

5. Conclusions



Waterfront Regeneration Trust

This report is the most in-depth evaluation of progress in removing Toronto from the “black list” of Areas of Concern around the Great Lakes since the 1994 report *Clean Waters, Clear Choices*. We conclude that progress has been made, but it is not sufficient to declare that remediation is complete, nor to provide the clean, green, healthy conditions that Toronto and the upstream municipalities need to provide a high quality of life for residents, tourists and business investments.

The Problems

In 1987, when Toronto was designated an Area of Concern, most of its waterfront beaches had high levels of bacteria that made them unsuitable for swimming for much of the summer season. Today, conditions have improved in the Eastern Beaches thanks to the installation of two combined sewer/stormwater detention tanks, and conditions will improve in the Western Beaches (Sunnyside area) in 2002 due to the installation of a major tunnel. However this infrastructure will not completely remove the problem in these two areas due to ongoing sources of pollution nearby, such as the Humber River. Furthermore, bacterial contamination continues to pose risks for swimming and other water contact recreation in many other parts of the waterfront, as well as in the rivers and creeks.

There are still advisories warning people not to eat certain types and sizes of fish because of high levels of contaminants, although they have been reduced in Toronto over the past two decades. Contaminants not only threaten human health, but also the health of other fish and wildlife in the food web.

Excessive algae growth along the shoreline and their subsequent decay is an unpleasant feature of the Etobicoke waterfront as well as other areas, particularly in the vicinity of stormwater outfalls. Other aesthetic issues along the waterfront and in the rivers and creeks are litter, oily scum, silt-laden waters and bad odours.

Finally, habitats for fish and other wildlife have been lost, fragmented and degraded. Many habitat restoration projects have been undertaken by agencies and community groups, and these areas are responding with increased fish diversity. However, degradation by pollution and excessive water flows during wet weather remains a significant barrier to further improvements in fish and wildlife communities, especially in the rivers and creeks.

The Causes

The single biggest cause of these problems is stormwater and combined sewer overflows. Rainfall and snowmelt generate large volumes of water, that carry oil, grease, eroded soils, metals, chemicals, road salt, animal feces and other pollutants into rivers, creeks and the lake. In the older parts of the city, combined sewers carry polluted stormwater together with more polluted sanitary sewage from our homes and businesses. Following heavy rainfalls, the combined sewers overflow into the rivers and lake instead of going to the water pollution control plants for treatment.

The variability in the water flows in our rivers and creeks is greatly increased by the impermeability of much of the urban landscape. Instead of infiltrating into the soil to replenish groundwater and provide year-round base flows to the watercourses, rainwater and snowmelt rush off the roads, buildings and other paved surfaces. The high flows create excessive scouring and erosion of the river banks, and the low flows are often insufficient to sustain aquatic life.

Other major influences on valley and stream habitats are the burying and channelization of watercourses, the imposition of dams and other barriers, and the stripping of riparian (streamside) vegetation. Along the waterfront, most of the original shoreline habitats have been lost through lakefilling, erosion controls, dredging, dockwalls, deforestation and destruction of wetlands.

The Solutions

Since the root cause of most of the problems is stormwater and combined sewers, the prime target of both remedial and preventative action must be wet weather flows. In the City of Toronto, a Wet Weather Flow Management Master Plan is nearing completion at time of writing. It will identify the most effective combinations of controls that can be applied at the source (e.g. on individual properties), during conveyance of the water through the stormwater system, and before discharging into a watercourse or the lake (e.g. ponds, tanks and tunnels). Implementation of this plan is the most important priority for restoration of beneficial uses to Toronto's waterfront and watersheds.

However, Toronto's Wet Weather Flow Plan must be complemented by a number of other initiatives. In the upstream municipalities, programs to retrofit stormwater quantity control ponds to also control water quality should be completed. Consideration should be given to providing stormwater management for those urban areas, roads and highways that were developed before stormwater controls were required. And vigilance is required to ensure that stormwater management in new developments in all the watersheds accomplishes the best results possible.

Pollution should be reduced, and where possible eliminated. Mechanisms include reducing the use of hazardous chemicals, eliminating cross connections between sanitary and storm sewer systems, preventing spills, improving and enforcing sewer use by-laws, and applying best management practices to municipal infrastructure, construction sites, industries and agriculture.

Habitat improvements should continue along the waterfront and in the watersheds. Emphasis should be placed on rivermouth wetlands; areas of land use change such as Port Union, West Donlands and Toronto Portlands; removal of barriers in rivers and creeks; and restoration of shoreline/riparian cover. Protection of existing habitats is also essential, especially in areas of new development.

The watershed focus provided by the various stakeholder groups for Etobicoke-Mimico, Humber, Don and Rouge watersheds should be continued, and expanded to include the Highland watershed. This will ensure that protection and remediation activities are focussed on the specific needs of each watershed, and that all the players are involved (governments, businesses, community groups, schools and other institutions, and individuals).

Increased efforts in education and involvement are essential to ensure that there is widespread public and political support for these actions, and that everyone plays their own part. For example, residents and other property owners can help to manage stormwater on their own properties and prevent pollution. Businesses, developers, farmers and industries can ensure that their activities sustain a healthy environment. Students can learn what's required to have clean waters and healthy habitats, and how they can participate. And decision-makers will benefit from a clearer understanding of the benefits of a healthy environment in relation to their other responsibilities, such as economic development, recreation and public health.

Delisting Toronto

In order to remove Toronto from the Great Lakes "black list" of Areas of Concern, we need to be able to clearly demonstrate that the beneficial uses specified in the Great Lakes Water Quality Agreement have been fully restored. At present, evaluation of how much remediation has been accomplished is difficult because monitoring programs do not provide all the information required. This report identifies a focussed list of monitoring and research needs for the RAP, which should be addressed by all the agencies participating in the integrated monitoring program developed by The Toronto and Region Conservation Authority.



Rosemary G. Hasner, TRCA



Toronto Tourism

A Last Word

Progressive waterfront cities all over the world are taking action to clean up degraded environments, recognizing that healthy conditions are essential to provide a high quality of life for residents, to provide an attractive setting for tourists, and to attract new companies that want to invest in places with an excellent standard of living. Think of London, Barcelona, Sydney, Chicago and Boston – to name just a few. The need for Toronto to take similar action was recognized in the report of Robert Fung’s Waterfront Task Force (2000) which notes:

“Revitalization will require the establishment of processes that can deliver, in a comprehensive and coordinated fashion, improvements to water quality, the remediation of polluted soils and the necessary flood protection actions..... Water quality improvements will encourage development and public activity at, and near, the water’s edge.....Water quality should be improved to the point that it is more aesthetically pleasing, the Harbour and Don River fishery is enhanced in terms of diversity, and ideally that Toronto Bay meets provincial swimming and water contact activity standards.”

Accomplishing these goals will not be quick nor easy. It took some 200 years to degrade our waterfront and watersheds to today’s conditions, and it will likely take decades to restore environmental health. However, progress to date is encouraging and demonstrates that much is possible.

We stand at a crossroad in determining the fate of Toronto’s waterfront. With the recent launch of Toronto’s Central Waterfront Plan and the establishment of the Toronto Waterfront Revitalization Corporation, it is timely to sort out priorities for action. This report presents a comprehensive and practical way to move forward to clean waters and healthy habitats. We welcome your feedback.



Rosemary G. Hasner, TRCA