainwater from seeping into the ground naturally and making its way to local streams. Instead, eaves troughs, gutters, downspouts and underground storm drains remove rainfall from the city — and into the nearest stream — as quickly as possible.

***Fresh Water.**
The world's rarest
type of water.*

The watercourse responds to this sudden influx of water by rising rapidly, creating annoying and potentially dangerous flooding during heavy storms or during spring snow melt. The fast-moving, sediment-laden water scrapes stream bottoms and violently tears at stream banks, making life difficult for fish and other aquatic life forms.

During dry weather, the extreme opposite may occur. Small streams may no longer be replenished by the natural and steady seepage of groundwater, and they may either dry up entirely or become sluggish and warm. In either case, aquatic life is compromised.





🚣 The Annual 'Paddle the Don' event launches at Serena Gundy Park.

Water Quality – Human Use

Sight, smell and touch. These are the intimate means by which people relate to the Don. When it is relatively clear with little or no smell, the river attracts hikers, cyclists, birdwatchers and nature lovers to its banks.

In 2000, the Don still has a long way to go to meet the public 'sense' test. Bacteria levels in 2000 are similar to those of 1997, and the water quality objective for 2000 that was outlined in the last Don Report Card has not been achieved. But, much to our surprise, this reality does not match public perception.

According to the June 2000 Angus Reid Public Opinion Survey, residents believe pollution levels and recreational opportunities on the Don have improved significantly since the last report card. Some 86 percent of Don residents surveyed agree that the watershed is a good place to walk or bike (as compared to 75 percent of respondents in 1996). And the number of residents surveyed who agree that the Don is less polluted than it was 10 years ago has risen dramatically from 46 percent in 1996 to 61 percent in 2000.

These perceptions raise a red flag for us. Are people more aware of the work being done on the Don, or do they mistakenly believe that the current efforts to improve it are enough? We're not sure of the answer, but we sincerely hope it is not the latter.

Sight, smell and touch — what is the reality? If there were swimming holes on the Don, they would be routinely posted as unswimmable by local health authorities. And, despite the best efforts of many, the aesthetics of the Don have not improved dramatically. Our climb to cleaner, healthier water is indeed a slow one.

Fisheries Biologists from the Toronto and Region Conservation Authority monitor the Don's fish populations.

Water Quality – Aquatic Habitats

Fish and other aquatic creatures actually need cleaner water than we do — after all, they live in the water all the time, breathing it and eating the plants and other animals that live there.

The water-borne bacteria and parasites that are so harmful to humans are not, as a rule, harmful to aquatic life. However, many other substances, including metals, high levels of sediments and salts, natural and manufactured chemical in fertilizers, insecticides and paint, and low oxygen levels, make life extremely difficult and sometimes even impossible for fish and other aquatic creatures.

Chemical contaminants are particularly problematic. Many organic chemicals bioaccumulate, or build up, inside the cells of the plants and animals that live inside an aquatic habitat. These chemicals then biomagnify to much higher concentrations in predatory fish, reptiles and birds, putting them at risk, too. We need to look no further than the international plight of eagles and peregrine falcons to see the dramatic effects of biomagnification.

So where do these pollutants come from? The majority of respondents (55 percent) in the June 2000 Angus Reid Public Awareness Survey erroneously believed that most of the pollution in the Don River comes from industry. The real culprit, once again, is stormwater runoff.

Stormwater not only pushes sewers into overflow, but it also carries everything in its path that will either float or dissolve, directly into the river. It picks up pollutants from motorized vehicles, including copper and other heavy metals, road salt, oil and carcinogenic benzene (from exhaust); animal waste, lawn and garden fertilizers; and sweeps up everything that humans dump down storm drains, including used motor oil, paint and detergents. All of these things and more wash into the River, negatively impacting the delicate habitats and ecosystems found there.





High water levels after a rain storm.

Stormwater Management

As you've discovered, stormwater is the common thread that runs through the water quality issues in the Don. Stormwater management can have a dramatic impact on the quality and quantity of water in the river. So how far have we come? Have we been able to improve the stormwater management along the Don and reduce the negative impact of this powerful polluter?

The short answer is no — we just haven't come far enough. Since 1997, little has changed. The stormwater management techniques used in the upper and lower reaches of the watershed are still dramatically different. The northern headwaters have benefitted from the installation of stormwater ponds, which are used primarily to control the quantity of water that streams into the River.

In the older, urbanized sections of the watershed that lie south of Steeles Avenue, there are virtually no stormwater ponds, and development is so dense in this area that creating them now is difficult.

So, is there a measure of hope? YES, we feel there is! Since the last report card, the City of Toronto has begun to develop a plan to help manage its Wet Weather Flow (a technical way to describe water that results from rain or snow). This plan will go a considerable distance to create a new and sustainable urban water infrastructure that will help us achieve the long term goals you find in this report card.

In the short term, it is important for every person who lives in the Don to take control of their own contribution to the stormwater problem. Downspout disconnect programs, increased use of rain barrels and the reduction and safe disposal of household hazardous waste are just a few of the small things that collectively make a difference.

Measuring Water Quality

How did we assess the quality of the water in the Don? We selected one of the conventional water quality parameters routinely measured by government agencies: total suspended solids. We have also continued to use advanced assessment techniques, including measures of the amounts of chemicals accumulating in the fish that live in the Don. These measures were previously used in 1997, and a direct comparison of results has allowed us to gauge progress toward our goals.

The Don's characteristic muddy colour is the direct result of heavy sediment loads. These suspended solids originate from poorly managed construction sites and agricultural sources, and are extremely destructive to aquatic habitats. As it flows through the River, the sediment load scours streambeds, harms fish through direct contact, and carries many chemical pollutants with it. In 2000, there is still too much sediment for healthy aquatic habitats throughout much of the Don.

Fish flesh studies of sport fish found in G. Ross Lord Dam in the western reaches of the River demonstrate that little has changed since 1997. The 1998 assessment of benthic invertebrate populations reveals virtually no change since 1984.

In 1997's *Turning the Corner*, the first Don River Watershed Report Card, we stressed the importance of maintaining the Ministry of the Environment's (MOE) 30-year-old tradition of basic water quality testing in the Don. This testing complements the measures we assess, and offers insights into possible water quality trends. Unfortunately, the MOE has discontinued testing at four of the five regular sites. Without this regular testing, we will likely be unable to keep track of parameters such as chlorides in the water, or fully understand why certain types of invertebrates may be missing from certain parts of the River.



INDICATOR 1:

FLOW PATTERN

How “natural” is the Don’s flow?

Where we were: (1997)

During the past few decades, because of urbanization, the time it takes for rainfall to reach the river has continued to decrease, resulting in higher and more rapid peak flows. Flow volumes have increased as a consequence, even though precipitation has remained the same. In 1990, the Don’s yearly volume, measured at Todmorden Mills, was about 150 million cubic metres — double what it was thirty years ago. To help prevent further deterioration, stormwater detention ponds designed to reduce the peak flows have been required in new developments since 1980.

2000 Targets:

Maintain flow volumes at 1997 levels, even with new development.

WHAT’S THE TREND?

in 1997



in 2000



Vast amounts of water continue to be discharged to the watercourse, with only scattered attempts at source control.



⌂ “Normal” flow, Wilket Creek.

Where we are: (2000)

The Don's Flow Pattern is the most difficult indicator to change, but is crucial because flow pattern is so fundamental to the function of the watershed. The Don watershed is over 80 percent urbanized and is comprised of vast amounts of impervious surfaces such as roofs, roadways and parking lots. Water is shed rapidly from these surfaces, therefore reducing the amount of water that can seep into the ground. Changing the way water moves in the urban environment is difficult and for this reason, there has been no significant change in flow pattern since 1997. Stormwater controls are one of the more common ways to manage flow and are required for all new developments. Stormwater controls have been enhanced in a small number of areas which had either no control, or only quantity control in place in 1997 (see Indicator 4). There has been some progress in the use of innovative stormwater management techniques, such as the use of porous pipes to enhance infiltration of water to the ground. Homeowners have been encouraged to disconnect their roof leaders (downspouts) from storm sewers; however, comprehensive programs combining lot level, conveyance and end-of-pipe measures, that are crucial to altering the way water moves, have not yet been developed.

Excessive flows are still causing extensive erosion damage, which in turn threatens water quality, the quality of aquatic habitats, human safety and the built infrastructure. Both the total volume of water and the frequency of high average daily flows have increased dramatically over the past 30 years. Rainfall that would be stored or evaporated in a forested setting moves quickly to the River in the urbanized Don watershed. As a result, the River has become much more "flashy", responding quickly to even moderate rainfalls. Less water is then retained for gradual release as baseflow. More



The Don responds quickly to moderate and heavy rainfalls, sometimes swelling over its banks.

runoff and less baseflow are destructive to aquatic habitats, cause the loss of aquatic species, and will likely continue to influence the success of fish reproduction.

Where we want to be:

By 2003:

- 1) Maintain flow volumes and frequency of flows at today's levels, even with new development.
- 2) The City of Toronto's Wet Weather Flow Master Plan should be completed and implementation initiated. Upstream municipalities will be conducting similar studies and taking similar action (see Indicator 4).

By 2010:

- 1) Gradually decrease the Don's flow trend, especially for more frequent flows.
- 2) Measures to increase baseflow in the river will be underway.
- 3) Implement lot-level source control measures in 50 percent of those lots where it is feasible (see Indicator 4).

By 2030:

- 1) Return to the lower, more even flows of 1962.
- 2) Baseflows in the river will be increased to allow for healthier aquatic habitats.

How to get there:

More effort should be placed on innovative stormwater management techniques such as exfiltration from stormwater pipes, establishment of roof top gardens, parking lot drainage retention, naturalization and other lot level controls. Possible locations for traditional stormwater management ponds should be assessed throughout the watershed. The feasibility of achieving the Don flow targets should be assessed through the Wet Weather Flow Study, and a plan should be developed for improving the condition of flows in the Don.



INDICATOR 2: WATER QUALITY

HUMAN USE

How well is the Don's water quality being protected for human use?

Where we were: (1997)

Bacterial counts had become worse since the mid-1960s, especially in wet weather when maximums were reaching 107,000 fecal coliforms per 100 millilitres (ml) of water. This was due to increased volumes of dirty stormwater (see Indicator 4) and contributions from combined sewers. Yet in dry weather, counts as low as 20 fecal coliforms per 100 ml were recorded in German Mills Creek and the Upper West Don, well within the Province's limit of 100 fecal coliforms/100ml for safe swimming. In areas of the Lower Don where combined sewers existed, the following progress had been made: in the City of Toronto, 80 percent partial separation of combined sewer overflow (CSO) area (downspout disconnection is necessary for complete separation); in East York, 65 percent CSO area eliminated; in Scarborough, 70 percent partial separation of CSO area; in Metro Toronto, 65 percent of the drainage area of the Main Sewage Treatment Plant has been separated.

2000 Targets:

A funded plan for the virtual elimination of combined sewer overflows will be in place.

Some Responses from 2000 Angus Reid Survey
"What is the first thing that comes to mind when you hear "Don River?"

"Getting cleaner"

"Yuck"

"You can walk across it... has thick skin like gravy."

WHAT'S THE TREND?

in 1997



in 2000



Poor water quality continues; cutbacks to monitoring.

Table 1

A Water Quality Index

The following table highlights the Don River's water quality by applying the water quality index currently being developed by the Canadian Council of Ministers of the Environment. Index scores range from 0 to 100, with the best water quality being 100. Parameters evaluated through the index include bacteria, chloride, copper, dissolved oxygen, nitrite, phosphorus, suspended solids, unionized ammonia and zinc.

	1990-1994	1995-1999
Lower Don at Lakeshore Rd.	15	Monitoring discontinued May 1995
Lower Don at Pottery Rd.	17	14*
West Don at Sheppard Ave.	34	Monitoring discontinued December 1993
West Don at Highway 7	28	Monitoring discontinued May 1995
East Don at Steeles Ave.	29	Monitoring discontinued May 1995

The Don's poor scores are primarily due to high levels of bacteria. Other parameters that also influence the scores include high levels of phosphorus, nitrite, copper, zinc and suspended solids.

* NOTE: Monitoring of *E. coli*, field pH and temperature, dissolved oxygen, ammonia and copper were discontinued at this station as of February 1997.

Where we are: (2000)

Between 1993 and 1998, the Provincial Ministry of the Environment (MOE) discontinued sampling for *Escherichia coli* (*E. coli*) at five sites** throughout the Don watershed. These stations were monitored for bacteria levels for about 30 years. Currently, the City of Toronto monitors four stations in each of the main branches of the Don which helps to fill the gap left by the Province's monitoring cut-backs. At the City of Toronto's monitoring sites, bacteria levels during the period of 1997-1999 ranged from less than 10 *E. coli*/100 ml to a high of 51,000 *E. coli*/100 ml, exceeding the provincial guideline most of the time. Bacteria levels are similar to those of 1997. In 1994, the Provincial Ministry of the Environment began *E. coli* testing in place of testing for fecal coliform bacteria. The Provincial Water Quality Objectives (PWQO) guideline was set at a maximum of 100 *E. coli*/100 ml (of water) for swimming and bathing.

Polluted stormwater and combined-sewer overflows (CSO) are the major contributors of bacteria and other pollutants to the river. Since the 1997 Report Card, no further combined sewer separation has been undertaken in the City of Toronto and the targeted "funded plan for further separation" has not been generated. However, the City of Toronto has completed Phase 1 and initiated Phase 2 of a Wet Weather Flow Master Plan that will address stormwater issues and combined sewer overflows.

Surface runoff often contains bacteria from pet droppings and wildlife. As well, illegal cross connections between sanitary sewers and stormsewers also contribute bacteria.

**** NOTE:** One of these stations however, Pottery Road in the Lower Don, continues to be monitored for other parameters. Table 1 identifies the last date when stations were sampled.

Where we want to be:

By 2003:

Bacteria levels will not be higher than in previous years.

By 2010:

- 1) Significant CSO reductions will have taken place.
- 2) Bacteria levels in the Don will be significantly lower.

By 2030:

- 1) CSOs will be eliminated.
- 2) The Don will no longer contribute to beach closures.
- 3) The Don River will be safe for recreational purposes throughout the watershed in dry weather (less than 100 counts of *E. coli*/100 ml).



⚠ An all too common occurrence.

How to get there:

Implementation of the Wet Weather Flow Master Plan by the City of Toronto will begin to address the problem of stormwater and combined sewer overflows, the major contributors of bacteria and other pollutants to the Don River. Stormwater treatment ponds will continue to be built in newly developed areas; suitable sites must be selected and ponds constructed in developed areas of the watershed (see Indicator 4). Educational programs for watershed residents will emphasize stoop 'n scoop. Individuals will be acting to reduce non-point sources of fecal coliform bacteria by strictly obeying the stoop 'n scoop by-laws in place in all Don municipalities. Municipalities will continue to identify and remedy cross connections of sanitary sewers to storm sewers. The fact that the entire Don watershed is part of the Toronto Area of Concern under the Great Lakes International Joint Commission (IJC) is not even remotely reflected in the state of water quality monitoring in this watershed. All levels of government, including the Province of Ontario must re-dedicate themselves to monitoring and addressing water quality contamination, particularly in the Areas of Concern. Innovative multi-stakeholder partnerships should be sought to help gather water quality data. The Province should reinstate complete water quality monitoring at three more locations in the Don watershed — Taylor/Massey Creek just above the forks of the Don, the East Don at Steeles Avenue, and the West Don at Highway 7, where the City of Toronto is currently conducting interim monitoring.



INDICATOR 3: WATER QUALITY

AQUATIC HABITATS

How well is the Don's water quality being protected for aquatic habitats?

Where we were (1997)

There was too much sediment in most parts of the Don for healthy fish habitats. In 1949, a biological survey of the Don indicated that 78 percent of the aquatic invertebrates throughout the watershed were sensitive species that were to some degree intolerant of pollution. A 1984 survey of aquatic invertebrates found that only 41 percent of the species were moderately intolerant of pollution and that there were no sampling sites that had invertebrate communities that were primarily intolerant of pollution. Fish flesh studies since 1981 indicated declining concentrations of DDT and chlordane, and stable levels of PCBs and lindane in the aquatic environment.

2000 Targets:

- 1) Add wet weather sampling of total suspended solids (TSS) to monitoring program.
- 2) Update the aquatic invertebrate data throughout the watershed to identify all members of the community to the species level (e.g. mayflies, caddisflies, worms, leeches, stoneflies, snails).
- 3) Continue young-of-the-year fish monitoring program at nine sites on the Don, and add three more sites — two in the headwaters and one in the Lower Don.
- 4) Continue and expand programs to identify and eliminate persistent toxins in the watershed.

WHAT'S THE TREND?

in 1997

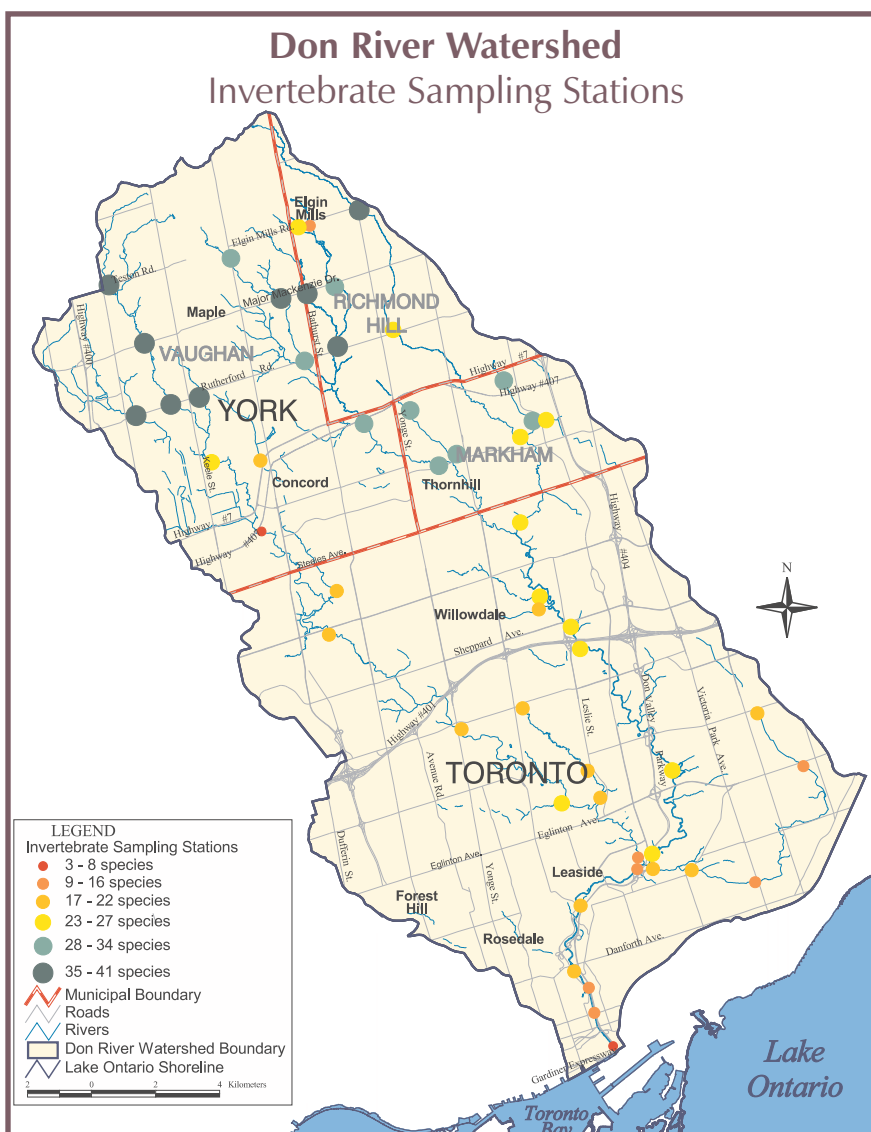


in 2000



Little change since 1984; continues as poor; cutbacks to monitoring.

Don River Watershed Invertebrate Sampling Stations



Where we are: (2000)

From an aquatic habitat perspective, water quality remains unchanged since 1997. The Don River still has too much sediment, especially following rain storms or during snow melt periods. Other critical parameters, such as trace metals, nutrients and ammonia, are still a problem. A benthic survey in 1998 found little change since 1984. Only 2 percent of stations had pollution-intolerant species and the ratio of stations with moderately tolerant and tolerant species remained virtually unchanged.

Contaminants found in fish flesh, under the Sport Fish Contaminant Study Program (1999-2000), are similar to those found in 1997-1998, for the two sites sampled. Rock bass, brown bullhead and carp from the G. Ross Lord reservoir are safe if consumed at no more than eight meals per month. In the young-of-the-year fish tissue testing program for organic contaminants, at the West Don site below G. Ross Lord dam, both PCBs and DDT were detected but only PCBs exceeded the objectives.

Pesticides that are in general use in urban areas were monitored during dry and wet weather in the summer of 1998 and 1999 at the mouth of the Don River and Wilket Creek. The commonly used lawn insecticide diazinon was detected under both dry and wet weather conditions, and cypermethrin under dry conditions. Lawn herbicides 2,4-D and mecoprop were detected only under wet conditions, and the agricultural herbicide d-ethyl atrazine only under dry conditions. Only diazinon exceeded the International Joint Commission (IJC) water quality guideline for the protection of aquatic life.

There is still too much sediment for healthy aquatic habitats throughout much of the Don. Suspended solids concentration measures, ranged



Water striders.

from 4 mg/L to 381 mg/L, but from a fisheries perspective, these concentrations are not the most crucial sediment issue. The total mass of sediment in the river is the primary issue. The sediment mass problem is caused by both sediment entering the Don from the urbanized watershed and sediment which is generated from within the river itself, because of the Don's "flashy" hydrology. Of particular concern is the lack of provincial water quality monitoring throughout the watershed, and the lack of emphasis on wet weather flow. The lack of focus on wet weather sampling can bias results because the high concentrations of contaminants often found during high flow events are not being detected. Between 1993 and 1996, the MOE discontinued water quality sampling at four sites* throughout the Don watershed that had been sampled for about 30 years. The only remaining sampling location is in the Lower Don at Pottery Road, which is being sampled several times a month all year long for various water quality parameters and some metals. Currently, the City of Toronto monitors four stations in the Don for basic water chemistry and *E. coli*, which helps to fill some of the gap left by the Province.

There were 28 reported spills of chemicals and/or raw sewage into the Don between 1997 and 1999. The number of unreported spills and/or spills on land that eventually made it to the river are unknown.

In 1999, the City of Toronto approved a progressive new sewer use by-law.

* **NOTE:** Table 1 (page 6) identifies the last date stations were sampled.

Indicator 3 continues on page 10.



AQUATIC HABITATS CONTINUED

The City of Toronto's Wet Weather Flow Master Plan

In 1998, the City of Toronto began the process of preparing a Master Plan in order to address the wide array of problems caused by wet weather flow. Wet weather flow refers to the runoff of water resulting from rain or snowmelt. It includes stormwater runoff from buildings and streets, as well as combined sewer overflows that occur when flows exceed sewer capacity. Extensive public consultation was conducted in the first phase of the study and the technical phase of the study is now underway. This technical phase will formulate strategies for the prevention, control and reduction of wet weather flow impacts. The objective of the study is to develop targets for runoff management to meet instream objectives for water quality, flow and aquatic habitat. The study also intends to identify technology and the extent of, and types of, treatment to be applied in the watershed. It is hoped that this plan will go a long way toward planning for, and implementing, a new and sustainable urban water infrastructure that will help facilitate the realization of many of the targets contained in this report card.



🔍 Crayfish. 🔍

Where we want to be:

By 2003:

- 1) A funded network will be put in place for watershed-wide monitoring of key contaminants (during dry and wet weather), as well as water flow, sport fish and benthic invertebrates.
- 2) Priority toxins (1994 Canada-Ontario Agreement Tier 1 list of substances) will be detected in 25 percent fewer samples; levels of persistent organic contaminants and toxic metals will meet the Provincial Water Quality Objectives; and contaminant levels in young-of-the-year fish should meet the IJC Guidelines For the Protection of Aquatic Life.
- 3) Targets for loading reductions of wet weather contaminants will be set through the City of Toronto's Wet Weather Flow Master Plan and a similar plan in York Region.
- 4) The upper Don watershed municipalities will complete two upgrading projects as identified through the Stormwater Facility Upgrade Plan (see Indicator 4). The Wet Weather Flow Master Plan for the City of Toronto will be well underway with two stormwater upgrade projects completed.

By 2010:

- 1) The number of stations dominated by pollution-tolerant invertebrate species will decline from 70 percent to 50 percent; the number of stations with moderately tolerant invertebrates will increase to 43 percent; and the number of sites dominated by sensitive species will increase from two percent to seven percent.
- 2) Statistically significant reductions in wet weather contaminants will have occurred.

By 2030:

- 1) Suspended sediment concentrations will be less than 80 mg/L more than 80 percent of the time.
- 2) A diverse group of aquatic invertebrates that is similar to, or better than, those observed in 1949 will be found throughout the watershed: the proportion of stoneflies, mayflies and caddisflies will be larger, and the stations dominated by pollution-intolerant species will approach the historical 20 percent, with 47 percent stations moderately tolerant and 33 percent tolerant.
- 3) Chemical contaminants found in water and the flesh of fish will be within guidelines established for the protection of aquatic life.
- 4) Persistent organic contaminants will be present in less than 10 percent of water samples.



☞ Mayfly.

How to get there:

Monitoring is essential. Expansion of the area monitored, the parameters assessed and the timing of the sampling (e.g., dry and wet weather events) must be accomplished to allow for effective monitoring. The Provincial government should contribute to funding partnerships for a watershed monitoring program to provide information necessary for assessing the health of aquatic ecosystems. The Provincial Ministry of the Environment should reinstate complete water quality monitoring at three more locations in the Don water-shed (see Indicator 2), as recommended by the Toronto and Region Conservation Authority's Watershed Monitoring Network (under development).

The reduction of sediment in the river will remain a priority for a number of years, especially that from construction sites. Effective environmental monitoring of construction sites, training in erosion and sediment control for all key personnel in construction, and strengthening municipal inspection and by-law enforcement is essential.

Wet weather flow remains the largest contributor of pollutants to the river and consequently, source control is essential (see Indicator 4). General awareness of the stormwater problem

must be improved. Stewardship by business and industry, transportation sectors, homeowners and construction companies is key to ensuring that sediment, fertilizers, pesticides and salt are reduced at their source. Downspouts must be disconnected in all feasible locations. Areas for stormwater management upgrades must be identified.

Business outreach and education efforts must be improved to increase awareness and generate action. Businesses must identify the pollutants they generate and employ environmentally sensitive best management practices when using and disposing of these pollutants.

The new Toronto Sewer Use By-Law must be enforced. Other municipalities will be encouraged to update their Sewer Use By-laws and enforce them.



INDICATOR 4: STORMWATER MANAGEMENT

How well has stormwater runoff from urban landscapes been managed?

Where we were: (1997)

Stormwater was the major conveyor of pollutants into the Don. Stormwater management (for both quality and quantity control) was required for all new developments. Quantity controls for new developments had been required since the early 1980s; consequently, 15.9 percent of the urbanized area in the watershed had quantity control, in the form of stormwater ponds. However, only 5.3 percent of the urbanized watershed area had quality control. In the older areas that were urbanized before 1980, there was virtually no stormwater management in place.

2000 Targets:

- 1) Identify all opportunities for stormwater quantity and quality control in currently uncontrolled areas.
- 2) Select and initiate five stormwater infrastructure upgrade projects in five sewer-sheds of tributaries where there is no stormwater control today, as defined by the above study.



📍 Killian Lamar stormwater pond in Vaughan.

WHAT'S THE TREND?

in 1997



in 2000



Municipal stormwater plans are underway; upgrade efforts continue.



⚡ Stormwater carries everything in its path that will either float or dissolve, directly into the river.

Where we are: (2000)

Stormwater remains the major conveyor of pollution to the Don River. Today, 15 percent of the urbanized portion of the watershed has quantity control and seven percent has quality control. It should be noted that these percentages should not be compared to those of 1997 since they represent existing controls in place at the time of report card publication; whereas, the 1997 percentages included both existing controls and areas for which controls were approved but not yet implemented. Don municipalities and the Toronto and Region Conservation Authority (TRCA) have implemented four stormwater upgrade projects and initiated an additional four (for a total of eight), thus exceeding the targets set in the 1997 Report Card. TRCA staff have carried out stormwater upgrade studies for each of the Don's upstream municipalities (Markham, Vaughan and Richmond Hill). Through these studies, a total of 16 existing ponds were identified as having upgrade potential and 16 sites were identified where the construction of new stormwater facilities is feasible. An additional 13 potential sites have been identified in the City of Toronto. As of yet, not enough emphasis has been placed on lot-level and conveyance stormwater controls; however, the City of Toronto continues to administer an effective downspout disconnection program which disconnected 7,919 properties from 1997-1999.

Where we want to be:

By 2003:

- 1) The City of Toronto's Wet Weather Flow Master Plan should be completed, approved and funded.
- 2) For each of the upgrade studies completed to date in the Region of York, municipalities (with assistance from the TRCA) will develop implementation strategies (Stormwater Facility Upgrade Plans) to prioritize upgrade opportunities and identify funding mechanisms.
- 3) Initiate three demonstration projects (one for each of the three municipalities in the Region of York) to demonstrate innovative lot-level/ source control techniques.
- 4) The upstream municipalities (Vaughan, Markham and Richmond Hill) will each undertake a study to determine where lot-level controls are feasible.
- 5) Four additional stormwater upgrade projects will be completed: two in York Region and two in the City of Toronto.

By 2010:

- 1) All existing stormwater ponds will be upgraded for quality control as identified in the upgrade studies.
- 2) Lot-level source control measures will be implemented in 50 percent of lots (where feasible).

By 2030

- 1) Stormwater upgrades will be completed in all sewersheds or tributaries where there is no stormwater control today (where feasible).
- 2) Lot-level measures will be in place (where feasible).

How to get there:

Realizing true ecosystem improvement requires that we find innovative ways to treat stormwater in all areas of the watershed, including those which were urbanized long ago. Stormwater upgrades are one way of doing this, but the lack of available land is a limiting factor. For this reason, all downspouts connected to the storm sewer system must be disconnected where feasible. Also, land managers (municipal, institutional, business and homeowners) across the watershed must strive for innovative ways of confining and/or treating stormwater on their properties. The Don is an urban watershed, with most of its development having occurred prior to the introduction of mandatory stormwater controls. Consequently, it is vital that conveyance and lot-level stormwater measures be implemented to complement end-of-pipe controls. Governments must devise new mechanisms for funding stormwater upgrade programs. Together, municipalities and agencies should assess candidate sites for stormwater ponds and select priority locations for upgrading based on cost/benefit analyses. Restoring the Don River's water quality, habitats and general ecological health is fundamentally dependent on our ability to address the stormwater issue in a substantial way.





Caring for Nature

🦢 Black crowned night heron.

Habitats

Habitat loss is the number one reason for the rapid loss of species around the world, across the GTA and in the Don watershed. We must stop the destruction of our delicate ecosystems, regenerate the areas that have been destroyed and work hard to increase the number, size and diversity of woodlands, meadows, wetlands and other key habitat areas in the watershed.

Diversity of habitats is critical. Small, cool headwater creeks support a different mix of fish, invertebrate and plant species than the larger, warmer river downstream. Densely canopied woodlots are vital, as are sunny and open meadows, for the different communities of birds and small mammals they support. And wetlands not only provide crucial food, shelter, water and space for a wide range of nature's creatures, they also act as giant filters, trapping and removing pollutants and sediment that are washed off nearby land. Riparian, or stream-side, vegetation is the great connector for all of these habitats, allowing wildlife to safely travel from one green place to the next.

*Habitat loss
is the number one
reason for the
rapid loss of
species around
the world.*

Obviously, more habitat is better. Several studies show that once the natural areas in any watershed fall below the 'magic' threshold of 30 percent of its total area, stresses start to become visible in the invertebrate and bird populations. In 1997, the Don had about 12 percent natural areas; in 2000, that number has not changed significantly.

The habitat indicators in this report card show an overall decline from 1997, but this change is not a reflection of effort. Significant improvements in digital mapping technologies have allowed us to more accurately measure our indicators, and as a result, this report card — not the 1997 report — should represent the baseline for future assessment.



Pottery Road weir, prior to mitigation efforts that today 🦢 allow migratory fish to move further north up the River.



🐌 *Creatures great and small share the Don.*

Wildlife

The area of habitat in the watershed is one measure of ecosystem health. But have plants and animals actually moved in, to live and reproduce there? Are the habitats healthy enough, rich enough and connected enough to function as healthy ecosystems?

To assess the health of the ecosystem, we must monitor its inhabitants. Most birds and mammals move around between different locations, making them difficult to effectively monitor. Frogs, on the other hand, are far less mobile, are vocal for at least part of the year, and are extremely sensitive to environmental toxins. This combination makes them an ideal indicator of the health of the Don.

Toronto and Region Conservation introduced a volunteer frog monitoring program in response to the recommendations in the first Don Report Card and the program hit a public nerve. The story was picked up by a number of major Toronto media outlets, including the Globe and Mail, and there was standing room only at the volunteer training sessions. Since 1997, data was collected at an incredible 71 different survey stations through the watershed — and more than two-thirds of the stations had at least one of the eight monitored species present.

The mere presence of frogs and toads in the Don gives us a glimmer of hope. Unfortunately, not every species of frog lives in every part of the watershed, and those most sensitive to environmental degradation — wood, chorus and bull frogs, spring peepers and gray treefrogs — are conspicuously absent from the Don's middle and lower sections.

Fish also tell us a lot about water quality and upstream land use practices. Not much has changed — good or bad — in the Don's fish populations since 1997. However, in 1999, the Don experienced a success not witnessed since the late 1800s. Through alterations or removal of five major in-stream barriers, salmon were able to migrate up the East Don River. Unfortunately, the poor quality of both the water and the fish habitat, coupled with the ravages of stormwater, have so far eliminated the likelihood of a successful spawn.



INDICATOR 5:

WOODLANDS

Are the Don's woodlands being protected?

Where we were: (1997)

Eight percent or 2,916 hectares of the watershed was woodlands.

2000 Targets:

- 1) No significant woodlands over one hectare will be lost, even with new development.
- 2) Establish targets for street trees and backyard trees.

WHAT'S THE TREND?

in 1997



in 2000



No measurable change;
Baker Sugar Bush an
important acquisition.

Habitats in the Don Watershed

**7.2 percent of
watershed area is
woodland**

**Target 10 percent
(15 percent in
Vaughan)**

Some Responses from 2000 Angus Reid Survey

***"What sort of changes
have you undertaken to
make your lot more
environmentally friendly?"***

"Eliminated a lot of lawn"

***"Use only organic
fertilizer"***

***"We recycle everything —
I'm 'Miss Green Thing'
here"***

York Region Going for Green

In September 2000 York Region endorsed a draft strategy designed to enhance the Region's natural features and to heighten awareness of environmental issues. Called the York Region Greening Strategy, the initiative will implement the environmental policies outlined in the Regional Official Plan. These policies include the expansion of the Region's forest cover, monitoring the quality of our water, air and soil, and creating partnerships with other agencies to improve the overall health of our natural environment.

The purpose of this initiative is to prepare a strategy to provide a context for regional decisions that affect natural features. It will provide opportunities to turn policies related to York Region's forests, greenlands and natural heritage features, into actions. The Greening of York Region initiative will be an umbrella for regional initiatives including land use approvals, property acquisitions of additional Greenland Areas, the Regional Trees By-law and the development of a Regional Streetscape Policy. The common strategy would ensure that all of these action areas are rationalized, and are supportive of each other and the policies of the Regional Official Plan.

*Source: taken from www.region.york.on.ca
Reprinted with permission.*



 Aerial view of Baker Sugar Bush.

Where we are: (2000)

More accurate digital technology has been employed to measure the quantity of woodlands in the Don watershed, and as a result, this report card should be considered the baseline for future comparisons. While the World Wildlife Fund and others have suggested a watershed woodland target of 25 percent, the Don watershed has only 7.2 percent woodland. For this reason, all woodland in the Don is important. The public acquisition of the Baker Sugar Bush in the Upper Don was a significant victory in the area of woodland protection but woodlands continue to be lost. Most remaining tableland woodlands are concentrated north of Highway 7 and are of special concern. Targets for street trees and backyard trees have been identified. The City of Toronto's Tree Advocacy Program and street tree survey efforts, and York Region's Greening of York Region Initiative (see box page 16) are laudable efforts worthy of support.

Where we want to be:

By 2003:

- 1) No quality woodlands will be lost, even with development.
- 2) The watershed Natural Heritage Strategy will be completed and adopted, and will include updated targets for woodland cover.
- 3) "Green Infrastructure" will be supported in the Official Plans of Toronto, York and the upper watershed's local municipalities.
- 4) New guidelines will be established by municipalities to ensure survival and growth of urban trees, both in new developments and existing built up areas.
- 5) The 2030 urban tree target will be revised for specific areas of concern.
- 6) Invasive species management programs will be in existence across the watershed to protect the quality of existing woodlands.

By 2010:

- 1) New woodlands will be planted in an additional 650 to 700 hectares of the watershed.
- 2) Municipal street tree planting and maintenance programs will be established to meet the 2030 target.

By 2030:

- 1) Ten percent, or more than 3,600 hectares of the watershed will be woodlands. (15 percent is the target for the City of Vaughan because it has more opportunity in the form of undeveloped land). This target is to be revised and finalized by the Natural Heritage Strategy.
- 2) A minimum of 50 percent of the Potential Leaf Area Density will be present in all urban watershed areas.

How to get there:

The Don Watershed Natural Heritage Strategy, a multi-stakeholder project which is developing a terrestrial habitat "blue print" for the watershed, should be completed and implemented. The Natural Heritage Strategy should be fully integrated with other strategies, such as the City of Toronto's Wet Weather Flow Strategy, to comprise a system through which future land use planning options can be assessed and prioritized in an integrated manner. We should also plant trees, maintain newly planted areas, monitor the success of plantings, and work to increase forested areas through partnerships, wherever possible. The Greening of York Region Initiative should continue and should be supported. Existing quality woodlands (to be defined by the Natural Heritage Strategy) should be protected and/or enhanced through the implementation of programs to remove destructive invasive plant species. Methods of determining "woodland quality" should be improved to consider the following factors: total woodland area in the watershed, species composition, maturity, presence of invasive species, size, shape, and other characteristics as defined by the Natural Heritage Strategy. Municipalities should work to ensure that there is "no net loss" as a result of development activity. We should strive for a "net gain" in woodland resources. Where possible, green corridors and linkages should be required between protected wooded areas. Citizen networks advocating street tree planting and care should be supported by Don watershed municipalities. Tree planting and care should be part of Federal, Provincial and Municipal infrastructure programs.



☞ A quiet refuge for wildlife and humans.



INDICATOR 6:

WETLANDS

Are enough new wetlands being created?

Where we were: (1997)

Only 49.5 hectares of the watershed were wetland.

2000 Targets:

- 1) Create at least 12 new hectares of habitat wetland.

WHAT'S THE TREND?

in 1997



in 2000



Wetland creation targets not reached.

Habitats in the Don Watershed

0.12 percent of watershed area is wetland

Target 0.5 percent

The Fung Report and the Mouth of the Don

A 2000 report titled, *Gateway to a New Canada, Our Toronto Waterfront*, prepared by the Toronto Waterfront Revitalization Task Force under Chair Robert Fung, has made a number of recommendations for the redevelopment of Toronto's waterfront in a holistic and sustainable manner. One vital recommendation in the report is the call to re-establish a naturalized river mouth for the Don:

"The ugly and undignified Keating Channel would be replaced along with the removal of the Gardiner platform, by a natural river mouth, bordered by park spaces."

From: *Gateway to a New Canada, Our Toronto Waterfront (Fung Report)*

The Fung Report's vision for the mouth of the Don echoes previous recommendations from the Task Force to Bring Back the Don, the Royal Commission on the Future of Toronto's Waterfront, and the Don Watershed Regeneration Council. This vision calls for a revitalized river mouth, complete with a thriving delta wetland, somewhat like the one that existed at the mouth of the Don before European settlement.



✎ Drawing of Proposed Mouth of Don River, prepared for The Task Force to Bring Back the Don, by Hough Woodland Naylor Dance Leinster, February 2000.

Where we are: (2000)

A total of 26,540 square metres or 2.7 hectares of new wetland were created, well short of the target of 12 new hectares. More accurate mapping technology has set the baseline quantity of wetland in the watershed at 44.5 hectares (0.12 percent of the watershed's area).



Wetlands provide critical food, water, shelter and space for fish, wildlife, birds and insects; and they help prevent flooding and erosion. They also act like giant filters, trapping and removing pollutants and sediment that are washed off nearby land.



Green frog.

Where we want to be:

By 2003:

- 1) Determine all potential wetland creation sites using the Natural Heritage Strategy.
- 2) Create three additional hectares of quality wetland in specific and appropriate areas. Quality wetlands should be of sufficient size and composition to provide multiple functions (hydrological, habitat).
- 3) Protect all existing quality wetlands (no net loss).

By 2010:

- 1) Wetlands to occupy 0.16 percent of the watershed (three new hectares every three years).
- 2) A major wetland will thrive at the mouth of the Don.

By 2030:

- 1) Wetlands will occupy 0.5 percent of the watershed, or another 135.5 hectares.
- 2) Flora and fauna indicator species will exist in significant numbers in the Don's healthy wetlands.

How to get there:

Potential wetland creation areas should be determined through the completion of the Natural Heritage Strategy. All necessary field work required to determine the suitability of sites for use as wetlands should be completed. We should continue to advocate for wetland creation. Larger scale, multi-functional wetland projects are needed if high-quality wetlands are to be brought back to the Don. In order to ensure the viability of wetlands (both existing and created), significant effort must be made to re-establish more natural flow patterns in the river and improve water quality. Invasive and exotic species that degrade habitat quality must be controlled.

NOTE: Wetlands created as part of stormwater management efforts are not included in this indicator. The area of wetland reported in this indicator pertains to habitat wetlands only.



Dredging of Keating Channel.



INDICATOR 7:

MEADOWS

Of what value are the Don's meadows?

Where we were: (1997)

Meadows occupied 3.5 percent or 1,261 hectares of the Don watershed (based on 1993 data). A target for optimal meadow area in the watershed was not provided.

2000 Targets:

- 1) Identify areas for long term, perpetual meadows, e.g. hydro corridors and roadsides.
- 2) Determine the optimal ratio of meadow to woodland in the Don watershed.

WHAT'S THE TREND?

in 1997



in 2000



Optimal ratio of meadows to woodlands still to be determined.



🌿 Road sides, hydro corridors, backyards and school yards make excellent meadows.



Purple cornflower. 🌿

Where we are: (2000)

A detailed assessment of the extent of meadows and their place in the Don has been conducted. The Don's sparse woodland totals dictate that woodland protection and creation take priority over meadow creation, since woodlands support greater biodiversity and provide higher quality habitats. Meadows, however, are a more sustainable and ecologically rich land use than sterile, monocultured lawns. Meadows host a wide variety of birds, reptiles, insects and mammals, and contribute to the retention and purification of water. For these reasons, meadow creation efforts in appropriate areas should be supported and advocated. Appropriate areas for meadows would include locations where the establishment of woodlands may not be feasible, such as hydro/utility corridors, backyards, school yards, etc.



Thistles provide food and nesting materials for the American goldfinch.

Where we want to be:

By 2003:

- 1) Identify and map all publicly owned areas proposed for meadow creation/enhancement; link these areas with other habitats where possible.
- 2) Undertake an effective outreach campaign to establish the Don's hydro/utility corridors as high quality meadow habitat (where possible).
- 3) Undertake 15 meadow creation/naturalization projects.
- 4) Set final meadow targets in conjunction with owners of hydro corridors and other identified areas.
- 5) Set targets for species of concern.

By 2010:

- 1) All meadow targets will be reached (e.g., hydro lands available for retention as meadow will be managed as such).
- 2) Meadows will be actively maintained and they will be of the highest quality possible, with native species predominant.

By 2030:

Continued stewardship of existing meadows.

How to get there:

Outreach to hydro/utility companies to make transmission or other corridors available for meadow and shrub plantings will be undertaken. Other land owners (institutional, industrial and residential) should be educated on the benefits of meadow habitats on individual properties. The community should be mobilized to improve the quality of existing meadows through planting of additional species or management actions to maintain meadow communities. Land managers need to manage invasive and exotic species in order to protect meadow habitat quality. Where possible, meadows should be located where they can provide a linkage between habitats currently separated by urban land uses.



INDICATOR 8:

RIPARIAN HABITAT

What is the state of the Don's riverside (riparian) vegetation?

Where we were: (1997)

Approximately 57 percent of the Don's riverbank has riparian vegetation. This represents 183 kilometres of the river's total length of 310 kilometres.

2000 Targets:

- 1) Identify opportunities for riparian planting to achieve a long term target of 75 percent riparian vegetation, or 56 additional kilometres.
- 2) Begin planting.

Habitats in the Don Watershed

35 percent of stream length has woody riparian coverage

Target
75 percent of stream length with woody coverage

WHAT'S THE TREND?

in 1997



in 2000



Extensive effort, especially in the headwater areas.



📍 Riparian habitat helps keep water temperatures cool and provides vital food and habitat for resident and migratory fish (photo taken in Charles Sauriol Conservation Reserve).

📍 Bartley Smith Greenway in Vaughan.

Where we are: (2000)

Since the last report card, almost four kilometres (3,883 metres) of riverbank vegetation has been planted and the Don now has 193 kilometres of riparian vegetation (62 percent of the riverbank length). More accurate methodology for measuring riparian habitat accounts for the rest of the change. However, only 109 kilometres of the existing riparian habitat is woody (trees and shrubs). It is woody riparian habitat that provides the most benefit to streams and rivers. The Don Council adopted riparian restoration as a major focus and the 2000 targets have largely been met. There is, however, still too much land, both public and private, that is mown right to the edge of the Don River's banks.



Charles Sauriol Conservation Reserve (near Don Mills Road and the Don Valley Parkway).

Where we want to be:

By 2003:

- 1) Plant eight additional kilometres of riverbank vegetation.
- 2) "NO MOW" zones will be identified and observed on all public lands.

By 2010:

- 1) Plantings will be completed in all opportunity areas.
- 2) Land managers (e.g., golf course managers) will allow for the establishment of natural riparian zones.

By 2030

- 1) Riparian habitat will exist along 75 percent of riverbanks.
- 2) The riparian habitat will be of high quality and comprised of native woody species.

How to get there:

Using the successes of the past three years, municipalities, citizens, land owners and government agencies should continue focusing on riparian-friendly land management practices and holding riparian planting events. Members of the community can get involved, adopting riparian zones as a primary target for restoration, maintenance and monitoring. The value of riparian habitats must be communicated to land managers and the public. Land managers need to manage invasive and exotic species in order to protect riparian habitat quality.

SPECIAL NOTE: The Province of Ontario should amend the Noxious Weeds Act to exempt urban lands, and specifically, riparian habitats and meadows, from control. The mowing of naturalizing areas because they contain noxious weeds eliminates the ability of riparian edges and meadows to become established.



INDICATOR 9:

FROGS

Are more frogs moving back to the Don?

Where we were: (1997)

There was a lack of data on the presence of frogs in the watershed. No baseline data was presented in 1997.

2000 Targets:

- 1) Complete baseline data for frogs.
- 2) Establish targets for 2010 and 2030.

Gray treefrog, a species of concern. 🐸



🐸 Green frog.



🐸 Northern leopard frog.



🐸 Spring peeper, a species of concern.

WHAT'S THE TREND?

in 1997



in 2000



71 stations were surveyed, 48 with frogs present; too early to assess health and viability of populations

Don River Watershed Frog Monitoring Stations



🐸 Gray treefrog.



🐸 Wood frog, a species of concern

🐸 American toad.

Where we are: (2000)

In order to address the lack of data, a volunteer frog monitoring program was initiated in 1997. Eight species were chosen for monitoring: American toad, green frog, northern leopard frog, spring peeper, gray treefrog, chorus frog, wood frog and bullfrog. The latter five of these are considered species of concern because of their specific ecological needs or sensitivities. American toad, northern leopard frog and green frog were found in limited areas throughout the watershed. These are the least habitat-specific, or sensitive, of the eight species chosen, and their presence indicates at least a minimal wetland function. While there have been unconfirmed reports of spring peepers, gray treefrogs, chorus frogs and bullfrogs in the lower sections of the watershed, spring peepers, gray treefrogs and wood frogs have been confirmed in the headwaters. The McGill Environmentally Significant Area (ESA) in the headwaters supports six of the eight targeted frog species. Forty-eight of the 71 survey stations in the watershed had at least one species present. Only a few records were made for spring peeper, gray treefrog and chorus frog, primarily in the upper portion of the watershed. Wood frogs are only known to occur in the extreme northern part of the watershed (north of Major MacKenzie Drive). All of these frogs have specific habitat needs and are sensitive to development; their presence in the upper watershed is due to the existence of better quality, and more highly connected, habitat patches.



Green frog.



Happy green frogs.

Where we want to be:

By 2003:

- 1) Assess the status of spring peeper, gray treefrog, and bullfrog populations in the lower watershed.
- 2) Continue monitoring, with an emphasis on protected and created habitats.

By 2010:

An increase in the abundance, distribution and diversity of species.

By 2030:

A further increase in the abundance, distribution and diversity of species.



Green frog.



Bullfrog, a species of concern.

How to get there:

We must continue to develop the regional monitoring program to identify additional species to track and target. Reports of spring peepers, gray treefrogs and bullfrogs in the lower portion of the watershed need to be confirmed. If these are but a few last remaining individuals or released pets, they are destined to disappear. If small remnant populations do exist, it is possible that they could benefit from habitat enhancement. Agencies should facilitate volunteer participation to continue and expand monitoring efforts. Frogs and other wetland life will only be viable if the wetlands themselves are viable. This means that the Don's extensively degraded flow patterns must be addressed through a renewed effort to improve stormwater management. As well, water quality must be improved, and habitat linkages between upland forests (where many frogs spend parts of their life cycle) and wetlands must be created and/or protected. The Natural Heritage Strategy will be a key document in identifying these important linkage opportunities.



FISH

Where we were: (1997)

2000 Target:

Remove three weirs — two at Pottery Road and one on the East Don between Lawrence Ave and Highway 401.

in 1997



in 2000

Salmon began moving toward the headwaters but no indication of spawning success.



⬆️ *Pumpkinseed.*

Where we are: (2000)

Twenty-one species of fish were found in the watershed in 1998, an insignificant change from the 18 found in 1991. This included two species, rainbow and brown trout, that were stocked as fry between 1997 and 1999 in the upper East Don. The percentage of stations reporting no fish is now 13 percent, also an insignificant change. Pomona Creek in Thornhill, Wilket Creek in North York and Taylor/Massey Creek in East York/Scarborough still have large reaches without fish. Five weirs acting as barriers to migration of salmon between Lake Ontario and York Mills have been removed or made passable, surpassing the 2000 target to mitigate three weirs. As a direct result of this action, a large number of Chinook salmon migrated up the East Don River in 1999 for the first time since the late 1800s (though at that time the migrating fish were Atlantic salmon). The salmon are now expected to be able to access York Region on their fall 2000 migration. There are a number of other weirs present through this area, however, which continue to act as barriers for most other species. While salmon access is a major positive story, the quality of the Don's fish habitat, its water quality and its excessive, destructive flows are likely to significantly inhibit spawning success. A scientific measure of aquatic habitat quality — the Index of Biotic Integrity (IBI index) — remains unchanged from 1991 (score of 21).

Where we want to be:

By 2003:

- 1) Continue removal or modification of existing barriers to fish migration — two on the East Don and one on Taylor/Massey Creek.
- 2) Toronto's Wet Weather Flow Master Plan must be completed and implementation initiated; stormwater upgrade studies in the Don's upstream municipalities will be completed and implementation initiated.
- 3) Complete the Don Watershed Fisheries Management Plan.
- 4) Develop recovery plans for streams without fish and target species such as reddsides and salmonids.

By 2010:

- 1) Common species, such as creek chub and others, will be reestablished in areas where no fish are presently found.
- 2) Species which were once widespread in the Don, such as common shiner, reddsides, johnny darters and mottled sculpin, will have an expanded range.

By 2030:

There will be self-sustaining populations of target species, such as reddsides, mottled sculpin, smallmouth bass, largemouth bass, rainbow darters, northern pike and rainbow trout, in appropriate habitats as outlined in the Don Watershed Fisheries Management Plan.

How to get there:

The Toronto and Region Conservation Authority, the Ministry of Natural Resources (MNR), and Don municipalities should proceed with removing or modifying in-stream barriers where determined to be of strategic benefit. We should also institute stormwater controls, control erosion from construction sites, plant riparian vegetation, create wetlands and improve aquatic habitats. The completion of both the City of Toronto's Wet Weather Flow study and the stormwater planning efforts in the Don's upper municipalities are crucial to providing the flow and water quality regime that can support aquatic life (see Indicators 1,3,4,6 and 8).

NOTE: Fish found in 1991 but not in 1998 include American brook lamprey, goldfish and yellow perch. Fish found in 1998 but not 1991 include alewife (introduced), gizzard shad, rainbow trout (introduced), brown trout (introduced), emerald shiner and brook stickleback.



☞ Angling success on the Don! This large Chinook salmon was caught in 1999 just south of the Donalda Golf Club in-stream barrier. This barrier has since been altered to allow fish to travel to the headwaters.





Caring for Community

📍 *The Mill Pond in Richmond Hill — a part of the Don community.*

People

As cities and other urbanized areas continue to grow, and as the pace of life continues to accelerate, humans often feel a strong need to slow down and take refuge from the changes around them. Where do they turn? For many urbanites, a city's parks, rivers and natural areas become a top 'escape' destination. Nowhere is this more evident than in the Don watershed.

According to the June 2000 Angus Reid Public Awareness Survey, 86 percent of respondents agreed that the Don River was "a good place to walk or bike" (a significant increase from the 75 percent of respondents in 1996 who agreed with the same statement). And 91 percent of all respondents to the 2000 survey agreed that the Don River was "important to my community's quality of life."

How is that reflected in the education of our younger generations? Sadly, the new curriculum introduced in 1998 downplays both the importance of the local environment and the need to build and nurture close connections to our ecological systems. The Don flows in close proximity to hundreds of schools but we do not know how many classes actually choose to use the river as an educational resource. However, we do know that Don schools often choose to visit the Kortright Centre for Conservation or the numerous residential field centres operated by Toronto and Region Conservation and the local Boards of Education. Most of these facilities are located outside the Don watershed.

Awareness

Have public attitudes about the Don changed since the last report card? Yes and no. When we compared the results of the June 2000 Angus Reid Public Awareness Survey to the 1996 survey, we discovered there were no significant differences in a range of perceptions, including:

- the correct definition of a watershed (23 percent in 2000 vs. 27 percent in 1996)
- the proportion of respondents¹ who knew they lived in the Don (44 percent in 2000 vs. 36 percent in 1996)
- the proportion of respondents who agreed that the Don was "very polluted" (74 percent in 2000 vs. 71 percent in 1996)

These attitudes are worrisome indeed, but there is hope. We are cautiously optimistic that key messages, particularly those about stormwater, are being heard. Seventy-one percent of respondents to the 2000 study — an improvement of 10 percent from the 1996 survey — knew that water from storm drains goes directly into the Don.

When people understand what a watershed is, and where stormwater goes, they are far more likely to become better stewards of streams, stormwater and the river. Yet there still is a high degree of misinformation among watershed residents. More than half of the interviewees still thought that the majority of pollution in the Don comes from industry when, in reality, stormwater is the real culprit. Most surprisingly, 61 percent of those surveyed now believe that the Don is less polluted than it was 10 years ago — a 15 point increase from 46 percent in 1996. We wish that were true! (See Caring for Water)

¹ Only those who correctly defined the term watershed were asked this question.

Responsible Use and Enjoyment

The Don continues to be well used and appreciated by local residents. And while some people may not visit it on a regular basis, the Don is a remarkable inspiration for those who do visit.

The river's silent charm wins over virtually everyone who walks its paths, cycles its trails or appreciates its flora and fauna. 100 percent of those respondents who had visited the Don between June 1999 and June 2000 felt the river was a good place to walk or bike. 97 percent of those same respondents felt the Don was important to their community's quality of life and 92 percent insisted that the Don was important to their own personal quality of life. If only we could get everyone to visit the Don!

Baby boomers seem to visit the Don more often than younger respondents, and the residents of the Lower Don are significantly more likely (54 percent) to have recently visited the river and its parks than residents of the Middle (37 percent) and Upper (28 percent) Don. The two most popular activities in the Don are walking (89 percent) and bird watching/nature appreciation (65 percent).

As the popularity of these peaceful activities increases, the rate of potential conflict with other trail and park users will almost certainly increase. Off-leash dogs disturb habitats and often chase birds and wildlife. In-line skaters and cyclists may clash verbally with walkers and birders, each holding the perception that they alone have access to that space at that time.

As the population ages and makes the transition from sports like tennis and skiing to walking and birdwatching, we will face increased pressure to expand access to the Don. We must strike a balance between access and protection — sensitive and regenerating areas must remain free from human interference. In those areas that are suitable for human use, we have established ambitious, long-term targets for trail extensions and improvements. This careful balance between protection and access will hopefully make the Don one of the green places to be in the region.



☞ 'Paddle the Don' is a popular springtime event for urban paddlers.



☞ The Yellow Fish Road project helps us remember that our storm drains are a direct connection to our River.

Classroom Education

The new provincial curriculum introduced in 1998 completely changed the environmental education landscape. While significant components of environmental education are contained in the new curriculum, the new guidelines focus more on the economic value of the environment than the need to make close, personal connections with the all important local, national and global environments.

These curriculum changes, coupled with decreased staffing, amalgamations and financial restructuring, left most education administrators with little time to respond to our progress surveys. Given our meagre four percent survey response rate, we were unable to assess progress toward the classroom targets we set out in the first Don Report Card.

However, we were pleased to learn that almost one quarter of all Don schools visit Toronto and Region Conservation's (TRCA) environmental field centres (residential) each year, and more than half of all Don schools visit the Kortright Centre for Conservation (day visits). Since the last report, the TRCA's Yellow Fish Road project, the hands-on program that paints yellow fish beside storm drains to symbolize their connection to the river, engaged 90 groups. In that same period, the TRCA's Watershed on Wheels brought their environmental outreach program to more than 90 classes.

Our targets for 2003 and 2010 are ambitious, but necessary. We believe that responsible, aware children become responsible, aware adults. The future health of the Don — and the planet — depends on it.



INDICATOR 11: PUBLIC

UNDERSTANDING AND SUPPORT

How well do people understand watershed issues?

Where we were: (1997)

Ninety percent of Don watershed residents surveyed (1996 public attitude survey) believed that the Don was “important and necessary” to their community. Twenty-seven percent knew what a watershed was, but only a third of those people knew that they lived in the Don watershed. Sixty-one percent knew stormwater goes into the Don but 53 percent incorrectly believed that industry was the river’s main source of pollution. Several hundred people throughout the watershed acted as volunteers to help the Don’s regeneration.

2000 Target:

- 1) Maintain current levels of public support.
- 2) Three thousand people will be active volunteers for the Don — committed to its regeneration through actions and/or donations.

Some Responses from 2000 Angus Reid Survey *“Can you tell me what a watershed is?”*

“A shed full of water”

*“Drainage for a particular
land area”*

*“It sheds the water down
off the home (roof)”*

What is a watershed, really?

A watershed is the land area from which water drains to a particular surface water body.

WHAT'S THE TREND?

in 1997



in 2000



Voluntarism up; people still believe industry is the primary polluter of the Don, not them; strong support continues.

*Community based action helped
transform the Don Valley Brick
Yard into a living, breathing
natural park.*



Get involved at an early age!

Where we are: (2000)

A June 2000 Angus Reid Public Awareness Survey showed that, as in 1996, support for the River's protection and restoration is very high. The majority of those surveyed (91 percent) believe that the Don River is important to their community. However, as in 1996, most people have limited understanding of watersheds and their problems. Only 23 percent of those surveyed could correctly define a watershed and only 44 percent of those people were able to identify that they lived in the Don watershed. The percentage of those surveyed who believe, incorrectly, that "most of the pollution in the Don River is industrial pollution", is statistically unchanged from 1996 (53 percent with this statement in 1996; 55 percent agreed in 2000). Perhaps as a consequence of this misperception, 57 percent of respondents identified industry as "completely responsible" for cleaning up the river while only 29 percent were willing to hold individuals completely responsible. Those people reporting regular visits to the valley lands are more likely to have donated time or money to local environmental causes.

According to the 2000 Survey, local residents don't know where to volunteer within their community. When asked what they consider to be the major barriers (besides being too busy) that prevent them from getting involved with local organizations, forty percent of respondents cited "lack of awareness/knowledge." Over the past three years, however, there have been at least 9,000* volunteers working toward Don watershed regeneration, equalling the 2000 target of 3,000 per year set in 1997.

Consistent with the themes of the 1996 study, seventy-eight percent of people surveyed indicated that the Don was "important to their personal quality of life." As well, there continues to be strong support for the notion of adding a small fee to the water bill to

clean up the watershed, with 85 percent of respondents agreeing with this approach. As well, 64 percent of respondents indicated that they would be either "very likely" or "somewhat likely" to donate money to an organization to clean up the Don Watershed.

** The number of volunteers reported is the cumulative total of volunteers attending events or other regeneration efforts. As such, it may count one individual numerous times, if he/she attended more than one event.*

Where we want to be:

By 2003:

- 1) An increasing percentage of people will understand the connection between their homes and/or workplaces and the storm drains and the River. More people will understand that stormwater is the primary polluter in the Don. People will become more aware of the impact of their actions on the environment.
- 2) There will be a renewed outreach effort to educate the public on stormwater through expansion or modification of existing programs, such as Watershed on Wheels, Yellow Fish Road, Not Grate for the Lake, and/or the development and funding of new programs (specifically, programs combining education and action such as volunteer monitoring programs).
- 3) More people will have taken the step from awareness to action by altering their behaviour and getting involved with efforts to improve the local environment; twelve thousand people (4,000 per year) will be active volunteers for the Don — and committed to its regeneration through actions and/or donations.

- 4) There will be funding for coordination of volunteers across all environmental agencies and groups, making information on volunteer opportunities easier to obtain.

By 2010:

- 1) Eighty percent of watershed residents will know that stormwater goes directly into the Don and is its major source of pollution.
- 2) Fifteen thousand people (5,000 per year) will be active volunteers for the Don.

By 2030:

Ninety-five percent of watershed residents will be knowledgeable about the Don and will be taking positive actions to care for it.

How to get there:

Don municipalities, the Federal and Provincial governments and the Toronto and Region Conservation Authority must work together to systematically address the level of public understanding, starting with the most basic awareness messages. For those people already aware of watershed issues, a central, accessible and easy-to-find Don River Volunteer Information Network should be established to help bridge the gap between awareness and action. This network could be as simple as a web site listing of all the groups, contact numbers and the types of volunteer work they perform. Funding should be made available to coordinate this effort and to assist in recruiting, training and deploying volunteer effort.



INDICATOR 12: CLASSROOM EDUCATION

Are our children learning about the local environment?

Where we were: (1997)

Nine percent of elementary schools responding to the 1996 survey had classes visiting the Don. In the upper grades, exposure to watershed curriculum varied from 5 percent to 90 percent, depending on the Board of Education. Currently, Provincial and/or Board level curriculum guidelines for watershed studies are in place. The Don Council's grade 7 teacher's kit, *Don Watershed Education Program*, is in the hands of 50 teachers from 20 schools representing all the Boards in the watershed, although it is not yet known how many teachers are using it.

2000 Targets:

- 1) Twelve percent of elementary school students will have classes visiting the Don.
- 2) Establish a baseline for junior high and high school students who will take watershed studies for at least one semester during their school career.

WHAT'S THE TREND?

in 1997



in 2000



Strong concerns over
commitment to
environmental education.



✎ The Kortright Centre for Conservation is a popular destination for the Don watershed's many school groups.

✎ Watershed on Wheels outreach program at the Toronto French School.

Where we are: (2000)

The prominence of the environment in education was substantially altered through changes to the provincial curriculum in 1998. While significant components of environmental education are contained in the new curriculum, the new guidelines downplay both the importance of the local environment and the need to cultivate close connections to our ecological systems. Under the new guidelines, environmental importance is to be presented in largely economic terms. There are, however, significant opportunities for the watershed message to be presented to students in Grades 7 and 8.

Only 14 of 314 schools responded to a 2000 survey of their environmental education practices. A number of Principals who were contacted indicated that while they were interested in environmental issues, the sheer number of changes in the educational system (new curriculum, decreased staffing, Board amalgamations, financial restructuring) had left them with little time to answer the many surveys they receive. Despite these challenges, the number of Don schools paying visits to Toronto and Region Conservation's (TRCA) conservation field centres (residential) or Kortright Centre for Conservation (day visits) has remained high. Twenty-two percent of Don schools (86 schools) sent classes to the field centres between 1997 and 1999 and 53 percent of Don schools (205 schools) sent classes to Kortright. The TRCA's Yellow Fish Road Program engaged 90 groups in painting yellow fish beside storm drains to signify their connection to the river. The Watershed on Wheels Program, administered by TRCA, visited 91 classes over the three years. In addition, Board-operated outdoor education field centres, including the Forest Valley Outdoor Education Centre in the Don, continue to educate students in a field setting. Numerous other fine programs delivered by municipalities and Non-Government Organizations (NGOs) helped connect students to the watershed and to the local environment.



Our goal for 2003: The Don Valley Brick Works Park will be promoted as an education centre.

Where we want to be:

By 2003:

- 1) All School Boards will have a target for mandatory outdoor residential learning experience (e.g., City of Toronto Board of Education model).
- 2) TRCA (and other) outreach programs will be targeted to meet the requirements of the new curriculum, particularly for grades 7 and 8.
- 3) The Don Valley Brick Works Park will be promoted as an education centre.
- 4) Use of all outdoor education centres will increase and resources will be found to ensure that these educational opportunities continue.
- 5) Governments will recognize both the value of environmental education and the intrinsic importance of "hands-on", outdoor education experiences.

By 2010:

- 1) Sixty percent of elementary schools will have classes visiting the Don.
- 2) One hundred percent of junior high and high school students will take watershed studies for at least one semester during their school career.

By 2030:

All students will study the Don watershed as an integral part of their school life.

How to get there:

Curriculum changes have made it even more important to find and directly link environmental curriculum strands to outdoor environmental education opportunities. Groups, including the TRCA and the Don Council, should provide and promote the existence of materials for both in-class and outdoor learning opportunities. Governments should recognize the importance of hands-on, local environmental education and find ways to support both the inclusion of ecological studies in the curriculum and the operation of existing field/outdoor education centres. Partnerships should be established between school boards, environmental groups and agencies to lobby governments for funding of outdoor environmental education.



INDICATOR 13: RESPONSIBLE

USE AND ENJOYMENT

How many people value the Don as a place for recreational use?

Where we were: (1997)

Forty-three percent of survey respondents had visited the Don at least once in the previous year, which means that approximately 344,000 residents were actively using the Don. Within this group, walking was the most popular activity (38 percent walked more than ten times in the previous year) and cycling was second (17 percent cycled at least ten times). Issues of conflicting or irresponsible uses of the Don's resources were arising. All Don municipalities had identified important cultural heritage sites in the watershed, which were being included in the Don Council's heritage sites inventory report, *The Don Millennia*, and on Community-Based Maps of trails.

2000 Targets:

- 1) Complete 50 percent of Don Council's Community-Based Maps of trails.
- 2) Improve and increase year-round access points.
- 3) Local governments and Local Architectural Conservation Advisory Committee (LACACs) should develop preservation master plans for their important cultural heritage sites, along with property owners and partners.
- 4) Local governments should identify conflicting and problem uses in the Don and develop management plans.

The Don's trails are used by walkers, runners, skaters and more.

Damage to sensitive vegetation can be minimized by staying on marked trails.

WHAT'S THE TREND?

in 1997



in 2000



Responsible use issues not yet addressed.



Where we are: (2000)

As a whole, the percentage of respondents to the June 2000 Angus Reid Public Awareness Survey indicating that they had visited the Don in the past year was similar to 1996 (43 percent), meaning that approximately 344,000 residents continue to actively use the Don. In the Lower Don watershed (the area south of Eglinton Avenue), 54 percent of those surveyed reported they had visited the River. Once again, walking and cycling were among the most popular activities. Interestingly, bird-watching/nature appreciation, a combined activity that wasn't prompted for during the 1996 survey, was cited as the second most popular use of the Don in 2000. Issues of conflicting uses, which include off-trail mountain biking, dogs off leashes, the harvesting of plants, and the release of non-native pet species into natural habitats, continue to persist though some municipalities have begun to address the concerns. To date, only a few Management Plans have been completed for small areas.

A full 93 percent of dog owners surveyed indicated that they "stoop-'n-scoop" in public areas, thus helping the Don's water quality. However, of those that do, only 85 percent indicated that they "always" stoop-and-scoop. In addition, three in ten dog owners let their dogs off their leashes in public areas other than in designated dog areas. Pet access to natural areas can result in trampled vegetation, disruptions to wildlife and degeneration of streambanks.

The Don Council did not achieve its target of completing six of the 12 planned Community-Based Maps of trails as the initiative was too resource-intensive to pursue. The City of Toronto, however, has produced an excellent cycling map showing trails and the Toronto Green Tourism Association has published a unique *Green Tourism Map of Toronto* containing elements of the

Don watershed. The City of Toronto developed a series of self-guided Discovery Walks in the Don, which are augmented by way-finding and interpretive signs and brochures. As well, the Town of Richmond Hill produced the *Richmond Hill Cycling and Trails Map*, the Town of Markham has published *Markham Pathways — They're All Yours*, and the Toronto Health Partnership is working on a series of Walking Route Maps for the West Don River, East Don River, German Mills Creek, Duncan Creek and part of Newtonbrook Creek.

As a consequence of many developments, including municipal amalgamations and LACAC restructuring, site specific Master Plans for important cultural heritage sites have not been completed as targeted. However, the volunteer heritage community within the City of Toronto (including the Community LACAC volunteer members) has coalesced through an effective coordinating body of some 35 organizations, known as the Toronto Heritage Association (THA). The Don Valley Brick Works Park was opened in 1997 and the culturally and environmentally significant Baker Sugar Bush was publicly purchased in 1999.

Where we want to be:

By 2003:

- 1) Local governments should identify conflicting and problem uses in the Don and develop management plans identifying locations for these uses.
- 2) A specific media and educational campaign should be launched to address issues surrounding human and pet impacts in natural areas.
- 3) Way-finding signage should be enhanced throughout the Don public lands system and should include messages about sustainable use of

these public lands (e.g., dog walking, plant harvesting, mountain biking, etc.).

- 4) Intensive discussion of cultural heritage issues within each of the watershed municipalities, involving LACAC volunteers and staff, Planning Departments, and the THA, will have taken place and site-specific heritage Master Plans will be under development using the criteria established.

By 2010:

Complete a continuous trail network, avoiding sensitive natural areas, from the lakefront to the headwaters, with way-finding and interpretive signage incorporating natural and cultural features.

By 2030:

Expand the marked trail network, avoiding sensitive natural areas, to include the Don's smaller creeks and streams, and to link the Don to the GTA's other watersheds.

How to get there:

Municipalities should develop management plans to specifically address and identify appropriate locations for high impact activities (e.g., dog walking, mountain biking). Management Plans and efforts to improve signage should be undertaken in conjunction with a media/education campaign, alerting the public to the destruction caused by improper use of natural lands. There should be a renewed multi-stakeholder effort toward the identification and protection of cultural heritage sites.





Protect What is Healthy

📍 *Chester Springs Marsh, located south of the Bloor Street Viaduct, is a wonderful public green place that humans — and wildlife — enjoy!*

Public Ownership and Protection

The best way to protect our natural places is for public agencies, Conservation Authorities, other conservation groups such as The Nature Conservancy, and local municipalities to own them outright. Natural areas come into public ownership in several ways: through direct purchase; as gifts; as the result of being ‘set aside’; and through the development process, in which valleys and some tableland features such as woodlands are given to either municipalities or Toronto and Region Conservation.

While Conservation Authorities across Ontario rely on Valley and Stream Corridor Management programs to protect green places, municipalities use a wide range of land planning designations and by-laws to protect natural areas. Of course, each municipality has different by-laws and regulations defining boundaries and areas to be conserved, making greenspace protection and use inconsistent across the watershed.

As land prices escalate, collaboration between public agencies for green space acquisition becomes critical. The recent successful collaboration of four agencies — the Province of Ontario, City of Vaughan, The Regional Municipality of York and Toronto and Region Conservation — saved the Baker Sugar Bush in the upper Don from approaching development. The Baker Sugar Bush is a key habitat link for many birds and animals, and is listed by the Federation of Ontario Naturalists (FON) as one of southern Ontario’s 20 best remaining examples of old growth forest.

Despite these creative partnerships, there is simply not enough public money available to save all the land that needs to be saved. And protective designations, such as the Province’s Areas of Natural and Scientific Interest (ANSIs), Provincially Significant Wetlands, and Environmentally Significant Areas (ESAs), can be and are frequently challenged by landowners who disagree with their classifications.

Easements (specific rights acquired directly from the landowner) and covenants on title (restrictions placed on certain uses of the land) are positive steps but they cannot always be enforced. Good stewardship by those who own ecologically sensitive lands is still critical to the long-term protection of our green places.

Clearly, there is no single or easy solution to greenspace protection.



Let's protect what we already have.

Protected Natural Areas

At this point, it would be easy to get discouraged. There are so many needs that it's hard to know where to start.

We went back to *Forty Steps to a New Don*, our original 'blueprint' to regenerate the Don, for some guidance and, in all honesty, a little bit of clarity. We immediately found what we were looking for, and it all seems so incredibly simple — we cannot move forward without first protecting what we have today.

"Protect what is healthy" is the first of the three guiding principles of *Forty Steps to a New Don*. After all, it doesn't make much sense to create more natural areas if those that already exist are not protected. We need only to look as far as the public outcry to 'save the Oak Ridges Moraine' to know our thinking is correct. Forty-seven percent of the respondents to the June 2000 Angus Reid Public Awareness Survey suggested they were either likely or somewhat likely to "write a letter to government demanding the regeneration and protection of the Don Watershed." All we can say is, "Wow!"

Just over 15 percent of the remaining natural areas in the Don watershed are owned and protected by the Toronto and Region Conservation Authority (TRCA). Local municipalities also own natural areas and use their Official Plans to assign protective designations to some privately owned natural areas.

But protection is a lot easier said than done. Development is proceeding in the headwaters of the Don, and many of the watershed's natural areas are now vulnerable.

The best protected areas are the streams themselves and their floodplains, which are formally protected under Provincial policies that are implemented through the TRCA's Valley and Stream Management Program and other local regulations. What does that mean? Wide ribbons of greenspace in the lower and middle Don are protected, but only thin threads of green are safeguarded in the headwaters. Toronto and Region Conservation is currently working to expand its valley and stream corridor mapping so the precious coldwater streams in the headwaters of the Don (and other local watersheds) will be regulated as well as those wide ribbons of green in the lower Don.



INDICATOR 14: PROTECTED NATURAL AREAS

Are the Don's remaining natural areas being protected?

Where we were: (1997)

Six hundred and forty-five hectares, or 15 percent of the watershed's natural areas (woodlands, wetlands and meadows) were in public ownership of the Toronto and Region Conservation Authority (TRCA). In addition, there were other lands (public and private) that were under protective designation. Very little tableland was publicly owned and/or designated for conservation. In the headwater areas, the remaining natural areas, almost all of which sat on tableland, were extremely vulnerable to development.

2000 Targets:

- 1) Identify specific areas for protection in order to meet targets in Indicators 5, 6, 7 and 8.
- 2) Protect all vulnerable and significant natural areas.
- 3) Establish targets for the protection of meadows and riparian habitat.

WHAT'S THE TREND?

in 1997



in 2000



No appreciable policy changes to protect areas; the lack of funding to acquire lands remains an issue.

The Oak Ridges Moraine

The Oak Ridges Moraine is a 160-km long ridge of beautiful rolling hills, kettle lakes and gentle streams that stores water deep underground and feeds our region's many waterways, including the Don. Portions of the moraine are under serious threat of development.

Protection of the Moraine — its features, functions and linkages — is important to the water quality, biodiversity and baseflow of the Don.

The regional governments of Durham, York and Peel, and Toronto and Region Conservation have identified four steps to protect this delicate masterpiece of nature:

1. Identify the all-important green corridor.
2. Protect the corridor.
3. Manage and restore the corridor.
4. Enhance public education and access.

The typical landscape of the Oak Ridges Moraine. ➤



Where we are: (2000)

Development is proceeding in the headwaters of the Don, and applications have been received for development both within and adjacent to some of the most significant habitats remaining in the watershed. Public interest in protecting these areas is high, as witnessed by the recent protests over development on the Oak Ridges Moraine in Richmond Hill. At the very time when the health of the Moraine is most at risk, there is still a lack of funding available for public land acquisition. Protection measures implemented through the planning process do not always consider specific watershed issues; decisions are often made which are based on GTA bioregional criteria which may or may not give significance to the remaining natural areas in highly urbanized watersheds like the Don. With the recent public acquisition of the 31 hectare Baker Sugar Bush in Vaughan, the amount of TRCA-owned natural area in the Don has increased to 676 hectares. The Baker Sugar Bush acquisition is significant for many natural and cultural heritage reasons. It is: one of the few remaining continuously-operated sugar bushes; designated as a Provincial Area of Natural and Scientific Interest (ANSI) and a Regional Environmentally Significant Area (ESA); and its acquisition is the largest public purchase of tableland woodland in the history of the Don watershed.

The City of Toronto's efforts toward the development of a new and visionary Official Plan and the work accomplished by its Environmental Task Force represent efforts with the potential to foster true achievement of sustainable urban living and planning ideals. The Greening of York Region initiative has similar objectives.



Aerial Forest Cover, Environmentally Sensitive Area (ESA) 73 in Vaughan.

Where we want to be:

By 2003:

- 1) The Natural Heritage Strategy should be completed and adopted, identifying all areas for protection, including linkages.
- 2) Criteria for planners to properly evaluate the Don's unique natural area requirements will be developed.
- 3) Municipalities in the Don will identify and protect natural features under appropriate designations and supportive policies in their Official Plans.

By 2010:

All natural areas (woodlands, wetlands, meadows, valleylands and stream corridors) will be protected, including newly created natural areas.

By 2030:

Maintain high levels of protection.

How to get there:

It must be recognized that the more than 80 percent urbanized Don watershed has unique needs and that regional criteria for assessing significance cannot apply to such a degraded ecosystem. Every woodland in the Don is potentially significant and this must be communicated and enforced through the planning process. The Oak Ridges Moraine studies must be completed and protective measures must be implemented. The Province of Ontario must provide leadership and funding for the implementation of an Oak Ridges Moraine Strategy which would support the municipalities in achieving the intent of the Planning Act to protect ecological function. Additional tableland habitats must be acquired by public bodies. The significance of natural areas must be assessed through inventory and monitoring, and communicated to municipalities and the public to build the support needed for retention/protection. The Don Watershed Natural Heritage Strategy must be completed in order to identify all areas to be protected and enhanced.





Regenerate What is Degraded

📍 Don Valley Brick Works Park

Regenerate What is Degraded

No, it doesn't make much sense to create more natural areas if those that already exist are not protected. But it also doesn't make sense to walk away from the areas that are already degraded. We know they won't fix themselves — nature is good but without significant changes to many of the stressors you've already read about, nature simply cannot keep up.

What is a regeneration project?

Regeneration projects are the in-the-ground, shovel and 'elbow grease' projects that help heal local, natural systems. They generally aim at one or more of four important goals: creation of aquatic habitat, creation of terrestrial habitat, improvement of water quality or control of water quantity.

To reach these goals, agencies, communities and municipalities collaborate on projects, including the: creation of wetlands; detention and treatment of stormwater and combined sewer overflows (CSOs); removal of in-stream barriers; schoolyard and park naturalization; planting of trees, wildflowers and other plants; and the enhancement of habitats in many other ways.

What is being done?

"Regenerate what is degraded" is the second of the three guiding principles in *Forty Steps to a New Don*. Between January 1997 and December 1999, some 130 regeneration

projects were undertaken, making a total of 230 projects since *Forty Steps* was published.

These 130 projects actually exceed the target of 100 set for 2000, but assessment of the success of this work is difficult. The Don needs a significant number of large-scale, multi-functional projects like the Keffer Marsh project in Vaughan to affect real change in the health of the watershed. The overwhelming majority of the 130 projects are small-scale, terrestrial plantings. Major flow and stormwater projects are needed to successfully complement the smaller, community-based efforts.

Regeneration is an ambitious program, and one that requires large volumes of both patience and money. The patience part is easy; the money part is not.

Two things give us cause to believe that a greater focus, both intellectually and economically, will soon be cast upon the Don. The recently released "Fung Report", titled *Gateway to the New Canada, Our Toronto Waterfront*, not only recognizes the undeniable integration between economic, social and environmental revitalization, it also proposes the naturalization of the mouth of the Don. Good news indeed!

The June 2000 Angus Reid Public Awareness Survey also yields promising news. Some 85 percent of respondents to the survey support efforts to clean up the Don watershed, even if it means a small fee added to their water bill to cover some of the clean-up costs.



🌿 Keffer Marsh in Vaughan.



🌿 Many hands makes light work.



🌿 Before,
Lawrence Avenue weir in
the East Don.



After, 🌿
East Don at Lawrence Avenue,
with Rocky Ramp installed for
fish passage.



INDICATOR 15: REGENERATION PROJECTS

How much in-ground work is being done to improve the Don's water quality, flows, and terrestrial and aquatic habitats?

Where we were: (1997)

Almost 100 projects had been undertaken throughout the watershed between the publication of *Forty Steps to a New Don* in 1994 and the end of 1996. Many of these projects were multi-purpose projects that improved stormwater controls or improved water quality in other ways, as well as enhanced terrestrial and aquatic habitats. Ninety-eight percent of residents supported the watershed's regeneration, according to the 1996 Angus Reid survey.

2000 Targets:

Double the number of regeneration projects to at least 200, concentrating especially on the creation and enhancement of the Don's woodlands, wetlands, meadows and riparian habitat.

WHAT'S THE TREND?

in 1997



in 2000



The ten year movement continues; 130 new projects and over 9000 volunteers.



🌿 Planting at Milne Hollow (project led by City of Toronto).

🌿 Terraview-Willowfield Park located on the headwaters of the Taylor/Massey Creek (project led by the City of Toronto).



Where we are: (2000)

An additional 130 recorded regeneration projects were undertaken between January 1997 and the end of 1999, making a total of 230 projects since *Forty Steps* was published. The majority of these projects are the result of progressive partnerships between municipalities, agencies and citizens groups. While a number of large-scale multi-functional projects have been undertaken, including the Terraview, Willowfield Park project on the headwaters of Taylor/Massey Creek and the Keffer Marsh project on the West Don in Vaughan, the vast majority of the 130 projects are small-scale, terrestrial plantings. These small-scale projects are vitally important but they alone cannot achieve the restoration of the watershed because they do not adequately address the fundamental issues pertaining to degraded water quality and destructive flows. While funding mechanisms for small-scale, community-based projects exist, there are no permanent programs providing dedicated funding for large-scale ecosystem/green infrastructure regeneration projects.

The Don Valley Brick Works Park, the largest regeneration project to date and one of the few multi-functional undertakings, was opened in the fall of 1997.

Where we want to be:

By 2003:

- 1) One hundred new projects will be initiated.
- 2) Monitoring and evaluation programs should be implemented.
- 3) All stormwater targets must be met (see Indicator 4).
- 4) A revised set of Community-Based Don watershed regeneration concept sites will be prepared (based in part on the completed Natural Heritage Strategy).

By 2010:

- 1) Major capital regeneration projects in the Don's municipalities should be completed or in progress, including:

City of Toronto: eliminate combined-sewer overflows (CSO); upgrade stormwater system, including downspout disconnection; regenerate the mouth of the Don; complete the G. Ross Lord Dam concept site; complete and implement a Taylor/Massey Creek watershed study.

Richmond Hill: upgrade stormwater system, including upgrading stormwater quantity ponds to address quality and implementing downspout disconnection; implement channel improvements along German Mills Creek.

Markham: complete Settler's Park and Pomona Park concept sites; develop a design to expand the Pomona Concept site and implement it; upgrade the stormwater system, including downspout disconnection.

Vaughan: complete Bartley Smith Greenway and stormwater pond upgrades.

- 2) Community groups will continue to initiate and support both large and small-scale regeneration projects.

By 2030:

Major CSO and stormwater projects will be completed.

How to get there:

Continuing on a major theme of this report card, large-scale projects addressing water, nature and community are necessary to ensure the viability of these community-based smaller efforts. Community groups and interested individuals should act to advocate for funding for large-scale environmental projects for the betterment of the watershed and its communities. The recently released "Fung Report", titled *Gateway to the New Canada, Our Toronto Waterfront*,

contains recommendations for the redevelopment of Toronto's waterfront in a sustainable and holistic manner, recognizing and paying heed to the undeniable integration between economic, social and environmental revitalization. Most importantly for the Don, the *Fung Report* proposes the naturalization of the river's mouth, an objective that must be pursued. Municipalities should include environmental enhancement in all capital projects, considering all opportunities to address water quality and quantity concerns through a hierarchy of measures including lot-level controls, conveyance and/or end-of-pipe measures. All levels of government should view regeneration projects as investments in natural infrastructure and provide the funding required to design and implement them. The Don's position in the Toronto Area of Concern should make it a priority area for Federal and Provincial funding programs such as the Great Lakes 2000 Clean-Up Fund. Local projects can be supported through partnerships among business, government and community groups. It is imperative that regeneration efforts on the Don move toward a more integrative approach in order to ensure the viability of individual projects and the maximization of the watershed's ecological potential. The Natural Heritage Strategy is one major tool for facilitating this type of approach to regeneration. Also, larger-scale, integrated regeneration plans incorporating tableland management actions with valley enhancement are required. These integrated "concept sites" would include any or all facets of regeneration: improvements in access, stormwater ponds, fish habitat enhancements, enhanced riparian corridors, protection and management of woodlands, etc. Such an approach would also involve the public in a more meaningful way, ensuring that regeneration actions are driven primarily by the vision and passion of community members.





Take Responsibility for the Don

🔗 Schools and community groups joined forces to regenerate Rupert's Pond in Vaughan.

Stewardship

Personal responsibility — it's probably the hardest thing for any human to do in any part of their life. But if we don't all stand up and admit that we are part of the problem AND part of the solution, our collective progress toward a cleaner, healthier Don is virtually impossible.

The June 2000 Angus Reid Public Awareness Survey suggests that Don watershed residents have a high degree of environmental consciousness and stewardship. Fifty-eight percent of residents interviewed have composted garden waste, 49 percent have reduced the amount of sidewalk salt used over the last three years, and 47 percent have reduced the amount of herbicides and pesticides on their properties in that same time period.

Once again, the Don is an inspiration to those who actually take the time to visit it. The June 2000 Angus Reid Public Awareness Survey compared respondents who have not visited the Don in the previous 12 months to those who had, and they discovered some interesting trends.

Those who had visited the Don in the last year were more likely to compost kitchen waste (60 percent visitors vs. 42 percent non-visitors), compost garden waste (66 percent visitors vs. 52 percent non-visitors), take their old paint and oil to a disposal depot (37 percent visitors vs. 19 percent non-visitors) and get involved in a weekend tree planting or creek cleanup (69 percent visitors vs. 46 percent non-visitors). Let's get everyone out to the Don!

The Don's dog owners seem particularly responsible. Eight in ten (80 percent) of dog owners who participated in the June

2000 Angus Reid Public Awareness Survey say they "always" stoop-and-scoop.

These results are impressive, but only 57 percent of survey respondents could think of any specific lifestyle change they could make to contribute to the clean-up efforts on the Don. Of those who could think of something, 24 percent mentioned "picking up garbage or litter," 22 percent mentioned "volunteering/organizing a clean up program," 12 percent mentioned "recycling" and 11 percent mentioned "becoming more informed/needling more information."

Business and Institutional Stewardship

Responsibility doesn't end with individuals. Commercial enterprises and institutions must also stand up and do their part to help heal the local environment.

Businesses can do the same wonderful eco-actions at work that they do at home, only on a larger scale. Improvements in water quality and wildlife habitats can be achieved through landscaping, treatment of stormwater on site, and alternatives to winter salt and lawn and garden chemicals. And like individual watershed residents, businesses can support the regeneration of the Don through improved practices, financial donations, participation in clean-up events, and more.

Did we achieve the stewardship targets we set out for businesses in the first Don report card?

Let's start by saying that the businesses and institutions who are pitching in are doing so in a big way. Here are just a few examples of the private partners committed to the well-being of the Don.

Quebecor continues to plant trees in the Don's headwaters every year. Friends of the Environment (Canada Trust) continues to provide a wide range of financial grants to projects and organizations across the Don. And Unilever Canada has expanded its annual support of Don restoration actions to become Toronto and Region Conservation's first-ever Living City Don River Partner.

Since 1997, we had hoped to increase the number of signatories to the Don Accord from 19 to 100, but sadly, there has been no significant progress toward that goal. We hope that by 2003, we will have three major business stewardship pilot projects up and running. These projects will be living, breathing inspirations that showcase the effectiveness of public and private sector partnerships.

Municipal Stewardship

In our first report card, we discovered that most municipalities in the Don do have watershed-friendly practices and policies in place. This was good news indeed, but the application of these practices was inconsistent across the watershed's municipalities.

Today, consistency across municipalities and regions is still uneven, but we have moved closer to our "greening" targets. Since 1997, York Region launched their own report card and introduced two major environmental initiatives: Greening of York Region Initiative and Water for Tomorrow program. The City of Toronto's extensive list of environmental progress includes the Wet Weather Flow Study, Tree Advocacy Program, Fung Report for sustainable redevelopment on the Waterfront, and more.

Richmond Hill and Markham also continue their advance toward more sustainable practices. Richmond Hill has reduced their use of road salt and sand by 25 percent and Markham has instituted a stricter lawn watering by-law. We hope that the day will soon come when every municipality in the watershed — and across the Greater Toronto Area — will have a strong and consistent Environmental Best Management Practices program in place.

After all, many hands make light work.



✎ Official Opening of the Don Valley Brick Works Park, October 19, 1997. Left to right: Alan Tonks, Chairman, The Municipality of Metropolitan Toronto; Michael Prue, Mayor, Borough of East York; Dick O'Brien, Chair, The Metropolitan Toronto and Region Conservation Authority; Jeffrey Smyth, Representing the Friends of the Valley; Allan Beattie, Chair, Don Valley Bricks Work Campaign Committee; Patrick Wilson, Chair, The Eaton Foundation; Bill McLean, President, The Conservation Foundation of Greater Toronto.

Unilever Canada Don River Partner

On October 30, 2000, Unilever Canada will announce its 3-year funding commitment to the Toronto and Region Conservation Authority and the Conservation Foundation's Living City Environmental Vision for Toronto and region. Unilever will become the first-ever Don River Partner. Unilever Canada's main manufacturing plant has been located on the lower Don River for more than a century, and the company has long taken responsibility to help in the River's preservation and restoration.

Unilever's focus on the Don supports their long-term, global strategy on clean water stewardship, and it complements the work Unilever companies around the world are doing to ensure sustainability, access and protection of fresh water resources. Their commitment to the Don River mirrors their efforts in the Mersey Basin in England and the Pasig River in the Philippines.

Ruth Richardson, Manager of Environmental and Corporate Affairs for Unilever Canada, on becoming the Don River Partner:

"This new sort of partnership is exciting for Unilever Canada. We have long benefited from our participation with both Toronto and Region Conservation and the Task Force to Bring Back the Don. Our new role as Don River Partner will draw upon the success of our past efforts in the lower Don and elevate them to the entire watershed."

Through their role as Don River Partner, Unilever Canada will help Toronto and Region Conservation:

- continue to improve the health and proliferation of habitat and species in the Don
- expand access and use of the watershed by all citizens, especially children
- increase use of the Don as an outdoor classroom and educational resource
- create a renewed and inspired connection between the Don River and Lake Ontario
- increase opportunities for educational pieces
- increase the sense of community, both publicly and institutionally, in the watershed
- provide leadership and inspiration to other corporations to become River Partners in other watersheds across the Greater Toronto Area

The Don Watershed Regeneration Council commends Unilever Canada for their stewardship and for their commitment to a healthy Don.



INDICATOR 16: STEWARDSHIP

PERSONAL

Are Don residents doing their part for the environment?

Where we were: (1997)

Although Don residents showed a high degree of environmental stewardship in general, only 35 percent had ideas on how they could help the Don specifically. At the same time, 36 percent of residents who lived in a house used pesticides or herbicides on their lawns, and only 21 percent had disconnected their downspouts from the sewers. No information existed on ravine stewardship in the Don.

2000 Target:

Forty percent of residents will know how they can help the Don, and will be doing at least one positive thing.



⌘ The “fruits” of a hard day’s clean-up of the Don.

Some Responses from 2000 Angus Reid Survey

“Can you think of any changes you could make in your activities or behaviours which would contribute to the efforts to clean up the Don?”

“I cannot think of anything”

“nope”

“no”

WHAT'S THE TREND?

in 1997



in 2000



Little change in the action of individuals; no reduction in pesticide/herbicide use.

Climate Change and the Don Report Card

The future goals outlined in the Don Report Card may be impacted significantly by the onset of climate change. The key facts are, as follows:

- even if all nations meet the emission reduction targets of the Kyoto protocol, the CO₂ concentrations in the planet’s atmosphere will reach a level that is double the average for the last 10,000 years around 2030, with the doubling having taken place since the start of the industrial revolution; and,
- as we move toward this unavoidable doubling, the onset of climate change will impact most aspects of watershed management, including: the temperature, quality and quantity of surface waters; the health of wetlands, fisheries and riparian edges; natural heritage, agricultural, greenspace and urban canopy management; and land use planning, water-taking permits, stormwater management systems, the rate of ground water re-charge and erosion damage from extreme weather.

As a result, all long term goals for the regeneration of the Don may need to be revised to reflect the changing climatic realities. Extensive work is required to integrate climate change into existing watershed management strategies, develop local climate change scenarios and identify adaptation strategies for a changed future.

Where we are: (2000)

Significantly more people than in 1996 survey now have ideas on how they can help the Don River; however, 43 percent of people polled couldn't think of anything they could do. Of the 57 percent that could think of something they could do, most cited picking up garbage or volunteering. Only six percent offered reducing pesticides and fewer suggested naturalizing their properties to provide habitat and retain water. This suggests a limited understanding of the stormwater problem that connects our lot-level actions to the health of the river. Thirty-nine percent of house dwellers* reported using pesticides and/or herbicides on their properties in the last year. Of those residents living in houses, forty-one percent reported that their downspout is not connected to the storm sewer system. Of those people, 23 percent reported that the downspout had been disconnected by either themselves or someone else in the household.

The June 2000 Angus Reid Public Awareness Survey also indicates that people who visit the watershed's valleylands for walking, cycling or some other activity are more likely to donate money or time to environmental organizations.

* House defined as detached, semi-detached or townhouse dwelling.



☞ Reducing the number and volume of household chemicals used and safe disposal of unused portions are excellent ways to reduce personal impact on the environment.

Where we want to be:

By 2003:

- 1) Seventy percent of people will be able to identify one thing they can do to help the Don and more than 25 percent of people will cite disconnection of downspouts, reduced use of pesticides and property naturalization as actions they can take (on an open ended question).
- 2) Governments, agencies and groups will be more effectively communicating the need for sustainable living at the individual level (see Indicator 11).

By 2010:

- 1) Ninety percent of residents will have eliminated pesticide use on their lawns.
- 2) Fifty percent of all downspouts currently connected to the storm sewer system will have been disconnected (where feasible).

By 2030:

Personal stewardship of the watershed will be an integral part of daily life.

How to get there:

First and foremost, public awareness targets and directions must be reached. Only when people are aware can they be expected to act. Education efforts must first break down existing misconceptions about the source of the Don's pollution (see Indicator 11) and provide information pertaining to actions we can all take to help the River. A "Property Health Care" message should be adopted as the main theme for outreach and education efforts. People should be made aware of the integral connection between their lifestyles, their health, their properties and the River. The awareness messages should coincide with efforts to have people take "one simple action" to personally help the River. The action promoted should be easy to implement and should effectively communicate the link between ourselves, our lands and the Don River. Owners of properties adjacent to the river should be approached first.



☞ It only takes a minute to return your cart to its proper spot!



INDICATOR 17: STEWARDSHIP

BUSINESS AND INSTITUTIONAL

Are businesses doing their part to protect and restore the Don?

Where we were: (1997)

There was proven leadership and interest from some watershed businesses and institutions in the Don's regeneration, but there were no broad survey data about what was being done. Nineteen businesses had signed the Don Accord as of December, 1996.

2000 Targets:

- 1) Collect baseline data on business stewardship and best management practices, and establish targets for 2010 and 2030.
- 2) At least 100 businesses will sign the Don Accord.

The June 2000 Angus Reid Public Awareness Survey found that 33 percent of those people employed outside of their homes are aware of corporate environmental policies or goals, while 18 percent are aware of financial contributions their employer has made to local environmental efforts.

WHAT'S THE TREND?

in 1997



in 2000



Businesses have started to address the environment in their operations but are lagging behind in the area of watershed-friendly land management.

A Sample of Business and Institutional Involvement in the Environment

In the Don

Aventis Pasteur	Grounds naturalization; plantings in G. Ross Lord Park.
Canada Trust	Many grants to organizations across the Don.
Friends of the Environment	
Domtar	Support to Friends of the Don East.
Langstaff EcoPark	Local businesses have contributed over \$100,000 in cash and in-kind support to EcoPark since 1995. Quebecor employees have planted trees for eight years, resulting in the creation of the Vaughan Chamber of Commerce Corporate Tree Planting Challenge.
Rotary Clubs	Supports community plantings.
Unilever Canada	Provides financial assistance.
Paddle the Don	Supported by Loblaws, Laidlaw, Sporting Life, Tremco and Harbourfront Canoe and Kayak School.

General

Large industries have shown extensive leadership, focusing on employee health and safety, waste management, recycling, reducing industrial emissions, and implementing environmental management systems, including the Responsible Care Program of the chemical industry. The motor vehicle and parts manufacturing industries, comprising 30 percent of Ontario's economy, are working toward the elimination or the reduction in use of 113 chemicals, as well as the certification of all suppliers to ISO 14001 standards early in the new decade.

Where we are: (2000)

Two pilot projects were initiated: the Sediment Awareness Project with the development industry, and the Langstaff EcoPark with the park's 1,500 local businesses. Baseline data were collected on both the broad spectrum of corporate environmental stewardship and on business and institutional support for local regeneration, as described in the box on page 48.



The Langstaff EcoPark showcases the great work that can be accomplished when different groups join forces.

Where we want to be:

By 2003:

- 1) Continue sediment control outreach activities and achieve demonstrable improvement in the area of sediment contamination from construction sites.
- 2) Develop and implement three pilot projects with Don businesses and institutions to raise awareness of the link between good property management and the health of the watershed.
- 3) Improve business and institutional participation in regeneration projects.

By 2010:

Fifty percent of businesses and institutions in selected demonstration areas will have implemented some form of improved property management.

By 2030:

Environmentally sound property management practices will be in place at a majority of businesses and institutions across the watershed.

How to get there:

While large industries are making great strides, industrial and commercial areas, dominated by small and medium sized enterprises, make up 20 percent of the watershed and still contribute a significant percentage of non-point source pollution and stormwater runoff. The challenge in the Don will be to engage all levels of government, business organizations, and other organizations to develop products and mechanisms that will help business and institutions expand their focus from internal operations to address the chosen priority targets for 2001-2003: improving sediment control, reducing the impact of stormwater runoff through property management practices and getting businesses and institutions more involved in community regeneration projects. Businesses and institutions located in areas bordering the river may be given priority attention.



INDICATOR 18: STEWARDSHIP

MUNICIPAL

Are the Don's municipalities doing their part?

Where we were: (1997)

The adoption of specific ecosystem stewardship practices such as protecting groundwater, encouraging naturalization of parks, reducing sediment and erosion, etc., were inconsistent across the watershed's municipalities. Even simple policies such as reducing the use of pesticides were not in place across all municipalities.

2000 Targets:

1. All Don municipalities will have ecosystem stewardship policies and good management practices.
2. A method for measuring how well municipalities are implementing and enforcing their stewardship practices will be in place.

WHAT'S THE TREND?

in 1997



in 2000



Strategic initiatives underway;
needs support from Federal and
Provincial governments.

Transportation Management Associations (TMAs)

TMAs are private, non-profit membership organizations dedicated to providing a variety of transportation services and programs. TMA membership is derived from the business community, public sectors and interested citizens.

TMA programs encourage people to walk, bicycle, ride public transit, carpool, vanpool, work flextime and telecommute. TMAs generally serve a number of employers and businesses in a specific geographic area.

TMAs are commonly and successfully used in the United States, where there are over 100 in existence. The City of Toronto has helped facilitate the formation of the first TMA in Ontario, the Black Creek Transportation Management Association, and is looking to encourage the formation of many more.



The Don Valley Parkway — on a good day.

Where we are: (2000)

York Region's Greening of York Region and Water for Tomorrow initiatives, as well as its Regional Report Card, are laudable efforts that have been completed or launched since the last Don Report Card. These have been undertaken as a prelude to the development of a new Regional Official Plan. As well, York Region opened its first Hazardous Waste Depot in 1998 (prior to that time there had only been mobile service).

The City of Toronto's many, significant environmental efforts include: the Environmental Task Force; the new City Official Plan process; the commitment to the sustainable redevelopment of degraded urban lands (e.g., *Gateway to a New Canada*, *Our Toronto Waterfront*, Downsview Park); the new Sewer-Use By-law; coordinating the establishment of Transportation Management Associations; the Wet Weather Flow Study; and the Tree Advocacy Program. These efforts place Toronto at the forefront of the drive toward sustainable urban existence. That these efforts were undertaken during the difficult period of transformation from six municipalities to one, only adds to the magnitude of the accomplishments. It will take some time, however, for these efforts to translate into measurable change in the watershed.

Specific stewardship policies are still inconsistent across the watershed but, generally, municipalities are continuing to advance toward more sustainable practices. Richmond Hill has achieved a 25 percent reduction in the use of road salt and sand. Markham has instituted a new lawn watering by-law. York Region has adopted a policy of "minimal use of pesticides." The City of Toronto's Environmental Task Force has recommended the elimination of pesticide use and outlined other sustainability initiatives dealing with smog, transportation and energy issues.

The City of Toronto's Downspout Disconnection Program resulted in the disconnection of 7,919 properties between 1997 and 1999. None of the upper watershed municipalities have implemented downspout disconnection programs, although Richmond Hill has taken steps towards initiating a pilot program. Salt and pesticides are still used by every Don watershed municipality, although use has been considerably reduced.

Where we want to be:

By 2003:

1. The efforts underway should be completed and implemented.
2. There should be a recognition at all government levels that a sustainably-developed and utilized GTA, with healthy neighbourhoods and viable functioning natural areas, will help facilitate the economic growth of the region.
3. All municipalities will have Environmental Best Management Practices.
4. Ecosystem-focused regeneration projects will become a line item in each municipality's annual budget, funded through a small increase in water rates.

By 2010:

1. All of the Don's municipalities will have modified their Official Plans based on the concept of sustainability.
2. Pesticide use will have been eliminated.

By 2030:

Don municipalities will be world leaders in sustainable municipal operations, helping to solidify the Don as an attractive place to live and work.

How to get there:

The Don's upper municipalities of Vaughan, Richmond Hill and Markham should make specific allocations to upgrade stormwater management at the lot-level (eg. downspout disconnection, infiltration basins, wetland construction, etc.). The City of Toronto should continue its extensive environmental efforts with the ultimate goal of enshrining sustainable practices in the new Official Plan. Municipalities should be able to access the Superbuild Fund for green infrastructure to help carry out these efforts. Municipalities, in partnership with others (including municipally-supported Transportation Management Associations, see box page 50), should improve public transit systems to reduce fossil fuel emission and encourage greater public transit use.



☞ Smog is on the increase across the GTA.



Report Card

GLOSSARY

Area of Natural and Scientific Interest (ANSI) - an area designated by the Ministry of Natural Resources for its natural heritage, scientific or educational value.

Areas of Concern (AOC) - a geographic area identified by the International Joint Commission required to be cleaned-up under the Canada-U.S. Great Lakes Water Quality Agreement.

Aquatic invertebrates - aquatic animals lacking a backbone (e.g. mayflies, caddisflies, worms, clams) that spend at least a portion of their life cycle in the water.

Aquatic habitat - all of the components, such as rocks, logs, weeds and water, that aquatic organisms rely on to survive.

Baseflow - the groundwater contribution which maintains the volume of baseflow in a stream, critical for quantity and thermal control, which may include direct discharge, discharge to wetlands, and bank seepage.

Biodiversity - the number and variety of species and habitats within a given region.

Combined sewer overflows (CSOs) - built in overflows called combined sewer overflows act as relief points by letting excess flows leave the sewer system before treatment, emptying into the nearest water body.

Conservation Foundation - an independent, community-governed charity created to provide vision, community support and fundraising programs for the environmental protection activities of the Toronto and Region Conservation Authority (TRCA). Recently, the Foundation launched *The Living City: It's Our Habitat*, a \$35 million campaign to develop an environmental vision for our City Region of Toronto, Peel, York and Durham.

Cross connections - illegal connections between sanitary sewers and storm sewers.

Conveyance - controlling stormwater within the stormwater system (e.g., in pipes, using porous pipes that let some of the water filter into the ground).

Contaminant - any physical, chemical, biological or radiological substance or matter that has an adverse effect on air, water or soil.

Don Watershed Natural Heritage Strategy - a strategy, currently under development, to identify core habitats and corridors and provide guidelines for the protection and restoration of terrestrial and aquatic habitat.

Downspouts - roofleaders that collect rainwater from the roof of a house, often connected to storm sewers in older developments.

Ecosystem - a term used to describe the interdependence of species in the living world, both with one another and with their physical environment.

End-of-pipe - controlling stormwater just before it enters the watercourse (e.g., stormwater ponds).

Environmentally Significant Area (ESA) - area identified by the TRCA, that contains critical wildlife habitat, rare flora or fauna, or performs a vital ecological function (e.g., groundwater recharge, wildlife corridor).

Exfiltration - porous pipes that move some water to the watercourse but allow for some water to filter into the soil.

Fauna - includes all vertebrate and invertebrate species.

Flora - includes trees, shrubs, herbaceous plants (such as wildflowers), grasses, sedges, ferns, mosses and their allies.

Flow - the volume of water that passes a given point per unit of time.

Hydrology - the science that studies water properties, circulation, principles and distribution.

Index of Biotic Integrity (IBI) - a measure of fish community associations that is used to identify the general health of the broader stream ecosystem.

International Joint commission (IJC) - established in 1909 to assist the USA and Canada in decisions regarding the lakes and waterways that form the boundaries between the two countries.

Impervious area - lands with no recharge potential due impermeable surface treatment (e.g. concrete, asphalt, rooftops).

Infiltration - the movement of water into soil or porous rock.

ISO 14001 - an internationally recognized standard for companies to follow when implementing an Environmental Management System; a management system that helps ensure the success of their corporate environmental programs.

Leaf Area Density - a measure of effectiveness of urban trees in improving the urban environment that estimates the total surface area of leaves on trees in a given urban area, taking into consideration tree size, distribution and health.

Lot-level controls - controlling stormwater at the source; at houses, businesses, on streets and in parks (e.g., disconnecting downspouts, using rainbarrels...).

Meadows - open terrestrial habitats dominated by grasses and wildflowers. They include natural habitat such as tall grass prairie or savanna, as well as old fields.

Naturalization - the process of allowing an area to revert to a natural habitat through a passive “hands-off” approach, or through active ecological restoration.

Non Governmental Organizations (NGOs) - community groups, without ties to government agencies, engaging in advocacy and/or action pertaining to the environment.

Noxious Weed Act - the Provincial Statute that governs the control of noxious weeds in Ontario.

Pesticides - a substance or mixture of substances intended for preventing, destroying or mitigating any pest or to regulate plant or leaf growth.

Potential Leaf Area Density - a measure of the potential for an urban area to support optimum tree cover, taking into consideration the fact that buildings occupy a large part of the available area.

Priority toxic substances - persistent substances that are extremely toxic which are targeted for virtual elimination through significant reduction in their use, generation or release (e.g., banned substances such as mirex, aldrin, chlordane, and DDT that are no longer manufactured but are still present in the environment).

Provincial Water Quality Objectives (PWQO) - objectives that have been established for each key water quality parameter in order to protect a particular use.

Riparian habitat - trees, shrubs, and grasses growing within 10 metres of a stream.

Sediment - sand, silt and clay particles derived from weathering of soil or rock material.

Stormwater - rainwater that runs off urban and rural areas, flows through ditches and storm drain systems, and empties into rivers and lakes untreated.

Stormwater treatment pond - stormwater management facility (e.g., wet ponds, dry ponds, wetlands, infiltration basins) that receive water from a conveyance system (ditches, sewers) and discharge the treated water to the receiving waters.

Stormwater Management Upgrade Plans - a comprehensive plan for addressing stormwater issues in order to return more natural flows to a river system; identifying and prioritizing all areas of opportunity for managing stormwater at the lot-level, the conveyance level and/or the end-of-pipe level.

Superbuild Fund - through Ontario’s SuperBuild Corporation, \$20 billion (½ from the Province and ½ from the private sector) will be invested in hospitals, high technology links, highways, educational institutions, and new parks and natural resources in northern communities.

Surface depression storage - a low area where water can pool; allows for evaporation and therefore less water in the rivers.

The Toronto and Region Conservation Authority (TRCA) - a provincial/municipal partnership established in 1957, under the Conservation Authorities Act, to manage the renewable natural resources of the region’s watershed. The TRCA is a leader in urban and near-urban watershed management, particularly the protection and regeneration of rivers and greenspace.

Terrestrial habitat - a native environment where a plant naturally lives.

Watershed - land area from which water drains to a particular surface water body.

Water quality - a term to describe the chemical, physical and biological characteristics of water with respect to its suitability for a particular use.

Weir/Instream barriers - a structure in a river that hinders or prevents the upstream movement of fish and other aquatic organisms.



GLOSSARY CONTINUED

Wet Weather Flow Master Plan - a plan to address stormwater management issues in the City of Toronto.

Wetlands - places that are permanently or seasonally inundated by shallow water. They include various kinds of marshes, swamps, bogs and fens. Wetlands are important for water filtering and retention, flood control, wildlife habitat and aesthetic values.

Woodland or forest - a self-perpetuating natural habitat dominated by trees. Tree plantations can also be considered woodlands, although they do not have the full range of biodiversity values inherent in a natural forest. Woodlands are important for water retention, air quality, climate regulation, wildlife habitat, aesthetics and resource values.

Young-of-the-year fish - juvenile fish less than one year old.

Public Opinion Survey

As in 1996, a major Angus Reid poll was conducted to assess the level of watershed awareness. Telephone interviews were conducted with a total of 500 adults ages 18+ living within the Don Watershed. Interviews were conducted between May 15 and 23, 2000. The margin of error for the overall sample is +/- 4.4 percentage points, 19 times out of 20. It should be noted that the margin of error is larger for subgroups of the study sample. The final data were weighted to reflect the actual household population for each region and the overall gender composition of Toronto.

In those instances where the 2000 study data is compared with the 1996 study data, the results of the 2000 study are filtered to include only those respondents who are 25 years or older and consider themselves a decision maker in the household (n=411). The margin of error with this subgroup is 4.8 percentage points, 19 times out of 20. This reflects the methodology of the 1996 study, whereby respondents consisted of those residents living within the Don Watershed who were 25 years or older and considered themselves a decision maker in their household (n=600).



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Information for this report card was obtained from the following sources:

- Environment Canada
- Ontario Ministry of the Environment
- The Regional Municipality of York, Town of Markham, Town of Richmond Hill, City of Toronto and City of Vaughan
- Don Watershed Public Opinion Survey, 2000, Angus Reid
- Toronto and Region Conservation Authority (TRCA)
- Various Don Community Groups

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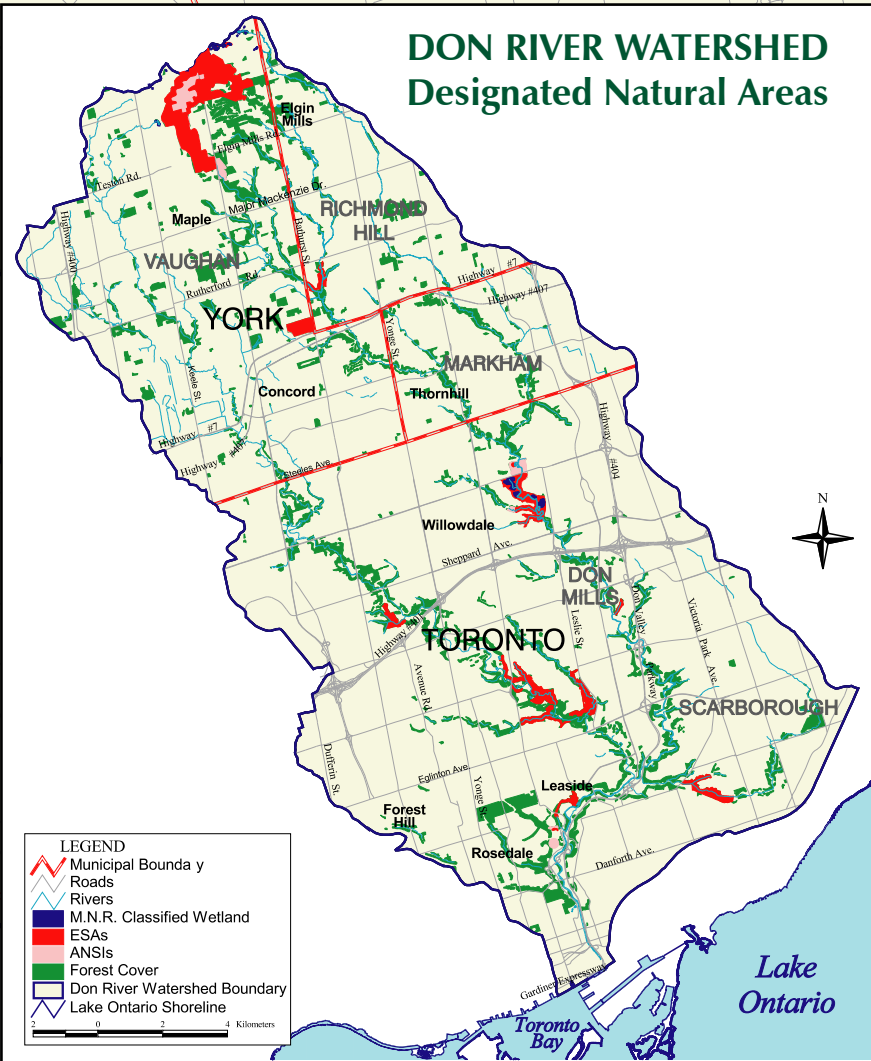
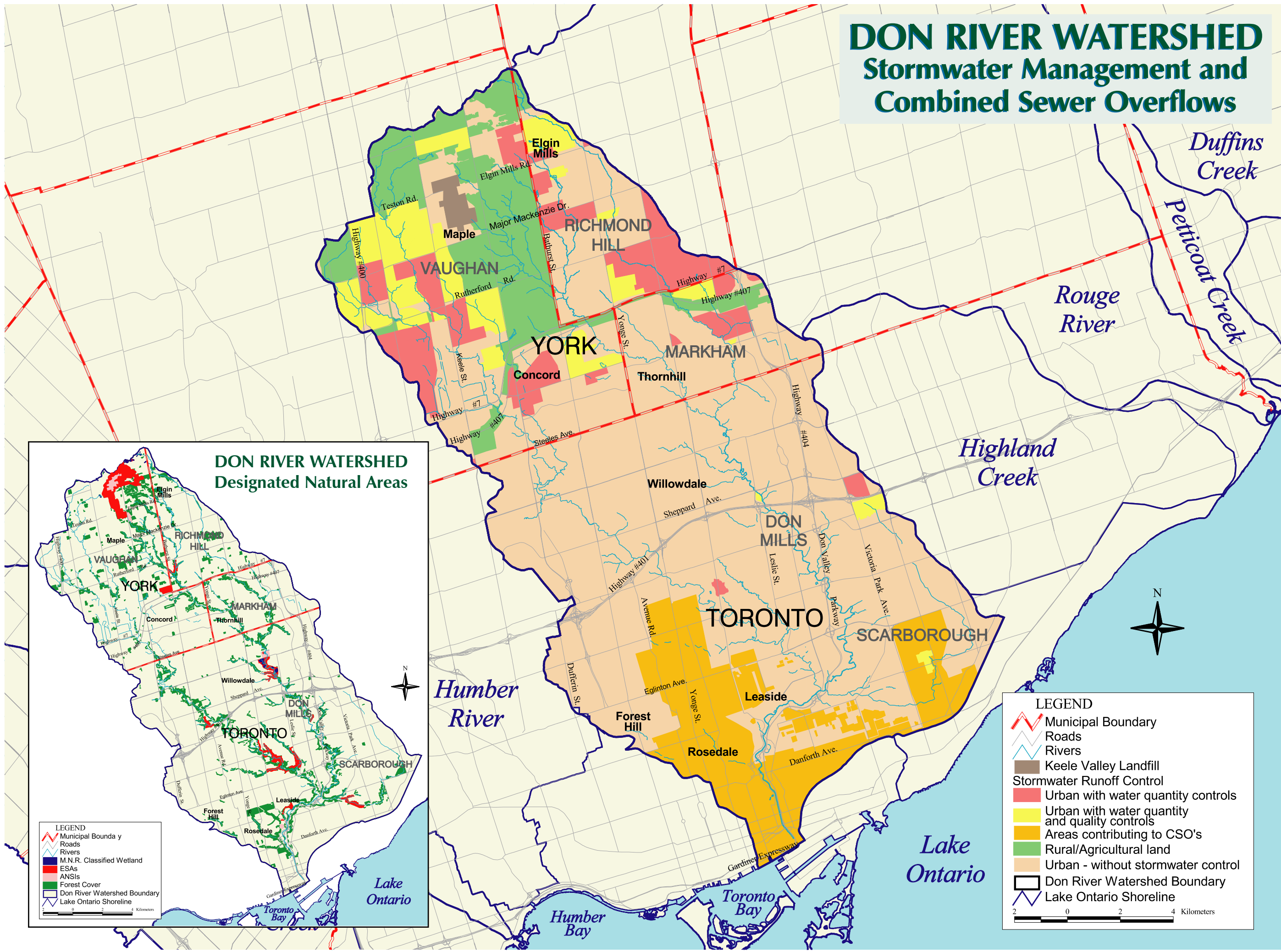


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DON RIVER WATERSHED

Stormwater Management and Combined Sewer Overflows



LEGEND

- Municipal Boundary
- Roads
- Rivers
- Keele Valley Landfill
- Stormwater Runoff Control
 - Urban with water quantity controls
 - Urban with water quantity and quality controls
 - Areas contributing to CSO's
 - Rural/Agricultural land
 - Urban - without stormwater control
- Don River Watershed Boundary
- Lake Ontario Shoreline

2 0 2 4 Kilometers



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