

## **FORTY STEPS TO A NEW DON EXECUTIVE SUMMARY**

---

In 1992, The Toronto and Region Conservation Authority (TRCA) created the Don Watershed Task Force with a mandate to develop a regeneration plan for the entire watershed.

The 25-member Task Force included one elected representative from each of the two regional and eight local municipalities; ten watershed residents; the Chair of the TRCA; and one representative each from The Metropolitan Toronto and Region Remedial Action Plan, the Waterfront Regeneration Trust, The Task Force to Bring Back the Don, and Friends of the Don York Region.

The Don Watershed Task Force met for the last time in April 1994. On May 27, 1994, Toronto Region Conservation formally endorsed "Forty Steps to a New Don" and resolved to begin implementation of the report immediately by establishing the Don Watershed Regeneration Council.

The following pages contain the Executive Summary of "Forty Steps to a New Don."

For a copy of the full report or for more information on how you can be involved in the regeneration of the Don, please call TRCA at (416) 661-6600, ext 5238.

## REPORT SUMMARY

The Don River, which flows through the heart of Toronto, is one of Canada's most degraded urban rivers. Restoring this watershed to health is a long-term urban river renewal project that will mean new harmony between the area's human communities and natural systems.

Forty Steps to a New Don is the Don Watershed Task Force's blueprint for regeneration. It includes a brief watershed history and summary of current conditions, a vision for the future, general principles of regeneration, forty specific steps for regenerating the watershed, seven detailed subwatershed regeneration plans that focus on neighborhoods, and six demonstration concept sites.

To achieve success, our plan requires commitment and cooperation from all who live and work in the watershed: cost sharing and task sharing among governments, enthusiastic participation by businesses, residents, and community groups, and individual and social lifestyle changes that will benefit the natural processes and habitats that form the basis of human communities.

Today, the Don Watershed is 80 percent urbanized and home to 800,000 people. Current population projections suggest that by the year 2021, it will be 91% urbanized. Now is the time to change past practices of "mastering nature" that have characterized agricultural and urban development, and to place the health of the natural system first in planning decisions and daily personal choices.



## THE PAST AND PRESENT

For 200 years, the Don Watershed has been subject to intense pressures from human settlement. These have fragmented the river valley's natural branching pattern, degraded and often destroyed its once rich aquatic and terrestrial wild life habitats, and polluted its waters with raw sewage, industrial and agricultural chemicals, and the petrochemicals, metals, and salt associated with road and highway transportation.

Land clearing, settlement, and urbanization have proceeded in three waves in the Don Watershed, beginning in the late 18<sup>th</sup> century with the City of Toronto in the Lower Don and scattered villages in the upper watershed. Next came the suburbanization of the middle watershed, mainly in North York, after World War II. Rapid urbanization of the river's headwaters in York Region began in the early 1980's and continues today.

Hydrologic changes in the watershed began when settlers converted the forests to agricultural fields; many streams were denuded even of bankside vegetation. Urban development then intensified the problems of warmer water temperatures, erosion, and water pollution. Over the years during the three waves of urban expansion, the Don's mouth, originally an extensive wetland, was filled in and the lower portion of the river was straightened. Small Don tributaries were piped and buried, wetlands were "reclaimed", and springs were lost. The middle and lower valley became a transportation corridor. The hydrologic cycle was severely altered by the expanses of urban and suburban pavements, rooftops, roads, parking lots, and gutters: water that had once soaked into the ground and had run slowly through grassy fields was now collected in a network of underground storm sewers, bringing stormwater quickly and efficiently to the river and carrying many pollutants with it. While sewage contamination is less serious today that it once was, raw sewage still reaches the Don through combined sewers in older neighborhoods and illegal cross connections between the sanitary and storm sewers throughout the watershed.

But already, along with this legacy of hydrogeologic changes, water pollution, and degraded habitats, there are encouraging signs for regeneration. Eighteen species of fish still live in the river system, though no longer brook trout or salmon. There are almost twenty designated natural areas (Environmentally Significant Areas [ESAs], Areas of Natural or Scientific Interest [ANSIs], and Ministry of Natural Resources wetlands) within the watershed. Trails are being built in many areas. Old combined sewers are being remediated in the Lower Don to reduce sewage contamination in the river. Since Hurricane Hazel in 1954, a great deal of the Don's valley and stream corridors has been brought into public ownership, resulting in a better starting point for regeneration than many other urban rivers enjoy. Most important, throughout the watershed residents and businesses are taking responsibility for the Don in many types of volunteer activities, and governments are coming to share accountability, planning, and funding for regeneration.

## **THE FUTURE**

The Don that we envision for the future is a revitalized urban river, flowing with life-sustaining water through regenerated natural habitats and human communities. In its upper reaches, sparkling brooks and deep forest pools will flash with fish. Downstream in the older urbanized area of the city, the Don will ripple gently under shade trees, meander across its grassy flood plain, and merge into wetlands alive with waterfowl. As the Don's water becomes ever cleaner, many species of fish, mammals, birds, and other wild life will return to find their niches within its varied, connected habitats. People, too, will visit the Don often, through improved access and trails, and will develop a watershed consciousness, feeling responsible for the part of the Don closest to home, while appreciating its living connections to the watershed as a whole.

The Don Watershed Task Force believes that this vision of a future healthy Don is realistic. In order to achieve it, we recommend three general principles and their guidelines to steer our actions.

### **1) PROTECT WHAT IS HEALTHY**

- a) Protect the natural sources of the Don River; its headwaters, groundwaters, creeks and tributaries.
- b) Protect the natural linkages that still exist in the Don, its diverse habitats, and the wild life in them.

### **2) REGENERATE WHAT IS DEGRADED**

- a) Restore the river and its tributaries through actions that re-establish or mimic the natural patterns of the watercourse.
- b) Restore clean, life-sustaining water to the river and its tributaries.
- c) Nurture degraded habitats back to health, and reconnect them to each other and to nearby human communities.
- d) Restore important reminders of the Don's historical past, and encourage activities that reflect our cultural diversity.
- e) Require all projects to improve the health of the natural system.

### **3) TAKE RESPONSIBILITY FOR THE DON**

- a) Contribute to a healthy, sustainable natural environment in all daily activities.
- b) Help neighbours, governments, and businesses work together to regenerate the Don.
- c) Visit the Don and share our enjoyment with others.

## **40 STEPS**

Putting these principles to work, the Task Force recommends forty specific steps that when applied together throughout the watershed will help regenerate the Don. In the body of the document, each step is followed and illustrated by detailed actions.

In the steps titled “Caring for Water” the greatest challenges are working with, and around, the storm sewer system to create a more natural cycling of water in the Don, and changing habits and practices to keep contaminants out of groundwater and streams. Seventy-one percent of the Don’s flow comes from urban runoff water, the river’s greatest source of pollution.

In “Caring for Nature” the steps aim to protect natural areas and functions, to regenerate and improve existing habitats, and to enhance existing connections or create new linkages between habitats. This requires a shift in thinking; learning to see the place where we live or work as part of the watershed’s tableland - connected to the surrounding environment - and making changes that will benefit wild life and the natural system.

In “Caring for Community”, the main purpose is to restore lost human connections with nature in the city, by providing easy access to natural areas, improving personal safety when there, and using the Don for formal and informal education and recreation.

The final nine steps, “Getting It Done”, are ways to implement this report.

### **CARING FOR WATER**

- Step 1 Protect or enhance the quantity and quality of groundwater
- Step 2 Let landscapes and natural processes absorb, collect, filter, and release stormwater gradually in new development projects.
- Step 3 Restore a more natural cycling of water in already urbanized areas.
- Step 4 Keep soil at construction sites out of sewers and streams.
- Step 5 Keep sewage out of the Don.
- Step 6 Keep industrial and household chemicals out of the Don.
- Step 7 Reduce the amount of pesticides and fertilizers entering the Don.
- Step 8 Reduce the use of road salt, while protecting public safety.
- Step 9 Manage contaminated snow like stormwater.
- Step 10 Keep old landfill sites from leaching into groundwater and streams.
- Step 11 Ensure that rural lands contribute to the Don’s health.
- Step 12 Support policies and programs at all levels that reduce air pollution.

## **CARING FOR NATURE**

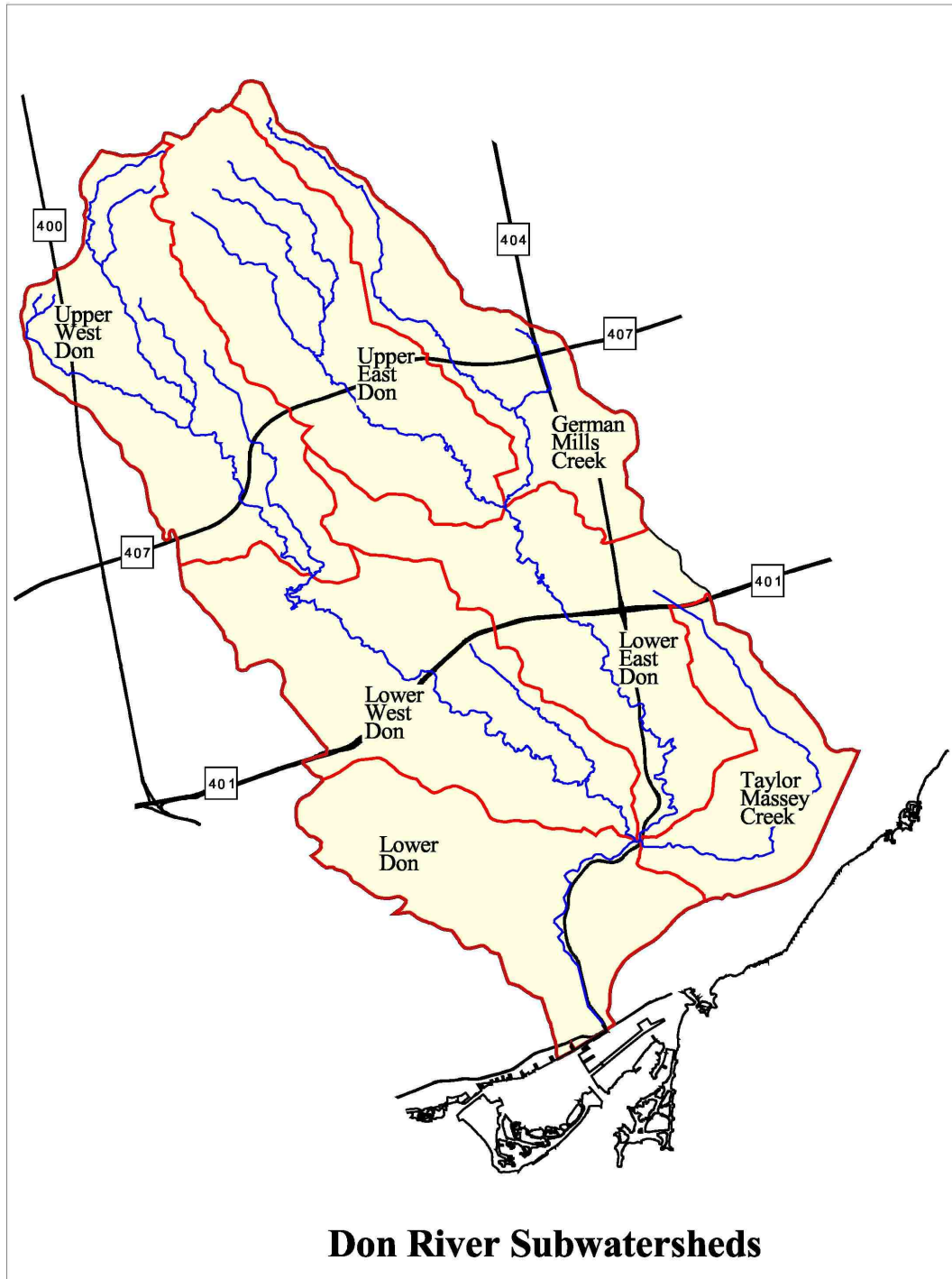
- Step 13 Identify the natural ecosystems and species in the watershed
- Step 14 Protect and regenerate the natural form and function of the Don's valley and stream corridors.
- Step 15 Naturalize buried and channelized streams.
- Step 16 Improve the Don's stream habitats and connections for fish.
- Step 17 Protect and regenerate lowland forests, meadows, and streamside vegetation
- Step 18 Protect and regenerate upland forest habitats wherever possible.
- Step 19 Protect and regenerate wetlands in the watershed.
- Step 20 Designate natural areas throughout the watershed.
- Step 21 Enhance the network of green corridors that link natural areas, on the tableland as well as in valley and stream corridors.
- Step 22 Improve the aesthetics of the Don's natural areas.
- Step 23 Live in harmony with local natural areas and wildlife.

## **CARING FOR COMMUNITY**

- Step 24 Provide safe pedestrian access into the Don's public natural areas.
- Step 25 Create continuous watershed trails between Lake Ontario and the Oak Ridges Moraine.
- Step 26 Accept flooding as a natural process and respect its dangers.
- Step 27 Improve personal safety in the Don's natural areas.
- Step 28 Honor our cultural heritage throughout the watershed.
- Step 29 Create Don Learning Centers throughout the watershed.
- Step 30 Make the Don a living part of the watershed's schools.

## **GETTING IT DONE**

- Step 31 Sign a “Don Accord”, committing your elected council, agency, business, or community group to regenerating the Don.
- Step 32 Form a Watershed Regeneration Council to integrate our efforts.
- Step 33 Use the Don regeneration plan, Forty Steps to a New Don, to begin local efforts.
- Step 34 Encourage grassroots regeneration groups throughout the watershed.
- Step 35 Encourage staff at agencies and municipalities to take responsibility for the Don.
- Step 36 Fund the Don’s regeneration through existing and new sources.
- Step 37 Research the effectiveness of different technologies and approaches for regenerating urban watersheds.
- Step 38 Undertake regeneration demonstration projects throughout the watershed
- Step 39 Publish a Don Report Card every three years to mark and celebrate progress in the Don’s regeneration.
- Step 40 Make changes in our personal lifestyles and government actions that will help protect and regenerate the Don and the larger ecosystems of which it is a part.



## **SUBWATERSHED REGENERATION PLANS AND CONCEPT SITES**

For real, measurable progress towards a healthy Don Watershed, the Principles of Regeneration and the 40 Steps must be put to work in municipalities and neighborhoods. That is the aim of the regeneration plans for the Don's seven subwatersheds presented in the final two-thirds of this report. Those plans outline regeneration at the local level, interpreting the forty regeneration steps according to the specific needs of each subwatershed.

The Don Watershed falls naturally into five subwatersheds: the four major tributaries (West Don, East Don, German Mills Creek, and Taylor/Massey Creek) and the main river, the Lower Don. To make the work of regeneration more manageable, we have further divided the West Don and East Don into upper and lower sections.

The seven subwatershed regeneration plans are organized similarly. Each begins with a general description of present conditions in the subwatershed and a vision for its future. Each plan then identifies the regeneration steps that are most relevant for that particular subwatershed.

For example, in the Don's headwaters, the Upper West Don and Upper East Don subwatersheds, large areas are still undeveloped, so protection of natural areas and functions is important. In the Taylor/Massey Creek and German Mills Creek subwatersheds on the other hand, intense urban development encroaches close to streams, so regeneration activities should concentrate on improving water quality and re-establishing vegetative corridors. The middle section of the watershed, the Lower West and Lower East subwatersheds, share the challenge of improving water quality, but also enjoy the advantage of broad, natural valleys where opportunities for habitat enhancement and public access are greater. Finally, the challenges for the highly urbanized Lower Don subwatershed, which receives the accumulated contaminants and sediment from the other six subwatersheds and suffers severe encroachment by the city, roads and railway, include revitalizing its upper portion, re-establishing where possible some of the former grandeur of its fertile marshlands, and restoring a more natural river mouth.

In the "reach plans" for each subwatershed plan, opportunities to regenerate the valley and stream corridors are discussed under eight headings: water quality, water quantity, aquatic habitat, terrestrial habitat, management practices, access improvements, education and interpretation, and special areas (such as ESAs and areas of cultural significance). These topics are treated at the level of specific reaches, that is, small tributaries or neighborhood-sized sections of streams.

In order to give direction to agencies and the community, for each reach we assess the regeneration needs in each of the above eight categories. We suggest specific regeneration actions that are needed for each reach, and assign a "level of effort" (limited, moderate, or extensive) to each action. For example, regenerating water quality is a big job, but it can be tackled in different ways; individual homeowners can reduce their use of household and garden chemicals using a limited level of effort, while municipal governments can undertake costly sewer system retrofits, which represent an extensive level of effort.

The maps and tables are provided to depict graphically the needs of each subwatershed. The tables compile the conditions and needs of each reach in an easy-to-read format. The maps indicate, at a glance, which areas of the subwatershed will need the greatest or least amount of regeneration work, and the relative amount of effort required in a single reach for regeneration actions of all types.

Finally, six of the subwatershed plans contain a “concept site plan”, a project that demonstrates techniques of regeneration at a local level. (The Lower Don subwatershed plan includes no concept site plan because several promising regeneration projects are already underway there.) The concept site plans generally combine improvements in water quality and wild life habitats, making better linkages between the tableland and the valley and stream corridor, creating or improving walking trails, and other projects that involve the community. For each concept site, we identify the stakeholders who can cooperate to turn the plans into reality. In our view, the concept sites represent local subwatershed regeneration in action.

The subwatershed concept sites are:

### **UPPER WEST DON - Rupert’s Pond**

Naturalizing the stream here in the heart of Maple, constructing a low-flow retention pond and wetland, and improving the existing stormwater detention pond will improve water quality and aquatic habitats. Plantings can link Rupert’s Pond to a nearby sugar bush, while upgraded trails, signage, and buffer plantings for winter will increase neighbours’ enjoyment of the area.

### **UPPER EAST DON - Pomona Mills Park**

At this park in downtown Thornhill, a treatment pond will reduce the impacts of stormwater and improve water quality. Planting a variety of native trees, shrubs, wildflowers and grasses, and removing instream barriers will improve habitats for fish and other wild life. A formal trail with signage will increase community access and appreciation of the natural features and historic mill site.

### **GERMAN MILLS CREEK - Harding Park**

At this well-used park in Richmond Hill, the two existing detention ponds can be retrofitted to treat water quality. Maple bush plantings along the creek, wetland plants at the ponds, and instream improvements for fish will diversify wild life habitats. Providing nearby parking, a trail, and a toboggan run along the CN berm will increase the community’s enjoyment of the park.

### **LOWER WEST DON - G. Ross Lord Park**

The open water of the reservoir offers unique regeneration possibilities: improving water quality for a warm water fishery, enhancing wetlands to attract water fowl, making the central peninsula a protected area for wild life, creating a “bench” around the steep reservoir banks for riparian plantings, and planting the prominent Hydro corridor to link with the East Don and the Humber River.

### **LOWER EAST DON - Cummer’s Mill**

In this mixed natural area in North York, water quality can be improved by wetland ponds at stormwater outfalls, correcting the severe bank erosion, and involving residents in keeping contaminants out of storm sewers. Diversifying plant species, improving aquatic habitats, and limiting vehicle access in the valley will improve wild life habitats, and a trail will open the site to the community.

## **TAYLOR/MASSEY CREEK - Terraview Park/Willowfield Park**

This headwaters park in heavily urbanized Scarborough can become a more natural ecosystem and wild life refuge. The plan includes disconnecting roof leaders from the sewer to lessen flooding, making a sediment basin for Highway 401 runoff, naturalizing the stream and removing its concrete bottom, creating upland forest areas, and using the project as a living classroom for nearby schools.

For the Lower Don subwatershed, we support the Task Force to Bring Back the Don's demonstration wetland south of the Bloor Viaduct, Toronto Parks and Property's valley master plan between Pottery Road and the forks, the Waterfront Regeneration Trust's Lower Don Lands Strategy recommending a realigned river mouth, and TRCA's Don Valley Brickworks Master Plan.

Throughout the subwatershed regeneration plans, in addition to the work, initiatives, and changed practices required of municipalities and agencies, we emphasize actions that individual residents can take to improve water quality and habitats. For example, we can use less sidewalk salt and find alternative garden chemicals; participate in household toxic waste disposal programs; clean up pet wastes; keep rain and runoff water on our property; plant native trees and shrubs in our yards; use the car less and keep it well maintained; and pour nothing down storm drains that will pollute streams. The key is seeing the land where we live, work, and play as part of the Don Watershed, intimately connected to its groundwater, streams, and natural habitats.

Indeed we also stress connections as a major theme of the subwatershed regeneration plans, for by its very nature, a watershed - and watershed regeneration - is about linkages and connections. Thus, recommendations often include: creating walking trails or linking up existing trails, removing instream barriers to allow fish to migrate; backyard plantings that connect the tableland to the valley; understanding the connection between the storm sewer catch basin on the street and the nearest stream; linking forest tracts, subwatersheds, or even adjacent watersheds together through tree plantings; and fostering cooperative linkages among property owners, community groups, schools, businesses, municipalities, and government agencies.

The Task Force believes that, along with changes in government environmental policies, cumulative actions at the local level will be most effective in regenerating the Don Watershed. In many parts of the watershed, river renewal has already begun, as citizens' groups, businesses, schools, and government departments and agencies cooperate on significant local projects. The Task Force has developed Forty Steps to a New Don in part to aid and encourage those efforts, with detailed recommendations and regeneration techniques for local areas. The subwatershed approach we have taken for the Don should also encourage regional and municipal governments to create and implement more formal, cooperative subwatershed plans, to ensure that the health of the natural system governs planning decisions.

Watershed regeneration is not a single goal, but an on-going process. As the Don vision concludes, "Just as a river flows continuously, gaining volume from many small tributaries, so river renewal will be a continuous, growing process. Large regeneration projects will help the Don heal. But equally important will be the sum of countless small, positive actions by all of us who act as stewards for the streams and valleys of the Don."

It is up to all of us, working together as agencies, groups, and individuals, to take the steps we can to a new Don.