



CHAPTER 5: GREENWAYS

We face a more crowded future: urban planners tell us that the population of the Greater Toronto Area will swell from the current four million to nearly six million three decades from now. Development in the cities will become denser, even as the urban edge moves ever outwards. We will spend more than \$75 billion on new roads, sewers, water, schools, hospitals, and other infrastructure — just to keep up with demand. Under the relentless pressures of urbanization, it may become increasingly difficult for most people to find a quiet refuge, an unpolluted stream, a place to walk among the trees.

But not only the human habitat is at risk: the rich mix of wild plants and animals with which we share the bioregion are in even more jeopardy. Among the 1,400 species of wild plants in the bioregion, for example, 140 are already limited to a single known location. More than 100 wild species are classed as provincially rare. Streams that leave the Oak Ridges Moraine as cool, clean homes for aristocratic brook trout arrive at the waterfront choked with filth.

Shaping our future to meet the needs of a burgeoning human population and a

vulnerable ecosystem is an extraordinary challenge. One of the most promising tools for meeting that challenge is the concept of greenways: corridors of protected green-space throughout the cities and beyond, into the countryside. Greenways do not pit humankind against nature; rather they serve the needs of both, protecting the quality of the natural environment while providing recreation and quiet places close to home.

The idea behind greenways is elegantly simple: link existing green spaces to create interconnected corridors, thereby increasing their usefulness for both people and wildlife. A system of greenways fits neatly in the nine principles put forward by the Commission in its interim report *Watershed* (1990); it proposed that the waterfront be clean, green, useable, diverse, open, accessible, connected, affordable, and attractive.

The greenway concept is gaining prominence, in part because there is a lack of funding for acquiring traditional parklands. Moreover, large blocks of natural landscape close to the urban mosaic are becoming increasingly scarce, and increasingly expensive. Greenways offer opportunities to provide equally good or better recreational



Oakville waterfront

opportunities, as well as vital ecological benefits, at a much lower cost.

Examining the role of greenways in the bioregion builds on the earlier work done by the Commission and others. In its *Watershed* report, the Commission proposed a system of trails along the waterfront, up the associated river valleys, and along the Oak Ridges Moraine. This trail system, buttressed by corridors of green space, would "cast a green net over the Greater Toronto Area, making the public open spaces far more accessible and attractive". The Commission also noted the need for special attention to ecological corridors, particularly along the river valleys that intersect with urban areas.

In her response to the Commission's recommendations, the provincial Minister of the Environment, the Honourable Ruth

Grier, endorsed the concept of a Waterfront Trail, and said that it

will become the Greenway that ties the Greater Toronto Area together from Burlington to Newcastle. . . . the highest land use for all public lands along the water's edge. . . . much more than a four-foot strip of asphalt.

The Province subsequently sponsored a study on optimum and interim routes outside Metro Toronto, released in April 1991 as *The Waterfront Trail: First Steps from Concept to Reality* (Reid et al. 1991). This report confirmed the feasibility of a trail alignment, and noted that a Waterfront Trail will link together some 34 major parks, 74 small waterfront parks and promenades, 40 significant natural habitats, and 25 marinas. It gave further support to the idea of the waterfront as a greenway, recommending that eight new

“green nodes” be acquired, and that links incorporate a corridor of greenspace.

In June 1991, a new public group, Citizens for a Lakeshore Greenway (CFLAG), was formed to support the concept of a waterfront trail. Clearly, its members also envision the links along the waterfront as “more than a four-foot strip of asphalt”.

This evolution in emphasis, from recreational trail to greenway, prompted the Commission to examine more closely the concept of greenways, and how they might fit within the sphere of ecosystem planning. What we discovered was a planning approach that is rapidly gaining favour across North America and has considerable potential for application within the bioregion and across Ontario.

The term “greenway” is relatively new, although the ideas it embodies have been around for some time. The first modern use, in the 1960s, is credited

to planner and author William H. Whyte.

It combines the syllable “green” from the British term greenbelt, and “way” from the American term parkway. Appropriately, greenways themselves also connect the ideas

behind the British and American words and the result is a system of protected linear corridors of open space, managed for conservation and recreation purposes.

The essence of greenways is connections — not simply connecting recreational areas through trails, but connecting wildlife habitats to each other, human communities to other human communities, city to country, people to nature.

This emphasis on links contrasts with the traditional approach to conservation of open space and natural areas, which stresses purchasing blocks of parkland, large and small, often isolated in a sea of surrounding development. While such parks are vital for conserving habitat and for recreation, their value could be greatly enhanced by creating green links among them. In fact, the existing parks and natural areas in the Greater Toronto bioregion are the basic building blocks of a greenway system. These parcels, often termed “greenlands”, include wetlands and woodlots, Environmentally Sensitive Areas, and Areas of Natural and Scientific Interest (ANSIs).

While it is important to define these and other aspects of a greenway, it is just as important to recognize how greenways differ from the more limited concept of trail systems, with which they are often confused.

A trail right-of-way may be little wider than a sidewalk, but a greenway is a continuous corridor of natural vegetation and open spaces.

Greenways may vary dramatically from each other in width, depending on land-

scape opportunities and on the character of the natural landscape, but those ecological elements are always present. A trail is usually — but not always — part of a greenway. In areas of ecological sensitivity, or on private lands within a greenway, a continuous trail may not be possible.

Most greenways created recently are those in and near American cities, but Ontario has several good examples of

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The common greenway feature is linearity — they are all corridors of some type. They all go somewhere.

Maryland Greenways Commission. 1990. *Maryland greenways. . . a naturally better idea*. Annapolis: Maryland Greenways Commission.

greenways. One of the best is along the Niagara Escarpment, a prominent landform feature that snakes across southern Ontario for 725 kilometres (450 miles) from Niagara Falls to the Bruce Peninsula. Under the Niagara Escarpment Planning and Development Act, a special Commission is charged with the responsibility of “maintaining the Escarpment and land in its vicinity substantially as a continuous natural environment”.

This Niagara Escarpment Commission (NEC) administers an environmentally based plan, which limits development of private lands to that consistent with protection of the ecological, recreational, and visual qualities of the escarpment. A system of more than 100 public parks is complemented by the links of the Bruce Trail, which was created by a private association. More than 1.3 million visitors use the Bruce Trail annually, including 50,000 who stay overnight. As the lands adjacent to this escarpment corridor become increasingly developed, the value of its network of greenways and associated open spaces grows.

A second Ontario greenway is the result of work in and near Ottawa, carried out by the National Capital Commission (NCC), which has been involved for several decades in creating greenbelts and linked bicycle and pedestrian trails. The trail system includes loop routes along the Ottawa Greenbelt, in Gatineau Park, and along four major water courses. Currently

130 kilometres (81 miles) in length, the system has a variety of surfaces, and is heavily used in all seasons. Development of the NCC system has involved strong central planning and considerable public expenditure; the result contributes greatly to the high quality of life in the Ottawa-Hull region.

There are more than 500 greenways in the United States, many of them small-scale. However, the Bay and Ridge trails around the City of San Francisco are substantial twin greenways, each about 640 kilometres (398 miles) long. The Bay Trail greenway is being created by the Association of Bay Governments, with funding from a variety of public and private sources. Planning and implementation of the Ridge Trail is carried out by a special council, including citizens' groups, municipalities, and various agencies. Municipalities along the trail provide funding for their trail sections, assisted by private grants and donations.

A similar public-private partnership is at work in Oregon to sponsor creation of the Willamette River Greenway, which runs through nine counties and 19 municipalities. Under a State Greenway Law, municipalities are required to adopt plans and ordinances to protect greenway lands, and to take responsibility for managing greenway lands within their jurisdiction.

Some municipalities have established greenway advisory committees, made up of local citizens, to provide planning advice and seek input from other citizens and special-interest groups.

One clear lesson from the American experience: their greenways' success does not flow from massive public expenditures, but rather from a clear vision of the opportunities they offer, and from strong individual

and public commitment to that vision. Creating a greenway can foster a strong sense of pride and accomplishment within a community, and help local people focus more clearly on the kind of place they want to leave to their children.

THE BENEFITS OF GREENWAYS

If in some ways greenways are old ideas dressed up in new clothing, in other ways they represent the forefront of ecological and economic thinking. Implicit in the concept is the recognition of an overlapping matrix of benefits and values. Few greenways, taken individually, will bring all of the benefits described in this chapter. But, as an interconnected system looked at from a regional perspective, in the same way that a network of roads might be evaluated, the benefits of greenways are striking. In a landscape rapidly filling with humankind's infrastructure, greenways provide the natural infrastructure vital to an environmentally sustainable region.

GREENWAYS ARE ECOLOGICAL CONNECTORS

Diversity is one of the fundamental underpinnings of natural systems, providing the abundance of different plants and animals that make them function. The importance of diversity has been recognized, among other places, in the proposed *Wild Life Strategy for Ontario* (Ontario Wild Life Working Group 1991), which ranks the conservation of biodiversity as a primary

goal. As well as protecting the integrity of the ecosystem, a diverse mix of species enhances the potential for human interaction with wildlife and other elements of the natural landscape.

As agriculture and urbanization increasingly fragment natural habitats, the diversity of wild species declines sharply. In effect, the remaining bits and pieces become islands of habitat, isolated in a sea of farmland and suburbs. A major factor in the declining diversity within them is that they are unconnected to other green areas.

In even a completely natural setting, stresses — natural fluctuations in weather and food supplies, for example — can temporarily reduce or wipe out some species. Added to these natural fluctuations are the urban pressures of pollution, disturbance, and predation by cats and dogs. The small size of many habitat

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remnants makes them especially vulnerable to these stresses, and means that some species (e.g., those that require interior forest conditions) cannot be sustained. Severing habitat connections can be lethal for species that use different parts of the environment at various life stages, such as salamanders that breed in ponds but live mostly in forests.

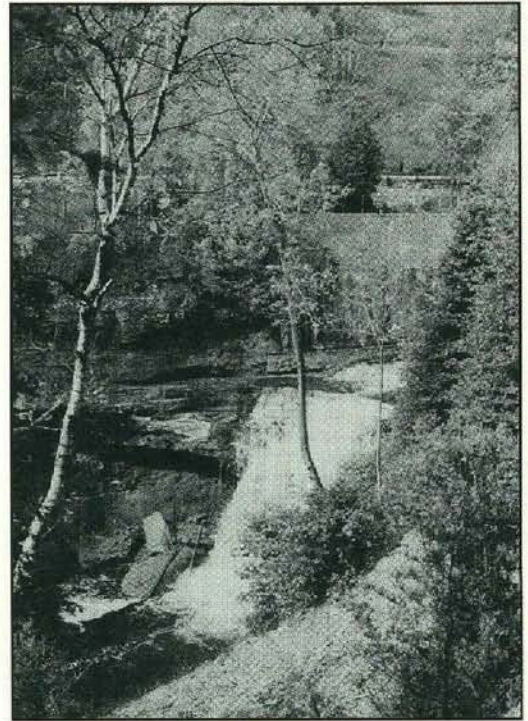
Many species have an innate ability to disperse to escape the effects of these fluctuations or to recolonize once habitat conditions improve. In an urban setting, however, that natural dispersal process is often deadly, the results visible as road kills on almost any highway. Recolonization of isolated islands of habitat, especially by animals, is almost

impossible: when a species is eliminated from its island from whatever cause, it is likely gone for good.

In order to counteract forces that reduce biodiversity, it is vital to maintain and expand natural links among habitat islands. Within the bioregion, greenway corridors along valleys are among the most significant connectors and also provide passageways for migrating birds and butterflies. Improved waterfront connectors could also do a great deal to stem the impoverishment of such isolated habitats as Mississauga's Rattray Marsh.

Re-creating the natural links to these remnant habitats, which were severed as the result of inadequate planning in the past, can help restore their natural balance. These habitat links must be carefully designed because the same stresses that affect habitat islands are at play in narrow greenway corridors. Greenway planners must ensure that habitat links do not become wildlife deathtraps, and must realize that the design of a greenway has a major effect on the species mix that can use it. While there is still more to be learned in this field, the design principles for an area-wide natural heritage system, produced by the Ministry of Natural Resources in April 1991, provide a useful starting point.

In the bioregion's more rural parts, the degree of habitat fragmentation is generally less pronounced, and the effect on wildlife populations is less noticeable. However, in the longer term, the near-urban forces of aggregate extraction, estate housing, roadways, and utility corridors will lead to the same kinds of stresses. Rural communities have the opportunity, in advance, to lay out greenway systems that will protect the integrity of their ecosystem, rather than piecing together remnants of the urbanizing process later.



Forks of the Credit Provincial Park near Cataract in Caledon: part of the Bruce Trail

While greenway connectors are essential in the landscape, they are not a substitute for other forms of sound planning. Environmentally Sensitive Areas, wetlands, and other greenlands have been identified across the bioregion, some of which do not fit logically in a greenway system. Nonetheless, these should be protected, particularly where they are known to shelter rare species or to provide other vital ecological functions.

Greenways are one tool in the package of sound planning processes, but certainly not the only one. Other issues such as agricultural land preservation and countryside management demand ongoing attention outside the context of greenways.

GREENWAYS ENHANCE WATER QUALITY

The degradation of water quality in the bioregion is not simply the result of

point sources, such as sewage treatment plants and factories. Equally important are the multitude of small sources of pollution: eroding streambanks and construction projects, stormwater run-off from streets and parking lots, pesticide and fertilizer residues from lawns, golf courses, and farmland. Greenways, particularly those along stream valleys and wetlands, can help filter and remove these diffuse pollutants, protecting downstream water quality.

Greenways carry out this cleansing function in a variety of ways: vegetated buffers along waterways slow the flow of incoming water, trapping sediments and attached pollutants. Excess nutrients are soaked up by floodplains and wetlands vegetation and eventually are incorporated into the soil.

Vegetated banks reduce erosion, by shielding the soil from the impact of falling rain and by binding the soil in the root system.

In an urban context, greenways can also provide a suitable location for facilities that enhance water quality, such as stormwater detention ponds and wetlands. Properly designed, these features could also be used to improve wildlife habitats and recreational access.

Most greenways include wooded areas, especially along valleylands. Even the shade provided by these woods can be a benefit to water quality: it reduces the photosynthetic process (which requires sunlight) in the stream, thereby reducing the growth of undesirable algae. Shaded waters remain cooler in summer, improving the habitat for fish and other aquatic creatures, and

increasing the water's capacity to hold dissolved oxygen.

In the Greater Toronto bioregion, the Oak Ridges Moraine has been identified as a major recharge area for groundwater, and as a source for more than 30 major watercourses. The water quality in the upper sections of these streams is excellent, because of the high baseflow contribution from the moraine. To maintain water quality in these streams, and to protect the associated cold-water fishery, it is vital to safeguard the moraine.

The Province has recognized this need by expressing a Provincial Interest in the Oak Ridges Moraine, issuing interim guidelines for planning decisions, and initiating a

two-year study to produce a long-term strategy for the moraine.

Maintaining vegetation in key recharge and source areas along the moraine, as part of a greenway system, should be an integral part of that protection. Unless the moraine itself is healthy enough to provide a strong flow of cool water to the bioregion's streams, it will be impossible to restore water quality in their lower reaches.

Even the best greenway system can be overwhelmed by uncontrolled stormwater flows, excessive nutrients, and other pollutants: while greenways can play an important role in improving water quality, they can do so only in concert with other pollution control measures. Therefore, they should be a central part of water quality restoration plans, but cannot be used as a substitute for other measures.

Rural communities have the opportunity, in advance, to lay out greenway systems that will protect the integrity of their ecosystem, rather than piecing together remnants of the urbanizing process later.

GREENWAYS PROVIDE RECREATION OPPORTUNITIES CLOSE TO HOME

As part of the background report, *A Green Strategy for the Greater Toronto Waterfront* (Reid, Lockhart, and Woodburn 1990), the Commission examined trends affecting participation in recreation. Among the more significant:

- a dramatic increase in population to be served, especially on the fringes of the metropolitan area;
- free time being spent closer to home, bringing increasing demands on near-urban facilities;
- increasing interest in the environment and out-of-doors, physical and emotional well-being, and spontaneous

rather than structured recreation activities;

- a rapidly aging population, which will probably lead to increases in the demand for golf, bicycling, walking, and similar outdoor pursuits; and
- strong public support for linked parks and trail systems, and for preservation of natural areas.

Recognizing these trends, as well as evidence of high use of existing cycling and walking trails, the Metropolitan Toronto and Region Conservation Authority has called for a system of river valley and moraine trails as part of its Greenspace Strategy. In his report, *Space for All: Options for a Greater Toronto Area Greenlands Strategy*, former MPP Ron Kanter (1990) also recommended “a series of regional trail systems”. The Royal Commission’s

Figure 5.1 Greenways bring people to the water’s edge



interim report, *Watershed*, echoed those recommendations.

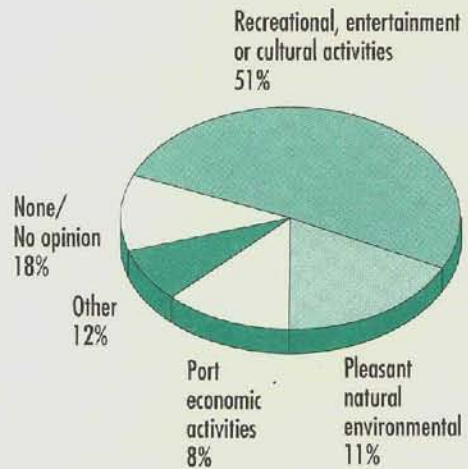
Several conclusions can be drawn from the Commission's background studies and from depositions made at its hearings. First, the value of trail systems is enhanced by increasing their length and interconnectedness. Second, trails are more attractive and more likely to be well-used when they are set in a corridor of greenspace. Third, the increasing time pressures being felt by working people mean that most trails must be immediately accessible, so that recreational use can be integrated into modern lifestyles. Trails that can be used easily as a route to the corner store, or to commute to work or school, will rapidly become part of community life.

Therefore, in a network of greenways, several distinct trail types should be recognized:

- long-distance trail networks, such as those proposed along the moraine, the waterfront, and the major river valleys, will attract users from across the bioregion and beyond who will devote a day, a weekend or a short vacation to the greenway as a destination;
- near-urban greenway trails, on the other hand, are more likely to be used on a regular basis by people from the surrounding neighbourhoods. On American greenways, 75 to 80 per cent of recreational users are people who live within an eight-kilometre (five-mile) range of the amenity.

Clearly, as well as the major regional greenways, it is important to create local links into adjacent communities, so that greenways are accessible and useable. These

Most Important Current Waterfront Use



Half of the respondents consider recreation, entertainment or cultural activities to be the most important current use of the waterfront.

Source: Environics Poll, 1991.

local links might follow tributary streams, or utility corridors, abandoned rail lines or even quiet streets.

The character of local links should be more community-oriented, designed for an evening stroll rather than an all-day cycling trip. While these links are particularly important as part of the urban fabric, they are also an asset in rural communities, especially in those where there has been considerable non-farm residential development.

Greenways located close to home are accessible to all income groups, particularly those who cannot afford the cost of a weekend cottage. To the greatest extent possible, urban greenways should be accessible by public transit, to ensure they remain affordable to all citizens, and to minimize environmental costs associated with car use.

In some cases, development of heavily used recreational trails will conflict with the ecological functions of greenways. Where

such incompatibility arises, the greenway may have to be widened or altered in some other way to allow trails to be routed around wetlands or other sensitive natural environments. Throughout the greenway system, careful design is needed to ensure that recreational uses do not impose unacceptable levels of stress on vulnerable natural areas.

Other design considerations might involve separating recreational uses, so that heavy cycling, for example, does not pose a danger to walkers, or so that horseback riders can use appropriate trails. Users' safety and the security of adjacent communities are also major concerns and must be addressed in the design

of greenways and trails. Especially within urban areas, trails should be designed and patrolled where necessary, so that all users feel physically secure: encouraging frequent use will help maintain safety.

In some places, the popularity of greenways as destinations for visitors and tourists may raise conflicts with local users and this, too, must be considered during design. Particularly in rural municipalities, adequate facilities such as washrooms and parking lots to handle peak periods is essential. Designating suitable parks as recreation nodes is one way of providing these facilities and directing access and levels of use along the greenway.

GREENWAYS BRING ECONOMIC BENEFITS TO COMMUNITIES

Greenways make good economic sense. Living and working in or near a greenway

can enhance the economic prospects of existing businesses and create opportunities for new ventures.

A report by the U.S. National Parks Service (1990), *Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors*, cites examples from across that country of documented increases in property values adjacent to protected greenways. Increases in property values range from five to 32 per cent, particularly near greenways that high-

light open space rather than highly developed facilities. Increased local tax revenues, and increased commercial activity in selected areas in greenways (food concessions,

bicycle rentals, etc.) have also been widely reported. Related tourism developments, such as nearby overnight accommodation and restaurants, can also benefit from a greenway system. The San Antonio Riverwalk, for example, is considered the second most important tourist attraction in the State of Texas. In Ontario, the Bruce Trail has been estimated to have a direct economic impact on the province's economy of at least \$30 million per year, even though the trail corridor is mostly through natural landscapes.

Perhaps more significant than these direct economic effects is the overall impact on a community's image. Greenway projects have been used as a spur for urban redevelopment, prompting private investment in adjacent areas. Their presence through the heart of the city is used aggressively by such places as Sacramento, California to attract new business.

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Given that corporations increasingly cite an area's "quality of life" as a major factor in location decisions, the clean, green, accessible image of greenways is a strong attraction.

They make economic sense on the expenditure side as well because they take advantage of what we already have — hundreds of parks and open-space areas, large and small, along the waterfront and in the valley systems. In some areas, the Humber River for example, the foresight of conservation authorities and municipalities has provided major blocks of public lands along the valley. Linking these together to create a continuous greenway will enhance their use and value, bringing a greater return on past investments.

Greenways are able to take advantage of linear features that do not attract other economic activities — floodplains, abandoned rail lines, and utility rights-of-way, for example. With vision and forethought, greenways can convert low-value, often derelict, remnants of the urban landscape into environmental and economic assets.

In his book, *Greenways for America*, Charles Little (1990) argues that public expenditures on greenways are justified for yet another reason. He refers to the advantages of "edge effect", noting that a long thin greenway looks much the same from the edge as a wooded park that might be a kilometre wide. The linear greenway, therefore, provides a great deal more *apparent* open space from the same acreage. According to Little's calculations, "for every dollar of tax money spent on the traditional blob park, you can get the same edge effect (assuming an equal price per acre) with an expenditure of 18 cents for a greenway".

GREENWAYS MAKE MORE LIVEABLE COMMUNITIES

Over the past several years, the Province has been examining various options for accommodating future growth in the bioregion, through the *Greater Toronto Area Urban Structure Concepts Study* (IBI Group et al. 1990) and other mechanisms. The bioregion currently supports about 40 per cent of Ontario's population on less than one per cent of its land base. This concentration is expected to continue into the foreseeable future, with about six million residents by the year 2021. Continued low-density urban sprawl along the fringes of the city to accommodate this increased population would have undesirable environmental and social effects. Considerable attention, therefore, is being focused on how to concentrate growth into smaller urban areas with a greater emphasis on mass transit.

Greenways can contribute in a very positive way to making such future communities more attractive and liveable. A green infrastructure throughout the city will soften the effects of urban concentration, and provide relief from the stresses of urban life. Corridors of green will replenish oxygen in city air, and help buffer noise and traffic. Urban greenways can be designed to separate communities visually, to help define neighbourhoods at a human scale.

In a practical sense, extended greenways will link the city to the countryside, through trails that provide opportunities for extended off-street travel. Such on-the-ground links can do a great deal to promote mutual respect and understanding between urban and rural residents, and to show urbanites what is happening on the city fringes. In many places, greenway trails can become an alternative and efficient means

of commuting to work, reducing pressure on road and transit systems. Nearby greenways can become resources for educators, fitness classes, and community groups.

Woven into the urban fabric, they help promote human health, both physical and emotional. In a more compact urban form, where there are fewer opportunities for individual residents to have their own private bit of green backyard, greenways can become a kind of community common, where people renew their contacts with nature.

This contact is vital to remind an increasingly urban population that the bioregion sustains us all. We need reminders, too, that the bioregion involves species other than our own, and habitats more complex than the concrete and brick structures that house us. In an informal sense at least, greenways and other green spaces are vital building blocks for the environmental education of this generation and of those yet to come.

GREENWAYS HELP TO STRENGTHEN COMMUNITIES

Characteristically, there is a high degree of community involvement in the creation of greenways. By combining public dollars and volunteer expertise and labour with private investment, establishing a greenway can bring out the best in a community. The U.S. President's Commission on Americans Outdoors, reporting in 1987, said that, among the major goals of greenways, one was to build partnerships among private enterprise, landowners, and local

governments and groups, as well as to encourage local pride. Those partnerships, feeding on the success of greenway projects, can spill over into other aspects of community life.

In the words of Charles Little (1990), "To make a greenway. . . is to make a community."

GREENWAYS PROVIDE LINKS AMONG EXISTING PROGRAMS

One of the difficulties facing both urban and rural communities is the confusing and sometimes contradictory array

of agencies and programs created by all levels of government. Establishing greenway strategies, involving many agencies and citizen groups, provides a mechanism to integrate these programs for at least

the key natural corridors. Of necessity, the process will help agencies document existing public lands and resources, identify gaps and opportunities, and build partnerships necessary to carry out a greenway strategy. This process can and should lead to a more cohesive approach to the waterfront, the major valleys, and the Oak Ridges Moraine.

Developing a greenway strategy should not become just another process, in addition to existing programs for wetlands, ANSIs, floodplains, and the like. Rather, it should be a means of integrating these programs at the community level, and reinforcing them where appropriate.

Such integration can lead to a new appreciation of opportunities for conservation

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Members of Citizens for a Lakeshore Greenway (FLAG)

and recreation. In the Town of Caledon, for example, background work undertaken for the Royal Commission brought together, for the first time, maps of public lands owned by a variety of agencies, and sparked recognition of possibilities for greenway links.

STRUCTURING A GREENWAY SYSTEM

The major elements of a greenway system in the Greater Toronto bioregion can be defined in two tiers: arterial greenways that establish an interconnected framework across the region, and local connectors in each community.

Along the Lake Ontario waterfront, the Province has already developed specific

proposals for arterial greenway development, anchored by the Waterfront Trail. The Niagara Escarpment Plan and Bruce Trail provide an existing greenway along the western boundary of the bioregion. Provincial studies currently under way will help define a ridge-top greenway along the Oak Ridges Moraine in the Greater Toronto Area.

Other arterial greenways most logically follow river valleys, which are well defined in at least their downstream sections. In some of these valleys, such as the Credit, the Humber, the Rouge, and Duffin Creek, significant stretches of public land have already been acquired by conservation authorities, municipalities, and other public agencies.

In addition to these arterial greenways, a network of locally based connecting links should be developed, based on local planning and priorities. In some cases, these connectors can tie into community parks or tributary valleys. They may provide cross-connections between valley greenlands to allow recreational loops by using utility corridors, abandoned rail lines, and parkway belt lands. Especially in the area's eastern sections, the ridges and slopes associated with the Lake Iroquois shoreline (which roughly parallels the existing shore) also provide opportunities for creating links between valleys.

The nature of greenway systems will vary considerably between urban and rural parts of the Greater Toronto bioregion. In urban sections, the width of potential greenways is usually already defined by the presence of residential or industrial developments on either side. Greenway corridors, even those on floodplains, may be threatened by proposals for roadway or utility uses, unless they are protected by strong policies.

Recreational use of greenway trails will be heavy, and public ownership of core greenway lands is likely to be necessary. In some circumstances, however, it would make sense to include a band of existing or proposed development within the greenway. This zone could be recognized in planning documents as requiring special policies to minimize conflicts with the ecological, aesthetic, and recreational values of the greenway. In many places, these private lands could help to buffer the core of the greenway from adjacent urban uses.

The boundaries of greenways in rural areas are more difficult to define, and the need to create greenways may seem less immediate. It is there, however, that vital opportunities exist to help shape the future form and quality of the bioregion. Ecological arguments for greenways should play a major role in defining rural greenways, particularly the need to protect downstream water quality. Private lands in wider greenways in rural areas can continue to support compatible uses such as agriculture, small hamlets, and scattered estate development. Potential greenways should be examined not only in the context of a regional network, but also as a component of overall rural planning, to address the conservation

of a living, functional countryside in the shadow of the city.

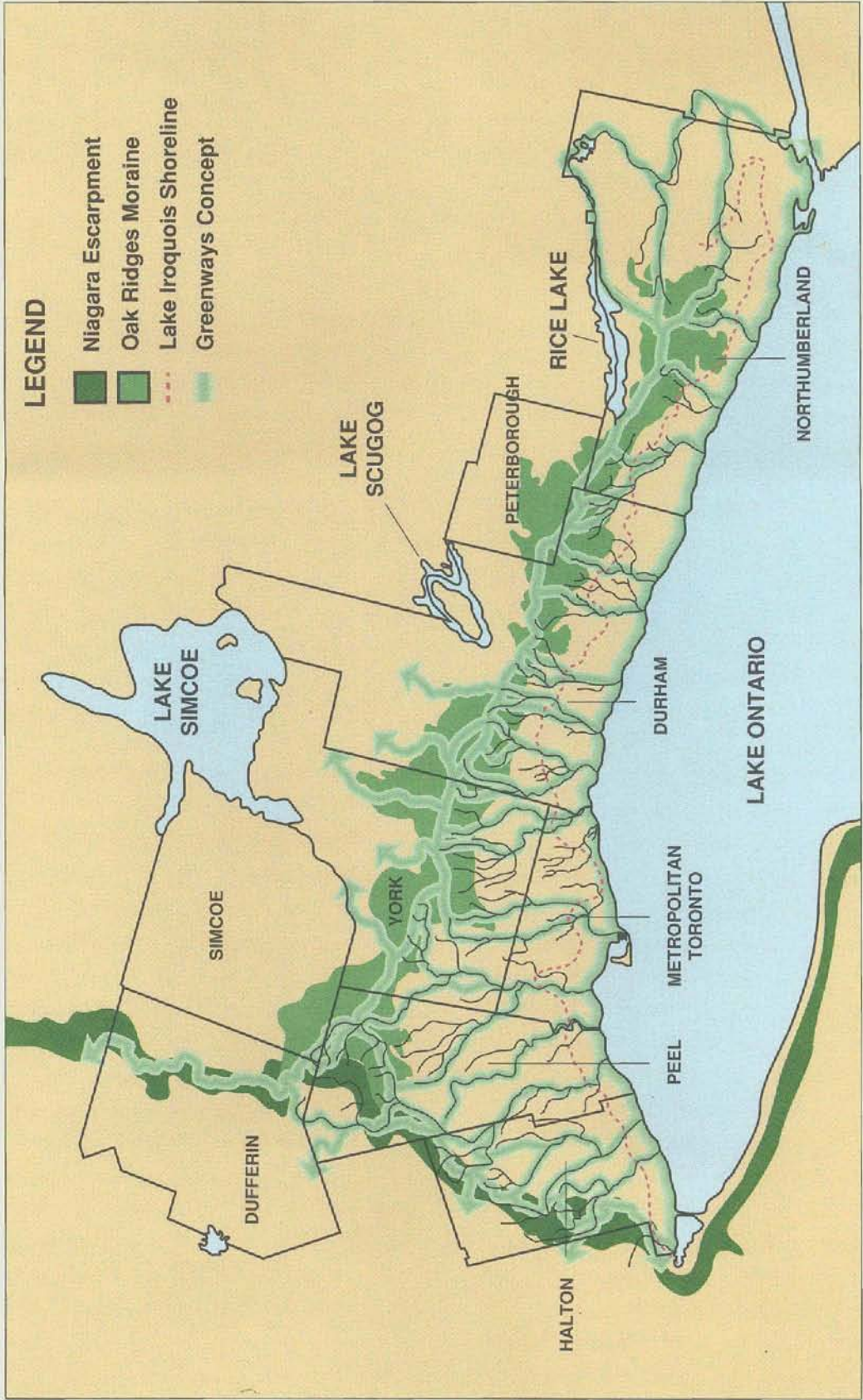
Several beginnings have already been made. For example, a greenlands strategy has been developed by the Region of Halton

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(1990), in conjunction with local municipalities and conservation authorities. It recognizes the significance of a linked system, and proposes a series of implementation steps related to policy formulation: a regional parks system, land acquisition, property tax incentives, and tree-cutting by-laws. More recently, the Town of King has proposed to establish a Greenways Advisory Committee to draw up plans for a municipal greenway system. An MTRCA proposed program would establish a 900-kilometre (560-mile) inter-regional trail system that could form a basis for greenways.

This evidence of local interest should be matched by provincial support and

Map 5.1 Greenways and trails concept for the Greater Toronto bioregion



assistance. Because arterial greenways can be expected to serve users from across the Greater Toronto bioregion and beyond, provincial involvement in setting a policy framework, design standards, and funding is necessary and appropriate. Local connectors are oriented more towards local use and can be left more readily to the community. However, provincial support and encouragement (for example, through the community assistance programs of the Ministry of Tourism and Recreation) may also be justified — a recognition of the benefits of their proximity to local residents, and of their contribution to the overall system.

While greenways should make maximum use of existing public lands in these corridors, not all lands in greenways need to be publicly owned. For example, lands with particular biological or visual significance might often be better protected in sympathetic private hands, with public access restricted. A range of alternative techniques, such as conservation easements, can be employed to provide long-term protection of specific features, without buying land outright. Municipal planning powers, together with more comprehensive regulatory powers for conservation authorities, could be employed to ensure that any development in designated greenways is compatible in scale, location, and design with greenway purposes.

This vision of creating greenways includes all existing public lands, such as those owned by Ontario Hydro and other agencies, to form the core of a greenway system. For example, on the 133 kilometres (83 miles) of proposed waterfront greenway outside Metro Toronto, 37 per cent is now publicly owned (mostly by conservation authorities and municipalities) and is

accessible, with an additional 17 per cent owned by other public agencies but not currently accessible.

Added to all greenways will be lands dedicated during development of adjacent properties, and lands purchased by public agencies for such related projects as flood protection and shoreline stabilization. Public acquisition of key properties may be necessary in crucial locations, particularly to establish public access links.

Enlisting the support and involvement of the development industry could bring significant benefits to the greenway system. For example, local developers have been major supporters of establishing the Georgian Trail between Collingwood and Meaford, because the trail makes adjacent residential developments more attractive. For the same reason, developers in the bioregion may find that a greenway in the neighbourhood, perhaps using some of their lands, becomes a selling point for their projects.

IMPLEMENTING GREENWAY PLANS

The detailed planning for greenways, and the steps needed to make them reality, cannot be carried out effectively by any single agency. Rather, implementation should involve provincial agencies, conservation authorities, regional and municipal governments, private non-profit groups, and land-owners acting on the basis of a common vision of the greenway system to be created.

Successful experience elsewhere shows that developing this vision must strongly involve the community at its grass roots. In the context of the bioregion, it is vital to have a strong emphasis on watersheds as a planning level for greenways.

In the State of Maryland, a special Greenways Commission appointed by the Governor in 1990 examined greenway benefits and opportunities, and urged the state and local governments to “embark on a bold adventure . . . pioneering a statewide greenway network”. The Maryland study (Maryland Greenways Commission 1990) did not call for new greenway legislation, but proposed better use of the existing complement of tools available. Ontario needs a similar call to action, along with a package of provincial incentives to catch the interest of landowners and municipalities.

Given their current land holdings, their watershed orientation, their regulatory powers, and their position as a partnership between the Province and municipalities, conservation authorities must be important players in a greenway system. Citizen groups, including such groups as Citizens for a Lakeshore Greenway, Action to Restore a Clean Humber, Save the Rouge Valley System, and Friends of the Credit River Valley, must also play a part. Other co-ordinating bodies such as the Don Watershed Task Force, being established by MTRCA, can also play a central role. However, if the full range of resources and public enthusiasm for greenways is to be captured, we believe a co-operative approach, rather than a single agency, is required.

The active involvement of municipalities in creating greenways has particular potential: as the level of government closest to the people, municipalities can be expected to represent local interests in greenway design, and to ensure that greenways are responsive to local needs. Through their planning powers and recreation programs, municipalities also have many opportunities to help make greenways a reality. If initiatives are viewed as simply

another program of the conservation authority, or of the Province, they will fall far short of their potential. Municipalities must become full partners and, in some cases, they should become the leading partners in creating greenways.

Across the bioregion, mechanisms for implementing the greenway system will differ. Its three major components — the waterfront, the Oak Ridges Moraine, and valleyland and community connectors — can be examined individually.

THE WATERFRONT GREENWAY

The Province has accepted responsibility for co-ordinating a waterfront greenway and establishing trails; to do so, it will have to co-ordinate intergovernmental policies and programs along the waterfront, and manage provincial lands, assets, and information resources. This will guarantee a strong continuing provincial presence along the waterfront, an area where creating some greenway links will be particularly challenging.

In carrying out this work, the Province may wish to develop Partnership Agreements with municipalities, conservation

The planning of a greenway begins with the commitment of a group of people. Energy is more important, at this point, than financial resources, and enthusiasm is more important than expertise.

Howe, L. 1987. *Keeping our garden state green: a local government guide for greenway and open space planning*. New Jersey: New Jersey Department of Environmental Protection.

authorities, and others. Progress will be monitored, and no doubt encouraged, by a new non-profit group, Citizens for a Lakeshore Greenway.

Development of the waterfront greenway will be assisted by the 1991 study carried out for the Province, *The Waterfront Trail: First Steps from Concept to Reality* (Reid et al.), which recommends optimum and interim routes for the Waterfront Trail outside Metro Toronto, and also identifies certain additional lands to be used for a greenway. The report notes that, while a substantial amount of the shoreline is now in public hands, significant stretches are privately owned, with varying opportunities for ecological restoration and public access in future. In September 1991, Metro announced the formation of a Working Committee to oversee completion of a Lakeside Trail in the municipality, which will complement the provincial work already done.

In the previous chapter, preparation of an integrated plan for the bioregion's shoreline is recommended as part of shoreline regeneration. This plan will address such issues as future lakefill management and protection of significant natural habitats. Because these elements and the objectives of a waterfront greenway overlap, and because future land acquisition and related shoreline protection activities will provide opportunities for trail and greenway links, such a plan should incorporate greenway design.

RECOMMENDATIONS

35. The Royal Commission recommends that the proposed shoreline regeneration plan for the Greater Toronto bioregion include basic design and policy for a waterfront greenway, and

Type of New Waterfront Facilities Wanted



More than a quarter of the respondents favour more park lands, walking trails, and bike trails along the waterfront.

Source: Envirionics Poll, 1991.

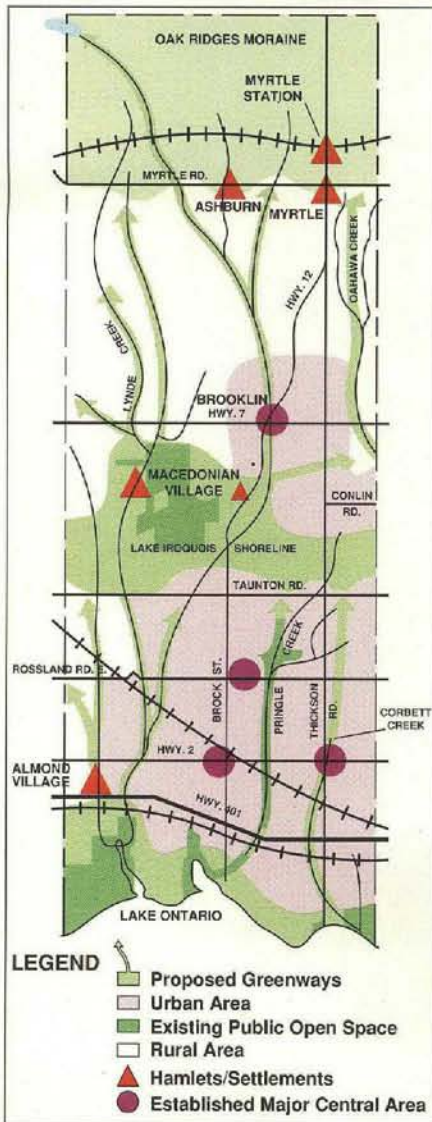
provide for ongoing consultation with affected municipalities, conservation authorities, other agencies, and citizens' groups.

36. The Royal Commission further recommends that a waterfront greenway be of sufficient scope to incorporate the recommended interim and optimum routes for the Waterfront Trail. Policies for public lands along the waterfront should reflect the Province's assertion that the Waterfront Trail will be "the highest land use for all public lands along the water's edge". Policies should be developed for private lands in the greenway to encourage landowner participation in ecological restoration. In some cases, such as major blocks of private waterfront lands, negotiated public access should be sought. In

THE LYNDE VALLEY AND OTHER GREENWAYS IN THE TOWN OF WHITBY

Three major greenway components cross the Town of Whitby: the waterfront, the Oak Ridges Moraine, and the twin branches of Lynde Creek. There are several other significant local greenway opportunities along the east-west ridge created by the shoreline of prehistoric Lake Iroquois, as well as along several streams that rise from this landform feature.

**Map 5.2 Town of Whitby:
potential greenways**



Approximately 70 per cent of Whitby's shoreline, including several important wetlands, is publicly owned. A shoreline management study sponsored by the Central Lake Ontario Conservation Authority (CLOCA) recommended development setbacks along the entire shore, related to erosion rates. These setbacks, combined with the Town's planning policies, should result in a permanent open-space corridor along most of the shore. A recent provincial study, *The Waterfront Trail: First Steps from Concept to Reality* (Reid et al. 1991), recommended that a larger block of parkland be acquired on Thickson's Point, which provides sweeping vistas along the shore. Whitby has recommended that a large regionally significant open-space area be created south of Highway 401, between the Lynde Shores Conservation Area and Ajax.

On the other hand, there is currently no public parkland in the Whitby section of the Oak Ridges Moraine, which runs across the northern section of the town. Developing east-west greenway links along the moraine, either in Whitby or in neighbouring Scugog Township, should be a high priority.

CLOCA owns two major nodal parks in the Lynde Creek Valley: the 176-hectare (435-acre) Lynde Shores Conservation Area

at the creek mouth, and the 269-hectare (665-acre) Heber Down Conservation Area just north of Taunton Road. The Town of Whitby has secured extensive portions of the

valleyland system south of Heber Down Conservation Area through dedication of land as subdivisions were being developed.

North of Heber Down, where there is less immediate urban pressure, the valleylands are likely to remain in private hands for some time, and a regulatory framework to protect the natural continuity of the valleys will be essential. Landowner agreements to encourage habitat improvement and to negotiate trail corridors would be useful there. North of Myrtle Road, greenways from the east and west branches could be merged to create a single corridor north to Chalk Lake (in Scugog Township), Lynde Creek's major source.

There are a number of unopened road allowances in Whitby's rural areas. These should be considered as possible interim — or, in some cases, permanent — links in the greenway system. Within the wooded and environmentally sensitive areas along the pre-historic Lake Iroquois shoreline, there are opportunities to create east-west links across Whitby and into the neighbouring municipalities. Existing Ontario Hydro and Northern Gas rights-of-way could provide potential greenway links.

The Town has acquired most of the Pringle Creek Valley between Taunton Road and its mouth; it would be useful to extend this greenway north to link with the Lake Iroquois shoreline. The majority of the Lynde Valley system up to Rossland Road is also publicly owned. Further east, the Corbett Creek Valley could provide another greenway link. The recently adopted Region of Durham Official Plan and the Whitby Official Plan Review include a major open-space corridor between Whitby and Ajax.

Like many waterfront municipalities, Whitby has made considerable progress in securing linked open-space corridors in its more urban areas. Developing a greenway system in the rural countryside to the north will require partnerships with a variety of private landowners, and with existing commercial users such as the owners of golf courses, tree nurseries, and ski resorts.

One of the five development principles established as part of the Whitby Official Plan Review process — establishing and maintaining linked systems — provides a policy framework for a greenway system. With the participation of CLOCA, other government agencies, and community groups, the Town of Whitby appears to have a strong basis for future greenway development.

all cases of new development along the waterfront, provision for a public trail alignment should be required.

37. The Province of Ontario should maintain a resource centre and technical assistance service on greenways, land trusts, and other conservation mechanisms, available to any agency or citizens' group in the bioregion.

THE OAK RIDGES MORaine

In June 1991, the Province released Implementation Guidelines on the Provincial Interest in the Oak Ridges Moraine Area. These are intended to control development activities in the Moraine while a two-year planning study, including extensive citizen involvement, takes place.

In October 1991, a founding committee was established for a non-profit organization

dedicated to developing an Oak Ridges Moraine trail system. Preliminary work on trail routes has been carried out by MTRCA, and further investigation of trail options is under way by the Province. An equestrian trail, most of it located along roadways, has been in existence since 1975.

These activities suggest growing recognition of the ecological and recreational values of the moraine as an interconnected unit. The Implementation Guidelines recognize the importance of “stream corridors and other linear natural features which may serve as passageways for animal movement”, and require the maintenance of “the health and functionality of natural corridors”. It would appear to be a short step further to recognizing the potential of connected linear features in the moraine as a greenway system.

One of the moraine’s striking elements is its similarity to the Niagara Escarpment. In both cases, a linear landform feature and associated natural landscapes are the focus of attention. In both cases, water quality in streams is a major concern. In both cases, threats to future integrity of the natural landform involve urban and scattered residential development, aggregate extraction, and intensive recreational developments such as golf courses. In both cases, the features of interest cut across many jurisdictions, with the Province involved to ensure that provincial interests are protected (see also Chapter 2).

Recognizing east-west elements of the moraine as greenways faces several key challenges. First, the amount of existing development, both agricultural and urban-related, in the moraine area means that a greenway there must incorporate cultural landscapes

as well as natural ones. Second, the moraine currently has only a few nodes of public lands, without extended parklands to act as a spine for conservation and recreation uses. Third — and unlike the Niagara Escarpment, which usually has a sharply defined cliff as its centrepiece — the moraine landform is relatively diffuse.

These challenges do not lessen the need for effective conservation of the moraine’s natural functions; if anything, they strengthen the case for provincial involvement. They also demand new and innovative approaches, to join the needs of a working landscape, in large part privately owned, with the ecosystem imperative that must guide land use there. Therefore, a system of ridge-top and valley greenways, designed to strengthen ecological and recreational links, should be a key element of future planning for the moraine.

RECOMMENDATION

- 38.** The Royal Commission recommends that the Oak Ridges Moraine Technical Working Committee incorporate the concept of greenways, as part of an ecosystem planning framework, into the planning exercise currently under way, and address the need for east-west links along the length of the moraine, and for continuity of an open landscape character.

VALLEYLAND AND COMMUNITY CONNECTOR GREENWAYS

Implementing a greenway system in the bioregion’s valleylands and communities means finding a balance between an ecosystem-based, cross-jurisdictional system,

and the desire for a grass-roots, community-based approach. Sorting out who does what may require a fair measure of co-operation, as well as a degree of provincial supervision and co-ordination. In many cases, citizens' groups with an interest in greenway benefits can lead the way, helping to define which institutional arrangements will work best for their community.

A logical starting point for most valley-land greenways is the watershed. Some watersheds cross many municipal jurisdictions, as in the case of the Don, or have valleys that form municipal boundaries, as in parts of the Rouge, the Humber, and several other rivers. In such cases, leadership for a connected greenway system will likely come from either the conservation authority or citizens' groups. In other cases, such as Whitby, most of the watershed is in one municipality, which may want to take the opportunity to create a greenway system. Elsewhere, the Town of Caledon has potential greenways related to the Niagara Escarpment, the moraine, the Credit and Humber valleys, all inside its boundaries. It would seem sensible for the Town to play a key role in integrating greenways into its jurisdiction.

In each watershed or municipal unit, the most important step is to develop a co-operative mechanism to create and implement a common greenway vision. This might be called a Community Greenways Alliance, and should include representation from:

- local municipal planning and parks/recreation departments;
- the regional municipal planning department (and parks department, if there is one);

- the local conservation authority;
- any provincial or federal agencies with land holdings or programs in the greenway area;
- local or regionally based environmental and recreation interest groups (hiking or cycling groups, naturalist clubs, land trusts, etc.);
- local community development groups (service clubs, business groups, etc.); and
- major private landowners or developers.

These suggestions for representation on greenway committees are not meant to be exclusive: for example, if a particular greenway incorporated a number of structures of historic or architectural interest, a representative from the local architectural conservation advisory committee (LACAC) would be appropriate. If the potential greenway included considerable farmland, a representative of the agricultural community should be present at the table.

These alliances have four goals:

- to develop a community greenway strategy, incorporating both arterial greenways and local connector links;
- to recommend an implementation plan for the various elements of the strategy;
- to co-ordinate specific mandates and tasks among various agencies and groups, and to build appropriate partnerships; and
- to monitor progress on implementation, and set priorities for further action.

Each alliance should be assisted by a staff person, who would report to it but could receive administrative support from

POTENTIAL GREENWAYS IN THE TOWN OF CALEDON

The Town of Caledon, in the northwestern section of the Greater Toronto bioregion, is situated at the intersection of four provincially significant greenway corridors: the Niagara Escarpment, the Oak Ridges Moraine, the Credit Valley, and the Humber Valley. While the Caledon area does not have a major urban centre, Bolton, Caledon, Caledon East, and a half-dozen hamlets are experiencing considerable growth. Largely because of its scenic landscape, Caledon is under tremendous pressure to develop rural estates.

Land use in a band along the Niagara Escarpment is controlled by the provincially appointed Niagara Escarpment Commission, which has a mandate to maintain the natural environment and open landscape. Public lands along this landform are included in six escarpment parks, linked by the Bruce Trail. The trail was created and is managed by a private non-profit association but, through the escarpment parks program, receives some funding for land acquisition, in order to secure a permanent route.

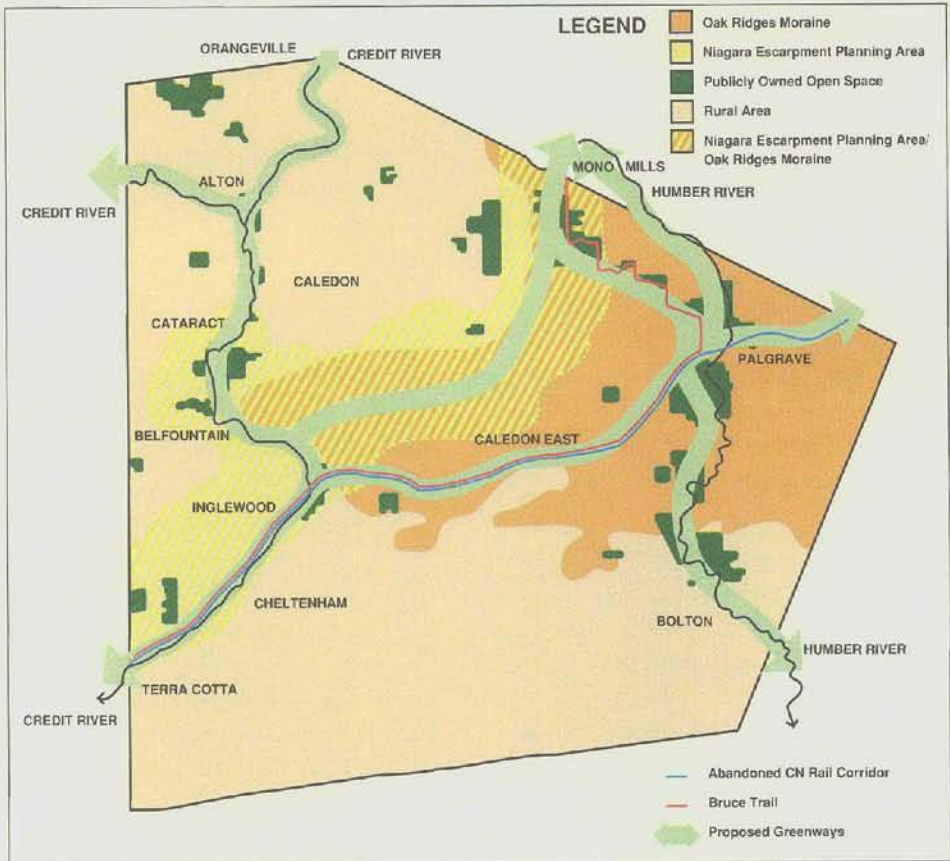
The Metropolitan Toronto and Region Conservation Authority (MTRCA) has acquired a great deal of land in the Humber Valley between Bolton and Mono Mills. Three large nodal parks along this valley — the Albion Hills, Palgrave, and Glen Haffey conservation areas — are located in the Oak Ridges Moraine. MTRCA has proposed development of a Humber Valley trail, which would have to be linked to other greenway features throughout the valley. The Humber Heritage Committee, a group representing the watershed municipalities, is attempting to have the Humber designated as a Canadian Heritage River. Another citizens' organization, Action to Restore a Clean Humber (ARCH), is also active in issues affecting the watershed.

The Credit Valley Conservation Authority (CVCA) has assembled several strategic open-space nodes along the river, in the vicinity of Terra Cotta, Inglewood, Belfountain, Alton, and Caledon Lake. In addition, the Ministry of Natural Resources operates the Forks of the Credit Provincial Park near Cataract. A program to develop a continuous trail system along the Credit River from Lake Ontario to Orangeville was initiated by the Town of Caledon and supported by all government agencies. CVCA recently agreed to co-ordinate preparation of a concept plan for this continuous pathway system. A non-profit group, Friends of the Credit River Valley, will assist and support this project.

Caledon has been fortunate in its ability to develop east-west links along the Niagara Escarpment and Oak Ridges Moraine, which actually overlap in Caledon and have been connected by a number of conservation areas and the Bruce Trail. The Town recently purchased a former CN Rail corridor, which cuts diagonally across the full width of the municipality, and is being developed as a passive trail for non-motorized activities. This strategic corridor links many historic hamlets in the Caledon area, and provides a direct connection between the Credit and Humber valleys, the Niagara Escarpment, and the Oak Ridges Moraine.

The Great Pine Ridge equestrian trail is a connection to eastern portions of the moraine and other trail links, running east along the moraine, have been proposed by

Map 5.3 Town of Caledon: potential greenways



MTRCA and the Oak Ridges Moraine Planning Committee. In October 1991, a public meeting was held to discuss establishing an Oak Ridges Moraine Trail Association.

The Caledon Official Plan dates from 1976 and is currently undergoing a major review. Given the significant existing and potential greenway network in Caledon and the number of agencies and citizens' groups involved, the Town has an opportunity to build on its accomplishments and forge an extensive and fully integrated greenway system. By building community support and enlisting the co-operation of private landowners, effective ecological and recreational links can be achieved between existing public lands.

any one of the agencies involved. The work of the alliances would also be assisted by provincial policy support, technical advice, and financial assistance.

As part of developing a strategy, the alliance would consult with the community,

using public meetings and other forums. The alliance's recommendations would guide relevant agencies in their greenway-related activities, as well as building a consensus for greenway development. The completed greenway strategy would become

a part of the municipal Official Plan and other related documents (such as recreation Master Plans). The plan would be designed as an integrated part of community planning, rather than being viewed as external to the life of the community. It would clearly spell out responsibilities for implementation, with leadership roles to be determined through local negotiation.

A greenway strategy should bring together the needs, resources, and aspirations of the community, as well as the abilities and interests of various groups and agencies. Among its elements should be:

- an analysis of ecological resources (natural areas, watercourses, significant groundwater areas, etc.) to identify significant green nodes and connecting corridors;
- identification of existing and potential recreational attractions, trails, and other connectors;
- an inventory of existing public lands, as well as of properties slated for public acquisition, and opportunities for securing other high-priority lands;
- an analysis of visual corridors, to protect the scenic quality and appeal of proposed greenways, and to provide community separation where that is appropriate;
- integration of significant heritage elements;
- management guidelines for public lands and for compatible private land uses such as agriculture, etc.;
- identification of opportunities for compatible economic development in or adjacent to greenways;
- guidelines for the safety and security of greenway users and adjacent

landowners, and for insurance coverage where necessary;

- strategies for enhancing ecological and recreational connecting links where that is appropriate; and
- a list of priorities necessary to create or complete greenways, as well as proposed mechanisms and responsibilities for undertaking those actions.

Community greenway alliances would not disband once their strategies were completed and accepted. Rather, they would continue to co-ordinate implementation and management activities. For example, they could play a role in programming greenway uses, to ensure these continue to be valued by the community. They could work to create partnerships for specific projects, monitor progress, and address problems as they occur. Their most important ongoing role would be to ensure that greenway strategies are not simply put on a shelf, but form a guide for a wide range of concrete actions.

RECOMMENDATIONS

- 39.** The Royal Commission recommends that provincial and local agencies encourage and support creation of community greenway alliances at the watershed or municipal level, as appropriate. Regional interest groups such as Citizens for a Lakeshore Greenway, Friends of the Credit River Valley, Action to Restore a Clean Humber, and Save the Oak Ridges Moraine should be closely involved in defining the most logical units for these alliances.
- 40.** The Royal Commission further recommends that in developing community

greenway strategies, alliances pay particular heed to the need to:

- build municipal and other bodies' commitment to the greenway concept;
- create links compatible with an overall greenway system for the bioregion;
- give priority to protection of ecological systems, while providing informal recreation opportunities close to home;
- create mechanisms to effectively involve private landowners and developers.

4.1. Community greenway strategies should focus on creating a common vision, a community consensus, and a community commitment to work toward implementing that vision. In developing greenways, communities should take advantage of considerable valleylands that are already publicly held.

4.2. Community greenway strategies should include creation of continuous arterial greenways in the following valleys:

Grindstone Creek
Bronte Creek
Sixteen Mile Creek
Credit River
Humber River
Don River
Rouge River
Duffin Creek
Lynde Creek
Oshawa Creek
Bowmanville Creek
Wilmot Creek

Ganaraska River
Cobourg Brook
Shelter Valley Brook

THE PROVINCIAL ROLE IN CREATING GREENWAYS

Speaking in the Legislature on 17 December 1990, the Honourable Ruth Grier, Ontario's Minister of the Environment, said:

Our clear endorsement of Mr. Crombie's principles should be viewed by municipalities and the community as a ringing endorsement of the ecosystem approach to planning as well as to the underlying values of the Commission report. . . . We intend to use those nine principles as a guide, not only for the waterfront, but to move beyond the waterfront — to the GTA urban structure process.

Provincial support and assistance in creating greenways should be a central component in carrying out this commitment. The Province should require that greenways be considered an integral part of the infrastructure of municipalities in the future; when land-use planners talk about infrastructure needs, they should also be talking about greenways with the same emphasis as they give roads, sewers, electricity, and other essential services.

Several forms of provincial involvement in creating greenways are needed:

- legislative and policy backing, for provincial agencies, conservation authorities, and municipalities;
- direct involvement in implementation in selected areas, particularly along

the waterfront and on the Oak Ridges Moraine;

- technical assistance on greenway design and implementation, in support of community activities;
- financial commitment for planning activities, priority land acquisition, and trail development and maintenance; and
- broad co-ordination of a greenway system throughout the bioregion.

One of the key questions about the provincial role is whether a comprehensive new greenways act is required; while such legislation would symbolize provincial commitment to the concept, this Commission does not believe it is a prerequisite to action at this point. However, several amendments to existing legislation are required, to strengthen tools for creating greenways.

It is more important, in the Commission's view, for the

Province to create incentives for creating greenways. These can be viewed in two packages: those that encourage municipalities and other agencies to take part in greenway planning and implementation; and those that secure participation by private owners of land in greenways.

Many of the incentives proposed in Ron Kanter's 1990 report, *Space for All: Options for a Greater Toronto Area Greenlands Strategy*, can be applied to greenways. For instance, the proposals for a five-year, \$100-million acquisition fund and for a Greenlands Foundation warrant further consideration.

In general, public acquisition of land should be considered a last resort in securing greenways. However, there will be instances, particularly where vital connectors for trails or other public access are required, in which no other means are likely to succeed. Without some form of significant provincial funding, a program of greenways in the bioregion would be crippled from the start.

Rather than simply allocating a set amount from the Consolidated Revenue Fund, however, there may be alternate, more effective means of providing funding. In the same way that a special tire tax is now collected to fund environmentally sound tire disposal, a designated tax source tied to land development could be used to create greenways and, thereby, contribute to environmental health.

Some American states levy a greenway surcharge on the Land Transfer Tax; typically in the one-to two-per-cent range, it has the advantage

of producing added revenues when development activities are at their peak, and when funding for protecting greenways is most needed.

Given the emphasis on community involvement in greenways, it would seem entirely consistent to provide funding assistance for acquisition on a matching, rather than a full-cost, basis. Again, experience in such American states as New Hampshire provides some interesting possibilities. Rather than providing a set rate of matching funding, they allow local agencies to "bid" for funding, based on the ability of the to pay, the priority given to the project, the

When land-use planners talk about infrastructure needs, they should also be talking about greenways with the same emphasis as they give roads, sewers, electricity, and other essential services.

Greenways . . . have the potential to be this country's most important land-based effort for conservation and recreation in the next several decades They can . . . give pride of accomplishment and responsibility to millions of people in every community. They can protect vital water, fish, wildlife, and recreation resources as integral parts of the growth of cities and communities. And, if greenways truly capture the imagination and boldness of the American spirit, they could eventually form the corridors that connect open spaces, parks, forests, and deserts — and Americans — from sea to shining sea.

President's Commission on Americans Outdoors. 1987.
Americans outdoors: the legacy, the challenge. Washington, D.C.: Island Press.

ability to attract matching funds, and other factors.

If a landowner agrees to sell below full market value, the donated value can be used as part of the local matching funds, as can the value of lands or conservation easements donated elsewhere in the local system. This flexibility greatly increases incentives for local creativity, and maximizes the value received for each public dollar.

Administering grants and other incentive programs could be carried out by an appointed Greenways/Greenlands Foundation, which could also act as an agent of the Crown to receive donations. One model for this foundation is the British Countryside Commission, a highly successful agency that collaborates with others to benefit the countryside. Among other things, the

Countryside Commission carries out research on landscape change and leisure patterns, and on new approaches to the care and enjoyment of the landscape. It works with planning authorities, provides technical advice, and offers grants to landowners and agencies for conservation and public access projects. While it places great emphasis on partnerships, it does not own or manage land directly.

Given its current initiatives, the Province is already strongly involved in creating greenways along the waterfront and in the Oak Ridges Moraine and Niagara Escarpment areas. Elsewhere in the bioregion and in other parts of Ontario, the Province should act as catalyst and supporter of local actions, and as a partner in providing new tools and funding support for establishing greenways.

RECOMMENDATIONS

43. The Royal Commission recommends that the Province give high priority to introducing a legislative package as follows:

- amendments to the relevant sections of the Conservation Authorities Act to clarify the mandate of conservation authorities to undertake environmental protection and recreation activities related to greenways;
- amendments to the Planning Act to require that, in the case of development, valleylands, wetlands, and other significant natural environments be dedicated to a public agency, or protected in private hands through such



Meewasin Valley Trail, Saskatoon

permanent mechanisms as conservation easements; this would be in addition to lands dedicated for park purposes;

- introduction of enabling legislation to permit municipalities, conservation authorities, and non-profit conservation organizations to hold conservation easements, so that local bodies can use this important conservation technique.

44. The Royal Commission further recommends that, under the Planning Act, the Province prepare a policy regarding the incorporation of greenway strategies into municipal Official Plans, and define the elements to be included in a greenway strategy.

45. The Province should establish a greenways/trails unit in the appropriate ministry to co-ordinate policies, programs, and activities across Ontario, and to act as a source of technical assistance and advice for local jurisdictions.

THE ROLE OF THE FEDERAL GOVERNMENT

While most activities related to greenways involve provincial or municipal agencies, there are several ways in which the federal government can play a supportive role: for example, it could make a statement of support for partnership arrangements involving federal lands or could formalize the process for disposing of abandoned rail rights-of-way which, in some

cases, could provide important recreational links.

At present, once a railway line has been abandoned, federal authorities have no jurisdiction over the property, which reverts to the railway. The railway may then sell rights-of-way in parcels, as it sees fit, or retain them for real estate development (obviously the most profitable course in urban centres).

The federal government can also use its taxing powers to encourage private landowners to participate in greenways. While it is likely that, over time, some public-spirited landowners may be willing to donate lands for greenways, a donation of real property to the Crown or to a non-profit charity is a “deemed disposition” for tax purposes: the donor may be liable for significant capital gains taxes, although he has donated his property for public benefit.

The inequity of this situation has been recognized in cases where cultural artifacts are donated, through the Cultural Property Import and Export Act, which exempts them from being considered capital gains in the donor’s income. Designated non-federal institutions are also allowed to issue charitable receipts equivalent to those for gifts to the Crown, which can provide a tax advantage to the donor. Similar treatment is needed for those who donate natural lands or interests in lands. Otherwise, the painting of a natural landscape could be more favourably treated than a gift of the land itself.

RECOMMENDATIONS

46. The Royal Commission recommends that the Government of Canada

encourage its departments and agencies to co-operate, in any feasible way, in establishing greenways involving federal lands.

47. The Royal Commission further recommends that the federal government, in co-operation with the provinces and the railways, seek to establish adequate formal procedures for disposing of rail rights-of-way after they have been abandoned, so that they can be acquired or retained for future use as a greenway corridor, if any level of government deems that use desirable.

48. The federal government should introduce appropriate legislation or amendments to permit significant lands, or interests in lands, to be donated to qualified organizations without triggering capital gains assessments, and to permit the use of a tax credit up to the full value of the donation.



CHAPTER 6: WINTER WATERFRONT

The greenway system proposed in the previous chapter offers opportunities for more people to enjoy the waterfront. Those who currently visit it in the colder months know how beautiful the shoreline is, year-round. However, most people assume that high-quality outdoor waterfront experiences in the Greater Toronto bioregion occur only during the summer months. Therefore, it is useful to examine the potential of the waterfront and river valleys to create different but equally memorable experiences in the colder months, from mid-September to mid-May. Harbourfront and the City of Toronto's eastern beaches offer examples of waterfront areas already well-used throughout the year.

In April 1990, the Board of Trade of Metropolitan Toronto suggested to the Royal Commission that a study be undertaken to "explore the possibilities of more wintertime recreational and entertainment activities along the central waterfront." As a result, the Commission organized a work group comprising representatives from local

and regional agencies, including the Board of Trade, to examine ways of enhancing outdoor use, and to prepare a report on the matter. The *Winter Waterfront* working paper was released by the Commission in December 1991 as a contribution to enhancing

year-round waterfront use in Metropolitan Toronto.

The Greater Toronto waterfront is more than 175 kilometres (109 miles) long, encompassing

an impressive variety of places — from peaceful natural wilderness areas to towering residential condominiums adjacent to highways and commercial/tourist facilities. From Burlington Bay to the Trent River, there is a great deal of potential to improve year-round waterfront use, at low cost.

*From Burlington Bay to the Trent River,
there is a great deal of potential
to improve year-round waterfront use,
at low cost.*

ENHANCING WINTER WATERFRONT USE

Emerging development of a greenway system will increase year-round use of the Greater Toronto waterfront. Municipalities and conservation authorities would benefit

from sharing pertinent information and participating in joint waterfront user studies. Municipalities could also contribute by adopting and implementing policies that achieve six major goals:

- providing year-round access;
- ameliorating outdoor climate;
- providing facilities to accommodate year-round activities;
- increasing year-round opportunities for contact with nature;
- enhancing user safety; and
- improving winter events and programming.

PROVIDING YEAR-ROUND ACCESS

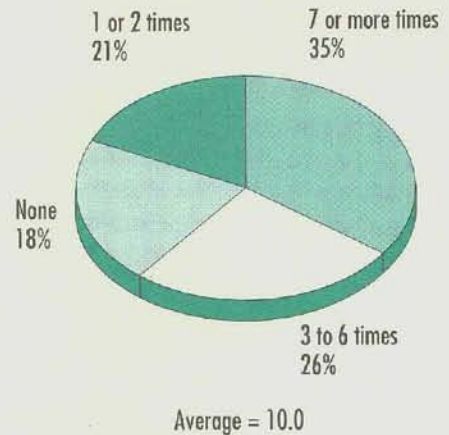
Accessibility to recreational areas is a key element in enhancing year-round use. The variety of walkways, ranging from the broad promenades at Toronto's Harbourfront to the modest paths and nature trails in Mississauga's Rattray Marsh or the Rouge River Valley in Scarborough, reflect the diversity of the bioregion's waterfront and river valleys; this should be retained, but connections between the various amenities should be made more comfortable.

The proposed greenway system would accommodate pedestrians and cyclists and would provide continuous access to waterfront promenades, parks, open spaces, and links to adjacent areas. The system should be safe and comfortable, connecting waterfront areas and the river valleys. The route of the waterfront greenway should be evaluated according to its ability to offer year-round use to pedestrians, cyclists, and others, including seniors and the physically challenged, and recognizing that some portions might be only seasonally accessible. Washrooms and

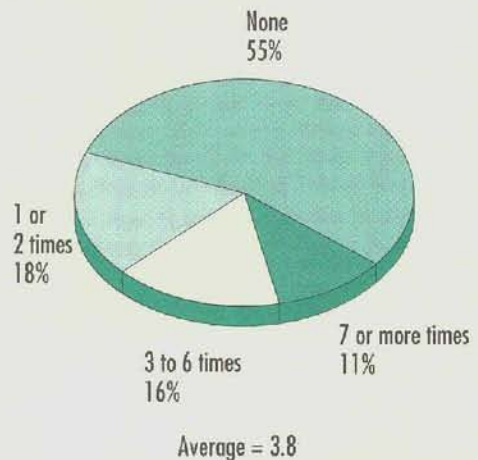
food concessions should also be provided at appropriate nodal points and should be open to the public, as much as possible throughout the year. Frequent year-round public transit service to the waterfront, with shelters designed to be comfortable in the colder months, would also encourage use.

Waterfront Visits

Summer Visits



Winter Visits



The respondents visit the waterfront on average ten times in the summer and four times in the winter.

Source: Environics Poll, 1991.

Parking along the waterfront should be integrated into the surrounding environment; limited amounts should be carefully located along the waterfront, accommodating those who cannot walk long distances and enjoy visiting the waterfront, and those who enjoy viewing the lake from within a parked car.

AMELIORATING OUTDOOR CLIMATE

The climate of the Greater Toronto bioregion waterfront area is affected by the Great Lakes, which tend to make average winter temperatures three celsius degrees warmer and summer temperatures about one and-a-half degrees cooler than in the hinterland. In winter months, the influence of the lakes causes constant freezing and thawing periods, often making weather unpredictable and the use of outdoor spaces sporadic.

The prevailing mean daily wind direction for the Toronto region shifts according to the season: in winter it is from the west about 50 per cent of the time. In spring, prevailing winds come from the west only four per cent of the time, and 42 per cent from the northeast. In summer, the prevailing winds are from the southwest 61 per cent of the time, while in autumn they come from the west/northwest almost half the time.

Some northern cities with colder climates provide year-round facilities, but the challenge in cities such as Toronto, where weather is less predictable, is to use the urban design process to ameliorate wind conditions and maximize access to the sun: year-round facilities requiring substantial financial investment are not always necessary.

There are two basic ways of reducing wind velocity in a specific site: by planting vegetation or building structures such as berms, walls, and screens. Berms, combined with trees and shrubs, provide effective year-round windscreening, the degree of effectiveness varying with the porosity of the plantings. For example, very dense evergreens achieve a strong reduction (about 80 per cent) in wind speed and force but such reductions can be sustained only for short distances (about the equivalent of five tree heights), because of the return flow of deflected air to the ground. Less dense planting reduces the sheltering effect but increases the range at which it is effective.

The relationship between microclimate and use of the outdoor environment during colder months has been studied in various places. For example, Scandinavian studies show that, on days when the temperature is as low as 10 celsius degrees but there is no wind, people will feel comfortable even without heavy clothing and will make use of outdoor open space.

A recent research study concluded that Toronto's microclimate could be moderated by providing shelter against the wind, thereby extending comfortable outdoor use by approximately 56 additional days a year — an extension of park use of almost 50 per cent over the existing 18-week base season. (See Figure 6.1.) Because ambient temperatures in March, April, and May are often below the human comfort level of 10 degrees celsius, but sunlight and the length of days are increasing, techniques that offer site-specific shelter from the wind and that capture the sun in strategic spaces could increase temperatures and encourage use of these areas.

Tall, bulky buildings can cast broad shadows for surprising distances, influencing the experiences of people who never go near them.

Hiss, T. 1990. *The experience of place*. New York: Alfred A. Knopf.

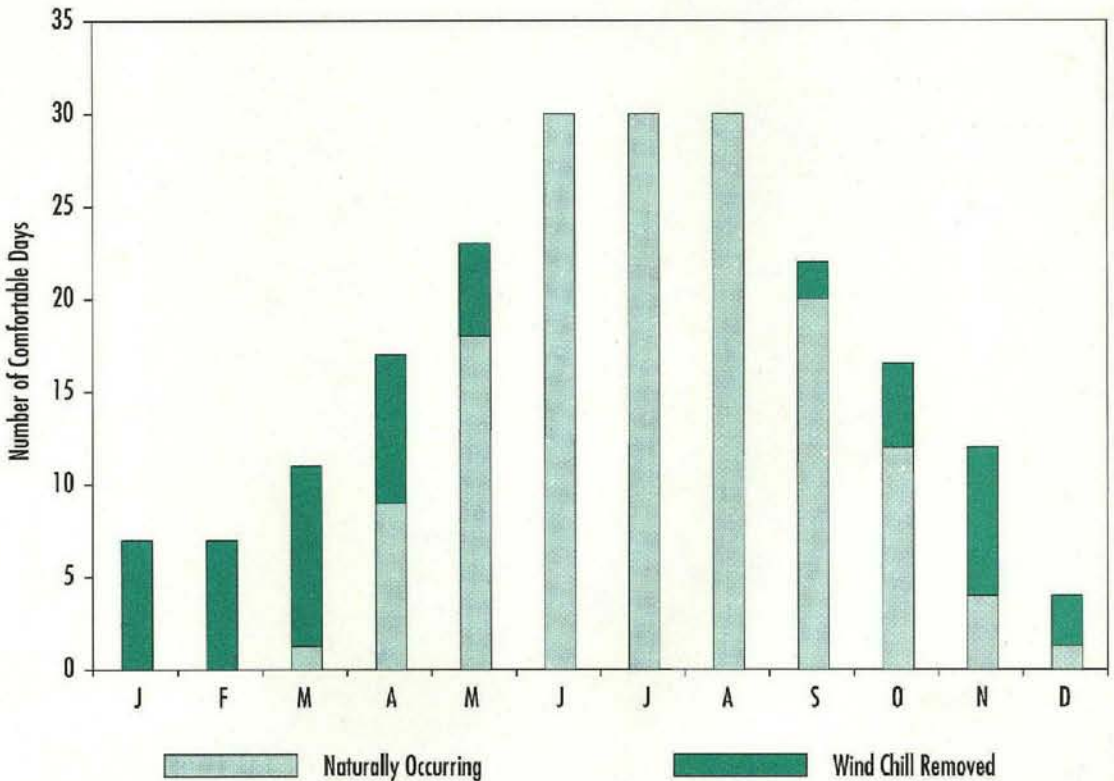
Temperatures in October and November are still in the outdoor comfort range but the effect of wet, windy weather on people needs to be addressed, if comfortable levels of outdoor use are to be achieved.

Studies examining the effects of built forms on sun and wind conditions and on pedestrians at street level have been done locally and in other parts of the world. San

Francisco recently developed and adopted solar access and wind comfort standards for modifying building forms, heights, densities, and setbacks to ensure that developments do not put open-space pedestrian environments in shadow and do not generate a wind tunnel effect.

In response to massive development that reduced usable open space in San Francisco's downtown and on its waterfront, voters approved referendum "Proposition K" in 1984; it requires that access to sun be protected in all public parks and open spaces under the jurisdiction of the Parks and Recreation Department, from one hour after sunrise to one hour before sunset throughout the year. Following the referendum,

Figure 6.1 Increasing year-round use of parks by removing wind chill effects



Source: Klinger, X. 1991. *Winter waterfront: year-round use in Metropolitan Toronto*. Working papers of the Canadian Waterfront Resource Centre, no. 9. Toronto: Royal Commission on the Future of the Toronto Waterfront.

several related amendments about access to sun on sidewalks and other open spaces have also been adopted.

Guidelines for controlling windiness in public open spaces in Toronto's Central Area were developed in 1974 but have not been adopted as part of its Official Plan. Currently, developers are encouraged to assess a project's impact on the microclimate of surrounding areas but — because proposals are tested for wind effects only in the final stage of the planning approvals process — are seldom required to make changes.

A 1991 study undertaken for the City of Toronto as part of Cityplan '91 examined and analysed the effect of buildings on wind conditions at street level and the combined effect of sun and wind conditions on pedestrian comfort. It recommended establishing procedures and standards for preserving access to sunlight on Central Area sidewalks, parks, and open spaces, and confirmed that sun and wind conditions are critical to outdoor uses, particularly in spring and fall. The report also suggested further studies to establish performance standards that will protect pedestrians from possible high winds resulting from future development such as those proposed for the Railway Lands.

Microclimate improvements in built forms, such as courtyards and wind-screening buildings, have been demonstrated in several Scandinavian projects. Studies show that courtyard use may be extended by about six weeks, most notably in spring, by applying the 10 degrees celsius comfort criterion. This microclimate improvement was achieved by applying urban design guidelines for each residential block — building heights are gradually increased from two stories at the southern edge of the



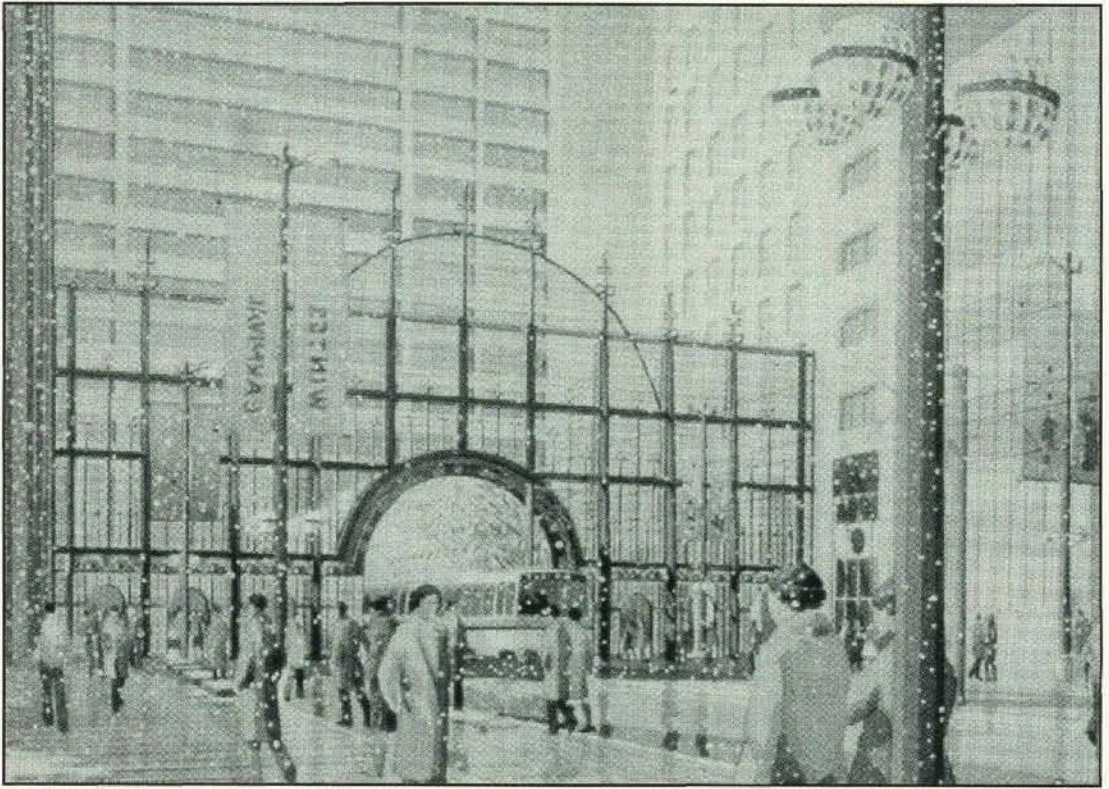
Modest sunpocket at High Park in Toronto

courtyard to six storeys at the northern edge to screen out prevailing cold winds while allowing for maximum solar penetration.

Although appropriate authorities have a general understanding of the benefits of improving outdoor comfort levels, more appropriate policies, standards, and guidelines could be developed and implemented. For example, wind comfort and sun access standards would be helpful in developing all publicly accessible urban promenades, open spaces, and parks on the waterfront. Related guidelines could include the design of sitting areas and walkways located in areas protected from winter winds, sheltered to maintain views.

When building heights are routinely increased . . . the shadow impacts are greatly increased. For those on the receiving end the change is not one of degree; it may be absolute. They had sun; now they have none . . . Sunlight should be a right, not an amenity that is nice to have.

Whyte, W. H. 1988. *City: rediscovering the centre*. New York: Doubleday Anchor Books.



Windgate of Main Street Mall in Buffalo, New York

Sunpockets can also be created in appropriate locations along the waterfront to encourage outdoor use in the off-season. These are a site-specific tool that can ensure solar access — semi-enclosed seating areas with direct sunshine access, protected from winds. They can be created using landscaping or other screening methods and are particularly desirable on the waterfront, where they can block the wind and provide vistas and views to the open water.

Walls and windgates should also be considered as wind protectors at promenade or park entrances and along roads. Windgates could be made of transparent materials, similar to those proposed as protection for walking areas in the City of Buffalo. Combined with vines and other plantings, they could become attractive sculptural elements and park landmarks.

PROVIDING FACILITIES TO ACCOMMODATE YEAR-ROUND ACTIVITIES

Available information on summer use indicates that walking, sitting, and enjoying nature are the most popular activities on the waterfront. Limited available data indicate that these activities, in addition to others such as skating, remain the most popular outdoor waterfront activities in the colder months.

Cold, snow, and ice tend to hinder outdoor recreational use in winter months, especially on the waterfront. To capitalize on investments and increase use, existing and future recreational and sports facilities on the waterfront should be re-examined, looking for ways to maximize year-round use. For example, the courts used for tennis in summer could be used for skating in winter, while swimming pools could be

converted for year-round use: uncovered in summer, enclosed in winter.

Improvements to waterfront facilities should be based on the interests and needs of both local and regional users, determined through surveys if necessary. Public consultation would also help determine which areas are more likely to be used throughout the colder months, and warrant immediate attention. Special emphasis should be placed on the needs of the elderly, physically challenged, women, children, teenagers, families, and ethnic communities.

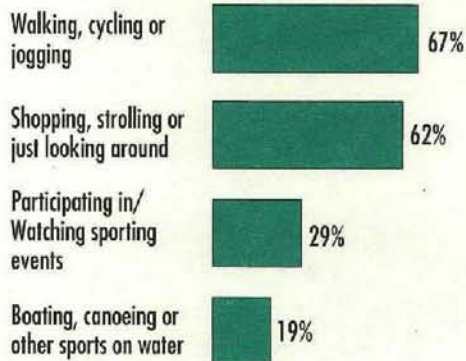
The length of recreational outings in cold weather will depend, in part, on air temperatures and the degree of protection from the wind. As a rule of thumb, people will walk for approximately ten minutes in winter before they need to warm up, with seniors and children more susceptible to cold. Walks and visits tend to be much shorter than in the summer, depending on the attractions and on available facilities such as washrooms, sheltered seating areas, and food outlets. Further studies of behavioural patterns of various user groups are required to pinpoint the length of travel time and average duration of a winter waterfront visit.

Locating facilities at selected nodal points along walkways would increase use and promote longer visits. Shelters from wind, rain, and snow, that still allow enjoyment of lake views, would also encourage prolonged visits to the waterfront as the weather gets cooler. Strategic locations for shelters include places where visitors linger or sit, such as look-out points and along walkways; these could be designed in combination with food concessions and washrooms.

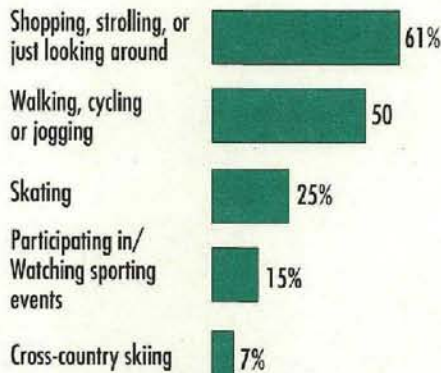
Existing facilities in park areas could be modified to function throughout the year. For example, gazebos could be adapted

Waterfront Activities

Summer Activities



Winter Activities



Participation in summer and winter waterfront activities by the respondents.

Source: Environics Poll, 1991.

with temporary enclosures such as transparent or glass panels and could even be equipped with stoves and wood to warm those who use the area for prolonged visits.

There is a general lack of seating in urbanized waterfront areas and parks. To foster year-round use, seating capacity standards and guidelines should be developed and applied for areas including parks and promenades. A lot of existing seating is unusable in winter: concrete benches and

steps are too cold, and seats in the shade, exposed to wind or covered with snow are rarely used.

Where it is appropriate, and especially where access to sun is limited in peak use periods, consideration should be given to movable seating. Movable chairs and benches allow users to take maximum advantage of sun and shade conditions. Moreover, flexible seating arrangements provide opportunities for both privacy and social interaction: Paris, New York, London, and Stockholm provide movable seats in many of their parks, and some — like the little chairs in the Luxembourg Gardens — have become park trademarks.

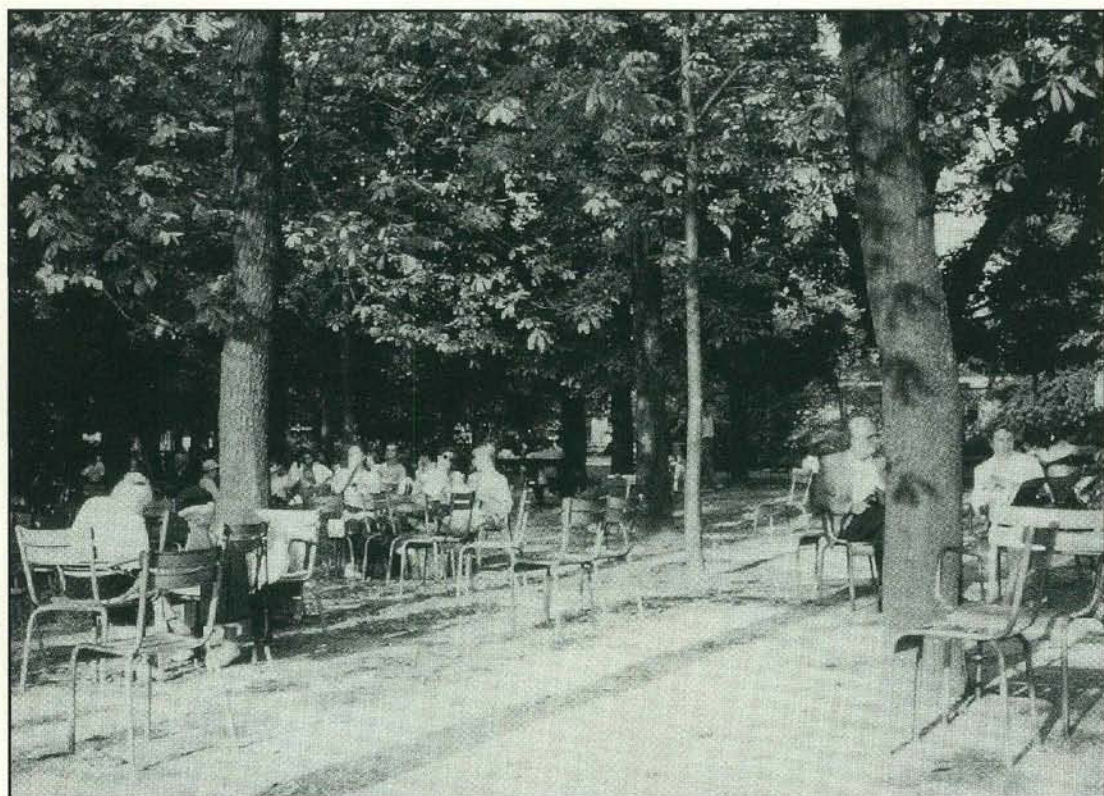
Vandalism and theft are often given as reasons for not providing movable chairs. However, this runs contrary to the experience at New York's Metropolitan Museum of Art,

which provides 200 movable chairs along its front steps, and leaves them out 24 hours a day, seven days a week. The Met found that it is less costly to replace stolen chairs than to pay for storage each night.

INCREASING OPPORTUNITIES FOR CONTACT WITH NATURE

One natural attraction of the outdoors is its seasonally changing moods; many places appeal to people because of natural features: a relaxing fall walk to view the changing colours; a family outing to learn about plants and animals on a wildlife reserve or conservation area; a spectacular view of the bluffs.

Sometimes what is a magnificent view in winter can be undistinguished in summer — a snow-covered landscape, for example.



Movable chairs in Luxembourg Gardens, Paris

Seasonal opportunities along the waterfront could offer the chance to:

- observe birds and butterflies along their migratory flight paths in spring and fall;
- follow winter animal tracks in the snow;
- observe and feed winter waterfowl;
- view the frozen lake and sculptured icy waves in winter;
- observe trees and shrubs, with their interesting bark, branch patterns, and clinging berries in winter; and
- appreciate the seasonal experiences of silence and the smell of melting snow in the winter, changing colours in the fall, warm spring breezes, and the softness of summer days.

Fragrant and tactile gardens would also offer those with impaired vision or limited mobility special opportunities for enjoying nature year-round. Only a few waterfront sites, such as the Royal Botanical Gardens in Burlington and the Rosetta McClain Gardens in Scarborough, currently do so.

Vistas should be developed with consideration given to seasonal weather, ambient light, and colour. Care should be taken to ensure that structures such as windgates and windscreens do not impair these views. Low angles of sun and long shadows in winter present opportunities to exploit the intricacies of gates, trellises, sculptures, and plantings designed to create imaginative winter landscapes and enhance outdoor spaces. Lighting,

ice, and the kinetic energy of wind can also be combined to devise intricate seasonal sculptures. Other ideas include using lake water to create fountains, cascades, ponds, and channels that could be artificially frozen to create skating and hockey areas.

Year-round nature interpretation centres should be provided in selected regional parks where natural areas, woodlands, marshes, and wetlands constitute a significant proportion of parkland. Nature

trails should include sheltered areas for observing and describing natural species, habitats, and geological formations. Special winter outdoor educational pro-

grams for children could be developed and would include games, nature hikes or exploration tours, bird-watching, and animal tracking.

Low sun angles and long shadows in winter present opportunities to exploit the intricacies of gates, trellises, sculptures, and plantings to create imaginative winter landscapes and enhance outdoor spaces.

ENHANCING USER SAFETY

Given that the presence of people makes a place feel safe, the greater the number at a particular area of the waterfront, the safer they all feel. The safer they feel, the more inclined they are to continue visiting an area — an important factor, especially during colder seasons when fewer people use the waterfront and there are fewer hours of daylight.

The proposed greenway could make access to parts of the waterfront safer and more comfortable by adding connections from the city to the water, from downtown offices to waterfront parks, and from neighbourhoods to the water's edge, during the winter months.

In designing safe and comfortable recreational areas and pathways, consideration should be given to the change in level of usage and its effect on safety. The configuration and types of vegetation, proper lighting, effective signage, and seasonal wind and ice conditions should be considered and, where possible, bad-weather hazards should be ameliorated and safety improved.

Carefully sited built forms and well-designed facilities, complemented by events staged on the waterfront, could draw large crowds, increasing perceptions of the area as being safe.

IMPROVING WINTER EVENTS AND PROGRAMMING

Special outdoor events and festival programming at the waterfront have so far focused on the summer season, while unpredictable changes in climate and increased temperatures have made it difficult to stage traditional outdoor events in winter. Local cities have sponsored winter festivals and events that failed because they were planned for cold, snowy conditions that did not materialize.

In order to increase seasonal tourism and recreation, emphasis should be given to events and activities that do not depend on ice and snow. Entertainment should be used as a means of promoting the waterfront's unique attributes: Christmas tree decorating, bonfires, and winter-adapted summer sports such as camping, marathons, triathlons, and canoeing could form the basis for successful festivals. Planning for such events should take into account the needs of nearby communities, especially in regard to potential traffic, parking, and other issues.

Efforts should also be made to facilitate the development of community-based annual outdoor/indoor events.

During the colder months in Toronto, special waterfront events are often held indoors in selected locations such as Harbourfront, Ontario Place, and Exhibition Place. Harbourfront's York Quay in Toronto is a good example of a popular site for recreational and educational water-related activities in the summer and skating and other uses in the winter. Further north, Nathan Phillips Square is used as a venue for numerous promotional events, such as fund-raising campaigns and art exhibitions. The square is a breathing space in front of Toronto's City Hall, with a park-like atmosphere in summer that appeals to hundreds of people who sit and eat their lunch or simply relax in the sun. At other times of the year, the reflecting pool becomes a skating rink, while nearby concessions serve the public. Popular outdoor activities such as pleasure skating should continue to be accommodated along the waterfront.

For more than 35 years, Québec City has had an annual winter carnival, 11 days in February filled with outdoor activities such as skating along 3.8 kilometres (2 miles) of the St. Charles River, a perilous canoe race in the half-frozen St. Lawrence River, a snow sculpture contest, and horseback riding. There are also many indoor events, including a beach party, an exotic hair-styling and make-up competition, a fashion show featuring Canadian designers, and a casino night.

Ottawa has its own February event, the 10-day Winterlude Festival. Activities include such adaptations of summer sports as snow-golfing and a triathlon that comprises skating, skiing, and running. Among other

events is a 160-kilometre (100-mile) Canadian ski marathon, which receives more than 1,000 entries each year.

Other North American cities also mount special winter activities: Easton, Maryland, hosts a Waterfowl Festival in mid-November to celebrate waterfowl conservation. The International Eelpout Festival in Walker, Minnesota, held in mid-February, began as a spoof on all the north woods fishing contests and a celebration for those who had survived the “worst” of winter, but is now enormously popular and draws thousands of fishers. In Fond du Lac, Wisconsin, the “Spectacle of the Geese” each September celebrates the migration of Canada geese to the marshes, with sunrise and sunset viewing tours and paddlewheel boat excursions to see fall colours. The success of these events does not depend on snowfall or very cold temperatures, and similar activities may be well-suited to southern Ontario’s climate, the joy of winter being celebrated whatever the weather.

In winter, the city’s cultural life is at its peak, with theatres, concert halls, restaurants, and cafés alive with people. However, if urban promenades, parks, and open spaces had a higher level of comfort, some of those activities could be brought outdoors. If the Greater Toronto bioregion is to develop further as a tourist area during the colder months, there must be better attempts to promote outdoor winter opportunities on the waterfront, linked to the river valleys, as well as to the unique setting, culture, and history of the shoreline.

OPPORTUNITIES FOR MAXIMIZING YEAR-ROUND USE

It is not feasible nor necessary to “winterize” the entire Greater Toronto bioregion waterfront. Rather, appropriate waterfront nodes should be selected as potential sites for year-round use and for staging winter events and festivals of a regional, national, and even international

scale. These sites should be connected to the greenway and year-round public transit should be encouraged.

The waterfront from Burlington Bay to the Trent River has a number of

successful recreational areas, although primarily in the summer months, and they are the nodes with the most potential for year-round use. Many of them could be improved with vegetation barriers or shelters, at little cost to managing agencies, but with the promise of increased use and added revenue.

Four such recreational nodes in the Region of Halton, each adding to the diversity of the regional waterfront, are as follows:

- Spencer Smith Park, on the Burlington waterfront, is a well-used facility in summer for boat-launching and passive recreational activities; its location, immediately adjacent to the downtown area, gives it tremendous potential for year-round use.
- The Oakville and Bronte Harbour areas in the Town of Oakville could

It is not feasible nor necessary to “winterize” the entire Greater Toronto bioregion waterfront. Rather, nodes for year-round use and for staging winter events and festivals should be selected and connected to the greenway.

also be winterized at little cost and indoor club facilities could support outdoor recreational uses. Catering to the boating community, the regional facilities serve boaters, most of them in the western part of the Greater Toronto bioregion.

- Coronation Park in the Town of Oakville is one of the larger active waterfront parks, attracting many families. Amenities include summer weekend concerts and children's play equipment. As in the case of many local waterfront parks, the most popular winter activities here are walking and viewing.

Mississauga, the only Region of Peel municipality adjacent to Lake Ontario, has a variety of recreational waterfront uses:

- Jack Darling Memorial Park, between the Rattray Marsh nature preserve and forests and ravines in privately owned Lorne Park Estates, provides waterfront recreation and is surrounded by complementary uses. Seasonal park facilities could be extended to support added outdoor winter activities as well as the tobogganing that is now popular in the winter.
- To the east, the Port Credit Harbour area south of Mississauga's downtown houses one of the largest fresh-water marinas in North America. Although much of the harbour is currently publicly owned, it is leased to private operators, which limits public access. City proposals to revitalize the area and increase public access could increase the harbour's year-round potential. Adjacent indoor recreational facilities

at J. C. Saddington Park would also serve to enhance year-round use.

- Canada Post's site on the waterfront offers significant long-term potential for mixed uses, including year-round recreational facilities, particularly if some existing buildings can be adapted.

Metropolitan Toronto also has a number of diverse waterfront nodes with great potential for year-round use:

- Etobicoke's motel strip/Humber Bay Park area is the subject of ongoing review. Future development plans will likely include extensive residential and retail areas, creation of wetlands, and educational and recreational facilities. A proposed community park and supporting amenities are intended to accommodate major events and festivals. Humber Bay Park East is already well-used during the summer months; improvements could greatly enhance comfort and safety in the park, bringing in more regional park users during the colder months.
- Harbourfront and Garrison Common attract visitors regionally, nationally, and internationally. Harbourfront currently provides the most extensive year-round programming and entertainment along the Greater Toronto bioregion waterfront. The majority of off-season events are held indoors, although winter programs organized around the skating rink are very popular. If future public and private open spaces are designed for year-round use, there will be opportunities to expand events outdoors.

WINTER IN HUMBER BAY PARK

Etobicoke's Humber Bay parks east and west are well-used during the summer, but would benefit further from winter facilities and programming. Proposed redevelopment along the nearby motel strip may substantially boost demand for park use throughout the year. Thoughtful and low-cost improvements to existing facilities could result in high quality recreation for an increasing number of winter visitors.

The parks already have good road access and abundant parking, but public transit connections and facilities must be improved; building shelters for and servicing of both parks by TTC buses would increase accessibility. An existing proposal for relocating the nearby GO station may result in improved regional transit access.

Park vegetation is predominantly deciduous, which often means a bleak winter landscape; planting coniferous trees and shrubs would create a more attractive environment, provide wildlife habitat, and improve the microclimate. Metro's parks department has already begun planting native species in Humber Bay Park East. Extending wetlands on both sides of the fishing pier would promote wildlife diversity. The shoreline is the most desirable area for walking and sitting, but is exposed directly to winter winds; planting trees along the south and east shorelines of both parks would provide wind-screening.

Well-defined walking and bicycling paths exist throughout Humber Bay Park East, but not in Humber Bay Park West. The trail network — separated from roadways — should be expanded throughout the site and along the shoreline to maximize views to the lake. The trail should connect both parks via a bridge over Mimico Creek and extend north along the banks of the creek. Major walkways should be constructed using heat-absorbing surface materials, which would make winter maintenance easier.

Seating should be increased in both parks, especially in Humber Bay Park East, which attracts more people. Skating and winter bird-watching along Mimico Creek and nearby natural areas could be enhanced if resting areas were provided in landscaped outdoor sunpockets. A gazebo-type shelter adjacent to the canal would benefit both pedestrians and skaters.

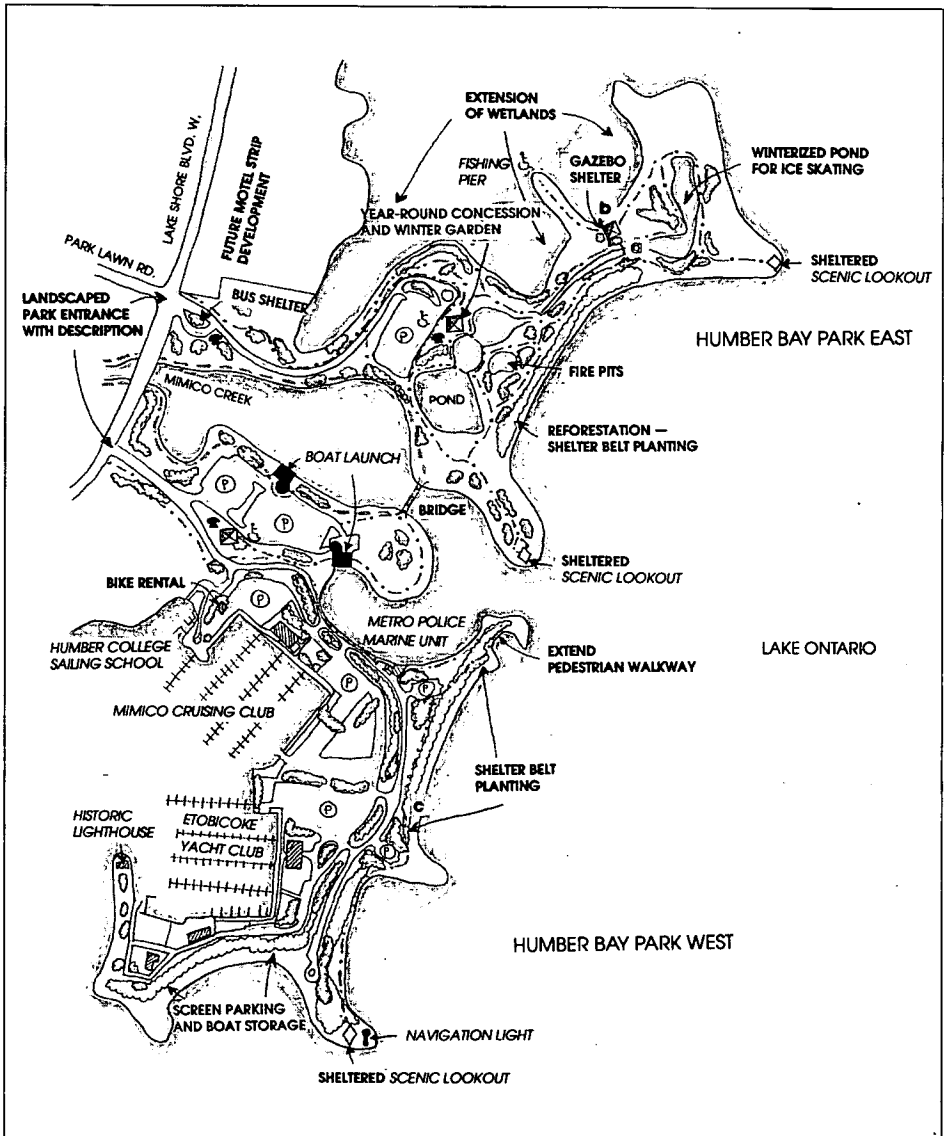
There are no food concessions open permanently to the public, although mobile ones cater to park users occasionally on summer days. In winter, mobile vendors could provide visitors with hot chocolate while they walked or skated. An existing comfort station in Humber Bay Park East could be enlarged to house a café/restaurant and horticultural display. Signs at all park entrances should give people information about year-round facilities.

The reduced number of park visitors during the winter season increases the risk of assault. Landscaping should reinforce safety, without detracting from the natural setting. Year-round food concessions would create a permanent presence in the park; pedestrian lighting and visitor information kiosks at park entrances would also create a safer environment.

Improvements now and in the future will attract more visitors; as the number of people using the Humber Bay parks increases, so will opportunities for expanding winter facilities and programming.

Source: *Klinger, X. Winter waterfront: year-round use in Metropolitan Toronto. 1991. Working papers of the Canadian Waterfront Resource Centre, no. 9. Toronto: Royal Commission on the Future of the Toronto Waterfront.*

Figure 6.2 Winter waterfront case study: proposed improvements for Humber Bay Park





People promenading along Toronto's Harbourfront in March

The Preliminary Master Plan for Garrison Common (Berridge Lewinberg Greenberg et al. 1991) examines year-round use in the area. Right now, outdoor spaces are used primarily during the summer, while design and programming ignore the possibility of year-round utilization. Winter climatic conditions here are harsh and open spaces would have to be modified to provide an acceptable microclimate.

- The park on the Toronto Islands is currently used year-round, as a major regional public place that accommodates millions of visitors, primarily during the summer season. With a few low-cost, key modifications, it could be made more comfortable, attractive, and accessible in the colder seasons. The feasibility of the present location of the Ferry

Terminal should also be reviewed for potential as a year-round operation.

The Islands already have a good vegetation base, including evergreen trees planted in the past five years. Additional planting would help to screen open spaces currently exposed to strong winds. Overall, in fact, winterization would require relatively little additional investment. Winter programming would also help to increase the number of park users.

- The Guild Inn and Guildwood Park in Scarborough are already used year-round. The hotel is privately operated, while the park, including an extensive collection of architectural artifacts, is operated by Metro and is open to the public. The park is especially

Where the winters are long and the sun sets low in the sky, people cherish what sunlight there is.

Whyte, W. H. 1988. *City: rediscovering the centre*. New York: Doubleday and Company.

beautiful in winter, when it can be viewed against a serene background of snow, evergreens, and the lake. Future redevelopment plans for the Guild Inn should maintain the site's existing scale and character and enhance year-round use.

While portions of the Durham waterfront are not yet fully developed, there could be recreational waterfront nodes in the future, providing opportunities for developing year-round use. Of those already developed, the key nodes on the Lake Ontario shoreline that have potential for year-round enhancement are as follows:

- The Petticoat Creek Conservation Area, in Pickering, surrounded by residential homes, currently operates seasonally and caters primarily to families; adding indoor recreational facilities would probably mean year-round use of the area.
- The Lynde Shores Conservation Area in Whitby is well-known as a place for viewing wildlife in the spring and autumn months, with boardwalks and viewing facilities. Both the Lynde Creek and Cranberry marshes provide excellent habitat for nesting birds. Summer activities at the conservation area include picnicking, fishing, and canoeing while winter-time users include participants in scheduled events such

as winter bird-feeder tours and skating on the Lynde Creek Marsh — one of the area's most popular outdoor winter activities. Future improvements could include an interpretive centre with improved indoor washroom facilities.

- The harbour area in the City of Oshawa is currently being studied with respect to its future uses. It has potential to be developed for uses including recreational-with year-round facilities.
- Darlington Provincial Park in the Town of Newcastle is a haven for rugged outdoor types — camping and fishing are most popular in this passive and active park. Other waterfront areas along the Newcastle shoreline have yet to be developed for recreational or other uses. In planning for these sites, consideration should be given to building form and design and to recreational facilities that promote use throughout the year.

STEPS TO WINTERIZATION

Local and regional waterfront planning policies and practices should recognize the potential for enhancing outdoor recreational use in the colder months. Municipalities should undertake user surveys, and adopt and implement appropriate policies after public consultation, and with the co-operation of relevant governments, agencies, and special-purpose bodies. Standards and guidelines for sun access and wind comfort levels should be developed and enforced, requiring studies of wind impact, sun access, and other relevant factors before issuing project approvals. These studies should include assurances that there will

be no detrimental change in wind patterns, velocities, and turbulence at the sites in question. Wind testing of proposed projects should also be conducted by the proponents early in the approvals process and be taken into account in planning and urban design decisions.

Proposed developments for areas in which wind speeds already exceed acceptable comfort levels should aim to reduce these speeds. New promenades, open spaces or park sites in development or redevelopment projects along the waterfront should be located to minimize wind effects. As it is neither possible nor desirable to screen all areas of the waterfront from adverse winds, each site should be assessed on its need and potential for modification based on the existing microclimate, present and future uses, and adjacent development.

Surveys of both existing and proposed sites that would be affected by future development or redevelopment should be conducted to determine whether there is a need for site-specific guidelines covering building location, height, and form to avoid overshadowing. Modifications to built form should be required if proposed projects would create extensive overshadowing.

RECOMMENDATIONS

- 49.** The Royal Commission recommends that local and regional municipalities across the Greater Toronto bioregion waterfront review their Official Plans and relevant supporting documents to incorporate policies that encourage year-round recreational use of the waterfront, particularly in the colder months.
- 50.** The Commission further recommends that local municipalities prepare and promote design guidelines that encourage landowners and developers to enhance pedestrian microclimate conditions. Factors such as wind impact and sun access should be considered in deciding whether the location and mass of a building are appropriate.
- 51.** Because not all areas of the waterfront are suited to year-round use, local and regional municipalities should work with agencies and the public to define priority recreational waterfront nodes for winterization; decisions should be based on user needs, the facilities available, and the potential to expand programming.