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A Green Strategy for the Greater Toronto Waterfront

Background and Issues

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The Royal Commission
on the Future of the Toronto Waterfront
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Royal Commission on the Future
of the Toronto Waterfront

A Green Strategy for the Greater Toronto Waterfront

Background and Issues

8

Royal Commission on the Future of the Toronto Waterfront

Commission royale sur l'avenir du secteur riverain de Toronto

Commissioner
The Honourable David Crombie, P.C.

Executive Director and Counsel
Ronald L. Doering

Commissaire
L'honorable David Crombie, c.p.

Directeur exécutif et Conseiller juridique
Ronald L. Doering

Dear Colleague:

I am pleased to provide you with a copy of the report: *A Green Strategy for the Greater Toronto Waterfront*. As previously announced, hearings relative to this report will take place on 17, 23 and 25 April 1990. If you wish further information, please contact the offices of the Royal Commission.

This report represents the opinion of the authors and not of this Commission. Nevertheless, I am pleased to note that the document provides a thorough overview of some important issues and should serve to stimulate and focus discussion on major issues that affect the waterfront and its river valleys.

I look forward to hearing from you.

Cordially,

Cher collègue,

Vous trouverez ci–joint un exemplaire du rapport intitulé *Stratégie de verdissement du secteur riverain de l'agglomération de Toronto*. Ainsi qu'il a déjà été annoncé, les audiences à propos de ce rapport auront lieu les 17, 23 et 25 avril 1990. Pour de plus amples renseignements, veuillez communiquer avec les bureaux de la Commission royale.

S'il reflète les vues des auteurs et non celles de la Commission, le rapport donne un aperçu détaillé de certains points importants; il devrait servir à alimenter le débat et à le centrer sur les grandes questions qui touchent le secteur riverain et son bassin hydrographique.

N'hésitez pas à me faire part de vos commentaires, le cas échéant.

Je vous prie de recevoir, cher collègue, mes cordiales salutations.

David Crombie

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- Pat Herring and Suzanne McInnes, Region of Halton;
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INTRODUCTION

Throughout history, humankind has been drawn to the water's edge. The attraction is often based on practical or economic considerations: use of the water for transport, industrial processes, or municipal supply. But we are also drawn to the water's edge by more personal urges: we come to the shore to recreate, to escape the city, to blend our spirit with the soothing sounds of wind and wave.

As the experience in Toronto clearly demonstrates, the urban shore is a limited resource, and the competing demands for its space are great. All too easily, the waterfront can be walled off by industrial use, as happened in the Toronto Harbour earlier this century. And, as more recent experience has shown, the rediscovered waterfront could all too easily become a haven for the wealthy, with public access obscured by a thicket of residential high–rises.

Fortunately, the foresight of municipalities, conservation authorities, and other agencies over the past several decades has done a great deal to make the waterfront accessible to the people of nearby communities. Tenacious public acquisition of shorelands, as well as major lakefill projects, have created new green spaces along the shore. The programs of Ontario Place, the Exhibition, and Harbourfront have forged a link between Toronto's urban core and the waterfront. Along the lake from Burlington to Newcastle, municipalities have shown new interest in the potential of their waterfront, with a plethora of plans and committees developed to take advantage of this unique resource.

In part because of this sudden enthusiasm for the waterfront, initiatives have frequently been fragmentary, often unco-ordinated, sometimes conflicting. In some ways, this "bottom–up" waterfront planning has its advantages — it tailors the approach taken to the needs of the local community, and encourages a diversity of styles that can add interest to the overall shoreline. On the other hand, without

some form of broader strategy, the sum of these local plans may fall well short of the waterfront's potential.

Planning for waterfront green space is no more immune to conflict than any other planning. If anything, the debate over waterfront uses can become even more heated, perhaps because we expect waterfront green space to serve several purposes:

- to protect natural habitats for wildlife, rare plants, and other ecological features;
- to provide access to the lake, by providing support facilities for boats, and by allowing views of the water;
- to provide regional parks and recreational attractions, ranging from passive "grass and trees" to Ontario Place;
- to act as local parks with recreational facilities oriented to waterfront residential neighbourhoods.

The Royal Commission on the Future of the Toronto Waterfront has been asked to consider an overall strategy for green spaces along the shore within this context of competing priorities and expectations. This strategy will build on many of the recommendations of the Commission's first *Interim Report*, released in August 1989. As well, the Province of Ontario has appointed the Honourable David Crombie a provincial Commissioner with responsibilities pertaining to the whole of the waterfront along the Greater Toronto Area, including a mandate to recommend mechanisms to link and integrate the waterfront with upstream watersheds.

In its first *Interim Report*, the Royal Commission asserted that proper planning of the waterfront and its river valleys requires an ecosystem approach — one that recognizes the need to plan on a bioregion basis and not simply within political boundaries.

While the boundaries for a Toronto area bioregion need not be exact, it is possible to logically define a natural region abutting the Greater Toronto Waterfront, based on natural and physiographic features. Bounded by the Niagara Escarpment

to the west, the Oak Ridges Moraine to the north, and Lake Ontario to the south, the lands within this wedge–shaped bioregion share many ecological similarities. Its soils and landforms are based on the glacial deposits of the Lake Ontario plain, rising to the gravelly hills of the Oak Ridges Moraine; a series of watersheds rise in the Moraine, and follow parallel courses southward to the Lake. Originally hardwood forest, then farmland, most of the bioregion now falls within the commuter and economic orbit of Toronto. As the term bioregion suggests, anything that happens within this area is tied ecologically to the health of the waterfront.

This report is intended to complement the previous publications produced by the Royal Commission's work groups, most notably *Parks, Pleasures, and Public Amenities,* which dealt with open space and recreational issues along the Metro Toronto waterfront. Related information can also be found in *Environment and Health* and *Access and Movement.* The current study now under way by Ron Kanter, MPP on developing a green strategy for the Greater Toronto Area should also be an important contribution to this discussion, particularly as it relates to the need for linkages between the waterfront and its river valleys.

This report will act as background information for Commission hearings into the development of a Green Strategy for the Greater Toronto Waterfront. In preparing it, we have drawn on available published information and interviews and meetings with key municipal, conservation authority, and other agency officials. The report summarizes all available information regarding:

- current ecological, recreational, and public uses and values along the waterfront and associated river valleys;
- progress of public agencies in maintaining or creating waterfront open space and recreational facilities;
- trends in public demand and attitudes that affect the shape and balance of waterfront uses;

- gaps in and barriers to a linked system of waterfront and valleyland green spaces;
- issues and opportunities that should be addressed by a Green Strategy;
- actions necessary to implement a Green Strategy.

AUTHORS OF THE REPORT

Ron Reid is a partner in Bobolink Enterprises of Washago, Ontario, specializing in analysis of and advice on protecting and managing natural environments, and on communicating environmental themes effectively. He has worked extensively with municipalities, provincial agencies, and conservation groups on techniques for protecting natural areas.

Bob Woodburn is president, and Rob Lockhart is vice–president, of RETHINK Incorporated of Peterborough and Guelph, Ontario. For the past eleven years, the company has been nationally known for recreation, cultural and tourism master planning; public consultation and facility feasibility studies; and personal and corporate health and lifestyle management. RETHINK has developed techniques for seeking and analyzing public and corporate input, assisting communities to address key issues and to deploy their scarce resources more effectively.

In the course of researching this report, the authors were able to benefit greatly from the materials collected by the Canadian Waterfront Resource Centre at the Commission offices, 207 Queen's Quay West, P.O. Box 4111, Station A, Toronto, Ontario, M5W 2V4.

1. Open Space/Recreational Resources Along the Waterfront

THE ROLE OF PUBLIC AGENCIES

Various public agencies at all levels are involved in some way in providing public open space and recreation facilities along the waterfront. A brief explanation of the major agencies and their roles will help put the more detailed information that follows in context.

The federal government is involved, through both its jurisdictional responsibilities and its land ownership. The Toronto and Oshawa harbour commissions are federal agencies, as is Harbourfront Corporation. As well as holding key parcels of waterfront land, as part of their mandates, these agencies are involved in development activities, including development of recreational facilities and other commercial or industrial uses. The federal government is also a major landowner in the Port Credit harbour, and federal agencies such as Canada Post and CN Rail hold other parcels of waterfront land.

Environment Canada plays a major role in restoring the water quality of the Great Lakes, and in managing fisheries and migratory wildlife.

The provincial government is a waterfront landowner in such sites as Darlington Provincial Park. In addition, the provincial Ministry of Natural Resources (MNR) controls the sale or lease of Crown waterlots (i.e., the lakebed), where these have not previously been sold to private owners. An independent provincial agency manages Ontario Place on the Toronto waterfront. The provincial government also owns several large redevelopment sites along the lakeshore, notably the psychiatric hospital grounds in both Etobicoke and Whitby.

The Province also provides the legislative framework and financial support for conservation authorities and municipalities. The Ministry of the Environment is the key agency

involved in protecting and restoring waterfront water quality, and also owns some lands for major sewage works.

Five conservation authorities are involved in managing natural resources along the waterfront and stretching inland to cover the adjacent watersheds. The Metropolitan Toronto and Region Conservation Authority (MTRCA) and the Credit Valley Conservation Authority (CVCA) have specific responsibilities for implementing the 1967 Metropolitan Toronto Waterfront Plan in their areas, but the extent of other authorities' specific waterfront responsibilities has been somewhat uncertain.

A recent review prepared for the Province recommends that conservation authorities be given responsibility for all aspects of flood and erosion control along river valleys and the lakeshore. As well, they would be responsible for major regional parks, with the private sector or municipalities providing major investments in recreational facilities. (Ontario. Ministry of Natural Resources 1987, 31)

The four regional municipalities along the waterfront carry out their regional policies through their official plans. Only the Region of Halton has addressed the waterfront specifically, through an Official Plan amendment, although Metro Toronto is now considering development of a waterfront plan. The regions of Peel and Durham have had little involvement in waterfront matters.

Regional governments own or directly control a number of waterfront properties, such as Exhibition Park and the Toronto Islands, and various water and sewage works. Metro Toronto Parks and Property Department manages most of the regional open space provided by MTRCA.

Local municipal governments provide planning controls over most waterfront uses, and most municipal official plans make specific policy references to the waterfront. In many cases, more detailed secondary plans and zoning by–laws are applied to specific sectors of the waterfront.

Most municipalities also own some waterfront parkland, generally managed for active recreational uses.

Perhaps the most notable aspect of government agency involvement along the waterfront is the diversity of approaches evident along the Burlington to Newcastle shore. In the absence of any kind of overall direction, each agency has developed a waterfront mandate and philosophy that reflects local and jurisdictional priorities, or responds to particular needs. As a result, the evolving framework is characterized more by divergence than by commonality.

PUBLIC OPEN SPACES

Considerable progress has already been achieved in making sections of the waterfront accessible and attractive to the public. This section quickly reviews the green spaces and recreational facilities now along the waterfront, which are shown on Existing Green Spaces, Map 1. In all sections of this report, local municipalities, from west to east along the shore, are used as the basic frame of reference.

Halton/Peel

Burlington

Royal Botanical Gardens

Most of this mosaic of formal gardens and natural woodlands and wetlands lies within Hamilton–Wentworth, but a small section touches the Burlington waterfront at the mouth of Grindstone Creek, and extends back up the Creek valley. The Royal Botanical Gardens are a valuable link to other natural areas, as well as a major regional open space.

Lasalle Park

This 23-hectare (56-acre) parcel of parkland is owned by the City of Hamilton through an estate donation, but operated by the City of Burlington. As well as protecting natural

woodlands and passive use areas, it provides active playgrounds, sports fields and a Heritage Pavilion. Its marina, sailing club and boat launch ramps also connect it to Burlington Bay. Lasalle Park is considered a regional park in the Halton Region.

To the east along the waterfront, Bayshore Park is a small municipal park providing passive uses and a vista over the lake.

Burlington Beach

This 40-hectare (99-acre) undeveloped park along the beach strip at the western end of Lake Ontario, running from the Burlington downtown core to the Burlington Canal, is in the process of being acquired. Public acquisition of parcels of the southerly section of the beach was begun in 1976, through a joint funding arrangement between the Halton Region Conservation Authority and other parties. The land purchase is now almost complete, but a number of houses and cottages remain on long-term leases, which are now gradually being acquired. The presence of these leased lands, and a series of Ontario Hydro towers on the beach itself, limit the present recreational uses of the site. However, the beachfront is used by local residents for swimming, windsurfing, walking, beachcombing, and other passive recreation.

At the northern end of the beach, Spencer Smith Park is a long-established municipal park with uses ranging from walking to boat launching. The Mohawk Canoe Club is located here, as well as the Visitor and Convention Bureau. Since its recent expansion, the park has been linked to an open space headland created on lakefill behind the Venture Inn at the foot of Brant Street.

A recently completed Master Plan covering both Burlington Beach and Spencer Smith Park calls for major developments, which are summarized in the section on Waterfront Plans and Policies in this report.

While there is relatively little public open space along the remainder of the Burlington waterfront, two small municipal parks (Port Nelson and Sioux Lookout) offer quiet vistas over the water and places for passive recreation. As well, a number of "street end" parkettes have been developed for passive uses.

Burloak

While a regional waterfront park is planned for this location on the Oakville-Burlington boundary, at present it includes only a four-hectare (nine-acre) passive use land base.

Oakville

Because the Town of Oakville has a practice of acquiring linear strips of waterfront land when they are being developed or redeveloped, its waterfront has a large number of small, municipally owned parks. Most of these areas are not heavily used, except where they have been connected to longer segments. The Town is in the process of ensuring that all of these waterfront lands are clearly delineated from adjacent private lands, and it is constructing trails to increase public access.

Bronte Harbour

This long–established port at the mouth of Bronte (Twelve Mile) Creek is owned by the Town, with some lands leased to the Bronte Yacht Club and to a private boat repair facility. Other existing facilities include washrooms, a beach, a picnic area, and a boardwalk. The Creek valley to the north, which is partially in public ownership, connects to Bronte Provincial Park and forms part of the Parkway Belt West. Immediately to the east of Bronte Harbour, an extensive linear waterfront strip of public land receives considerable passive use.

A 1987 master plan prepared for the Region of Halton called for an Outer Harbour to be constructed east of the existing

river mouth, with space for a 450–slip marina. Work on the breakwater for this Outer Harbour is now under way, with the assistance of $3.2 million from the federal Small Craft Harbours Branch. The master plan calls for construction of a major boat launch facility on the west side of the river, as well as upgrading of the existing park, beach, and pier. The plan should add to the overall extent and quality of open space at Bronte Harbour, with improved parking and pedestrian connections to adjacent retail areas.

Coronation Park

This ten–hectare (24–acre) Town park has a large natural beach and facilities for softball, picnicking, winter skating, and children's play.

Oakville Harbour

Most of the land surrounding the mouth of Sixteen Mile Creek (Oakville Creek) is owned by the Town, and operated as an active recreational harbour. The river mouth is tied closely to the historical development of Oakville, and the east side of the harbour is dominated by the Erchless Estates, the original house of the founder of Oakville, which is now operated as a municipal museum. Several boating clubs and a canoe club lease Town lands for clubhouses and docks.

The only private land in the harbour is the Oakville Club, which operates tennis and squash facilities, a swimming pool, and some boat docks.

Wave action damage to the harbour was corrected in 1988 with construction of internal breakwaters and spending beaches (which is a beach alongside a river mouth, against which waves spend themselves). The land east of the harbour mouth is currently being rehabilitated as a shingle (pebble) beach.

Gairloch Gardens

This former estate was dedicated to the Town in 1974, and Oakville Galleries now operates from the estate house.

The landscaped grounds, with their extensive flower gardens and shrub displays, are a popular site for wedding photos and sightseeing. The Town is improving shoreline protection and has an ongoing landscaping program for the Gardens.

Mississauga

Approximately 56 per cent of the City of Mississauga's waterfront is in public or quasi-public ownership. However, only 33 per cent of the shoreline is publicly accessible; the remaining public lands contain a thermal generating station, sewage and waterworks plants.

Lakeside Park

This ten-hectare (24–acre) park has recently been expanded by the acquisition of an adjacent industrial property. Its ownership is shared between the City and the Credit Valley Conservation Authority (CVCA). It is being developed for passive uses only, with a picnic area and swings.

Meadowwood Park

Part of this 14-hectare (35-acre) linear park is leased to the City by Petro-Canada to provide a buffer between the oil refinery and adjacent residential neighbourhoods. The City operates two historic homes on the property as museums (the Bradely Museum and the Anchorage). CVCA owns another small site, known as Watersedge Park, near the narrow waterfront portion of this park.

Rattray Marsh

This 34-hectare (83-acre) marsh at the mouth of Sheridan Creek was acquired by CVCA to protect the last remaining lakefront marsh between Burlington and Toronto. A 1982 master plan emphasizes the preservation and educational values of the marsh, and identifies the management techniques needed to maintain the wetland in its present state. Construction of trails and interpretive stations has been carried out to provide limited public use.

Jack Darling Park

This 38-hectare (95-acre) site is leased from the Ministry of the Environment, and is used for tennis and field sports, picnicking, and other passive recreation. It also contains the only public beach in Mississauga capable of supporting a large number of people. A Master Plan and Environmental Assessment prepared in 1987 by CVCA proposes that groynes be constructed to control beach erosion and protect existing sewers; that the entrance drive be relocated; a path system developed; more parking and washrooms added. Most of this work is scheduled for 1991-92. An earlier proposal for marina development was discarded, largely because of public concerns about its effect on the Park.

To the east, the City–owned Richard's Memorial Park is separated from Jack Darling Park by 785 metres (2500 feet) of private shoreline owned by the residents' association of Lorne Park Estates. Like Cranberry Cove Park further along the shore, Richard's Memorial Park caters largely to picnickers and strollers.

J.C. Saddington Park

This ten-hectare (24-acre) park is a landfill project by CVCA, completed in 1974. At present, it has a large picnic area and waterfront walks. An Environmental Assessment report prepared in 1988, which recommended redevelopment and expansion, is on hold pending completion of other CVCA projects.

Port Credit Harbour

A mosaic of federal lands on both sides of the Credit River below Lakeshore Road provide marina activities and are an important access point for the Lake Ontario sport fishery. Boat launch ramps on the west side of the river include a fish-cleaning station, and a new building under construction will house a pumping station, information kiosk, and offices for the local Business Improvement Area. Federal lands on the

east side of the river are leased to the Port Credit Yacht Club, which will relocate in April 1991. A small passive use park near the river mouth is popular for shore fishing and walking.

East of the river mouth, a protected harbour developed on the former site of the Canadian Steamship Lines terminal is leased for 49 years to a private operator. The lessee, who operates one of the largest fresh-water marinas on the continent, wants to buy the property for development purposes.

Lakefront Promenade Park

This major regional lakefill park has been under construction by CVCA since 1977, with a master plan approved in 1985. It is now almost finished and is scheduled to be fully open in 1993.

The Port Credit Yacht Club is moving to this site in 1991, with facilities for 430 wet berths, winter storage, and a clubhouse. In addition, a public marina is expected to open in 1991, with 182 boat slips, a gas dock, and a public boating building. The master plan also calls for boat–launching ramps, parking, picnic areas, beaches and lookouts. A bicycle/pedestrian pathway will link this park to the Adamson Estate to the west, which is also owned by CVCA. The estate has been designated under the *Ontario Heritage Act* for its historical and architectural value, and the house on it will be leased to the Royal Conservatory of Music.

Metropolitan Toronto

A detailed description of open spaces in each sector of the Metro Toronto waterfront is included in the *Parks, Pleasures, and Public Amenities* report, which includes information current to early 1989. A brief overview of these existing green spaces and facilities is included here, but the reader is referred to the earlier report for more detailed information.

Etobicoke

Marie Curtis Park

This 23-hectare (57-acre) park at the mouth of Etobicoke Creek is owned by MTRCA and managed by Metro Toronto Parks Department. Its recreation facilities are heavily used and additional boat-launching and other facilities are planned. One major proposal now under active consideration is that MTRCA acquire part of the federally owned Canada Post (Canadian Arsenals) property immediately to the west, which includes an attractive woodlot.

To the east of Marie Curtis, there are four small neighbourhood parks along the Long Branch waterfront, with little interconnection between them through stable residential communities.

Colonel Samuel Smith Park

A major lakefill operation at the foot of Kipling Avenue is nearly completed, with docking for 500 boats, natural meadows, picnic areas, and trails scheduled for 1991. Discussions are currently under way regarding the boating basin to fully maintain public access to the water's edge.

MTRCA has acquired 12.9 hectares (31 acres) of the former Lakeshore Psychiatric Hospital grounds immediately adjacent to the landfill, to be managed as public parkland. The remainder of the Hospital grounds, together with the adjacent Humber College South campus, are the subject of redevelopment proposals, including those for a considerable amount of low–cost housing. Open space and public access will be included in an Environmental Management Master Plan to be prepared this year for the proposed redevelopment.

A sizable block of open space is included in the grounds of the R.L. Clark Filtration Plant, along the west side of Colonel Sam Smith Park. The plant is currently slated for expansion, potentially affecting parking areas and trail connections to the residential streets to the west. East of Sam Smith,

three neighbourhood parks provide intermittent access to the waterfront, but parkland along the Mimico shore is very limited.

Humber Bay East and West

Two lakefill parks created by MTRCA at the mouth of Mimico Creek provide a total of 40 hectares (99 acres) of recreational open space. The west spit is intensively developed for boat mooring and launching, while the east spit has been retained for urban wildlife habitat and passive uses.

Further development of Humber Bay East and West includes the construction of a footbridge to link the two spits, and the development of paths up the Mimico valley and along the waterfront to the west. Three small local parks are located along the waterfront of the "apartment strip" to the west, and redevelopment of this area may bring opportunities for new links. The Metropolitan Toronto aquarium has been proposed for Humber Bay East, but the Commission's first *Interim Report* recommended that this facility be relocated to the motel strip.

City of Toronto

Western Beaches

A linear strip of parkland along the shore of Humber Bay, protected by an offshore breakwall, dates back to the 1912 plans of the Toronto Harbour Commissioners. Along with trails, beaches, and playgrounds, this area is the site of an historic bathing pavilion and rowing and sailing clubs. Development plans call for additional swimming facilities and improved parking. Implementation of MTRCA's 1975 Master Plan for the Western Beaches has been delayed by lack of funding and jurisdictional disputes between the City of Toronto and Metro Toronto.

Because of the proximity of Lakeshore Boulevard and the Gardiner Expressway, the Western Beaches are somewhat isolated. Bicycle and pedestrian access across the

Humber River mouth to the west is difficult, although that could be corrected during planned bridge reconstruction. Access to the Humber River marshes, a significant natural area, and High Park, a major municipal park, is also restricted.

Exhibition Place/Ontario Place

The grounds of Exhibition Place, which is operated by Metro Toronto, are poorly utilized except during major events. Parts of the site include major examples of the built heritage: historic buildings, Fort Rouille, and a marine museum. A Metro study of Exhibition Place proposed that it be retained as a recreational facility, an amateur sports centre, a cultural entertainment site, and a major park. Other proposals include development of an international trade centre, or major changes to the stadium and waterfront areas to accommodate either the 1996 Olympic Games or the World's Fair 2000.

The Toronto Historical Board has proposed a major redevelopment for Fort York, a short distance to the east, which badly needs improved visibility and links to other attractions and parklands. Coronation Park, to the south of Lakeshore Boulevard, features baseball diamonds and picnic areas, as well as formal commemorative tree plantings.

Ontario Place is a lakefill-based facility operated by a provincial agency. Its attractions include cultural events, theme rides and the Cinesphere, a marina, and various commercial enterprises. This facility would also have to be substantially modified to meet the needs of a world fair or Olympics. Other proposals call for development of additional amusement rides.

Even though Ontario Place is adjacent to Exhibition Place, there is very limited interconnection between them, either physically or in programming. The entire complex of publicly owned properties could be strengthened as a waterfront recreation node if effective joint planning were in place.

Harbourfront

Harbourfront was established by the federal government in 1972 as a park along the Central Toronto Waterfront. The nature and scale of development proposed by the Harbourfront Corporation in its 1981 plan led to a public outcry; the Commission's first *Interim Report* includes far-reaching recommendations for restructuring the Corporation, including endorsement of a suggestion that a minimum of 16 hectares (40 acres) of land be transferred to the City of Toronto as parkland and open space, and as a continuous waterfront promenade.

Toronto Islands

The Toronto Islands comprise a regional park attracting a million summer visitors annually. Facilities such as marinas, a children's farm, picnic areas, and bicycle paths are set in a relatively natural parkland. The Islands and associated surrounding canals contain important fish and wildlife habitats, and several historic sites. There is, as well, a residential community here.

Few major changes are anticipated in the management of this outstanding open space asset.

Outer Harbour and Tommy Thompson Park

Two hundred and forty-seven hectares (598 acres) of the Leslie Street lakefill spit are owned by MTRCA, with an additional 223 hectares (540 acres) to be transferred to the Authority when further lakefill is completed. While the Leslie Street Spit was originally intended to create an outer harbour, and was then proposed as the site of recreational development, current plans recognize its value as an urban wilderness. Natural vegetation and wildlife communities have rapidly colonized the new habitats created by lakefill, including colonies of several rare species of birds.

A Master Plan and Environmental Assessment submitted by MTRCA in June 1989 proposes that the spit be managed to

protect significant wildlife, and to create additional marsh/wetlands habitat. An interpretive centre for public education will be provided, along with pedestrian and bicycle paths. The recommended concept plan also includes mooring basins and facilities for drysailing, as well as parking. After the Master Plan is approved by the Environmental Assessment Board, it will be implemented over a 20-year period. In its *Interim Report*, the Royal Commission commented on the need to maintain the natural values of this area.

Immediately adjacent to the base of the spit, the Toronto Harbour Commissioners (THC) is developing a 1,200-berth marina, which will substantially increase boat traffic in the outer harbour. The first phase of this marina opened in 1989.

In June 1989, the THC proposed that the City develop 33 hectares (80 acres) of land along the north shore of the outer harbour as public parkland. This area falls within the Declaration of Provincial Interest announced by the Province in October 1989, and will be considered by the Commission in the context of the Environmental Audit currently under way.

There are sections of grassy open space around the grounds of a sewage treatment plant, immediately to the east of the base of Tommy Thompson park, which is operated by Metro Works. As part of a proposed expansion onto lakefill to the south, the Martin Goodman Trail will be relocated to the water's edge in front of the sewage treatment plant, to provide a better link between Ashbridge's Bay, the proposed City park, and Cherry Beach to the west.

Ashbridge's Bay

The lakefill spit at Ashbridge's Bay, owned by MTRCA and operated by Metro Parks, provides seasonal boat mooring and launching facilities, playground and picnic grounds, beach, and a trail system.

Eastern Beaches

A series of City-owned beaches provide a continuous and heavily used public waterfront from Ashbridge's Bay to the Scarborough boundary. Water quality problems caused by sewer overflows recur regularly. MTRCA is just completing a long-term management plan for the Eastern Beaches; it examines future stability of the beach in the face of declining natural sand supply because of erosion control works further east.

Scarborough

Rosetta McClain Gardens

The formal gardens developed by Metro Parks on this property give a good view of the lake. Along the Bluffs to the west, a broken chain of small properties has been acquired by MTRCA, and properties needed for shoreline protection programs will continue to be acquired.

Scarborough Heights

This passive-use park links to other MTRCA lands to the east and is a potential pedestrian link, through a ravine, to the shoreline below the Bluffs.

Bluffer's Park

This 42-hectare (102-acre) lakefill-based facility is the focus of waterfront activity along the Scarborough shore, with launching ramps, mooring for 1,100 boats, a beach, picnic grounds, and some passive uses. It has become a major access point for salmon fishing, and in some seasons, suffers from overcrowding. Further expansion, involving access improvements and possibly further lakefill, is being considered.

Among the more immediate issues are development of a safe pedestrian trail to link Bluffer's to MTRCA-owned toplands west of the Brimley Road Ravine, and possible links to shore protection works currently under way to the west.

However, the interesting geological formations known as the Needles need the continuous wash of waves at the foot of the Bluffs if they are to be maintained. The Toronto Waterfront Charrette, an international team of planners and architects who met in September 1989 to discuss ideas for the future waterfront suggested that securing access past the Needles will require innovative design, perhaps involving a boardwalk on open piers to allow waves to pass.

Cudia/Sylvan

These passive parks along the Bluffs are not slated for major development. Erosion control projects in the Bellamy Ravine and along the toe of the Bluffs through this section will provide additional public pedestrian access over the next few years.

Guildwood

The Guild Inn is set in wooded grounds that shelter sculptures and cultural artifacts, as well as several rare plant species. Because access to the shore is possible at this site, there have been proposals to develop a swimming beach, small craft day mooring area, and beach trails connecting to the east and west, but a master plan that would deal with these proposals has not yet been developed. Redevelopment of the inn itself, which is managed by a provincially appointed Board, is anticipated in the near future.

Two municipal parks also make it possible to get to the Bluffs to the west and east of Guildwood. MTRCA erosion control works have already provided access along the base of the Bluffs in front of the South Marine Drive property. Ravine stabilization is needed in the other area, known as Grey Abbey Ravine.

East Point

This MTRCA waterfront park is undeveloped at present, and is used principally for passive recreation. Development plans,

which are scheduled to be submitted for Environmental Assessment Review this year, call for wetland enhancement and a sports field complex to support a mix of active and passive recreational uses. Proposed lakefilling along the waterfront would create a marina for 600 boats, as well as launching facilities, by the end of the century. The perceived impact of traffic on the local community is a major issue.

A pedestrian link is also proposed past the Highland Creek Pollution Control Plant to the east. It would connect to a trail up Highland Creek to Colonel Danforth Park, and further along the lakeshore to the redevelopment area at Port Union.

Lower Rouge

Almost the entire Lower Rouge valley is publicly owned, protecting a very significant natural area and wetland. While some habitat improvement projects have been suggested for this area, existing recreational development is limited to beach facilities and a pedestrian bridge across the river mouth.

Access along the shore between Port Union and the Rouge is restricted by a busy railway line and a scattering of houses. MTRCA proposes to acquire the remaining homes in the Chesterton Shores area as funds permit. A small area of lakefill would permit continuous public access along the waterfront from Chesterton Shores to the Rouge beach.

Region of Durham

Pickering

Petticoat Creek

This 68-hectare (165-acre) conservation area is open from spring to fall and has such facilities as an artificial swimming lake, group camping, nature trails, a picnic area, and beach. Petticoat Creek has been designated under the MTRCA Greenspace Plan as a major recreation/interpretation area, and further upgrading of swimming and picnic facilities is

planned. As well, a small lakefill is proposed on the west side of the existing park boundary to provide safe mooring for paddle boats, sail boards, and other small watercraft.

MTRCA has purchased about half the homes and properties along the waterfront in the Rosebank area, between Petticoat Creek and the Rouge River. The long–term plan is to acquire the remaining properties and extend the conservation area west to link to the Lower Rouge, with pedestrian and bicycle access from the bridge there. The Authority has been acquiring properties in the Fairport Beach area, to the east of Petticoat Creek, so that eventually it will be a continuous link to their Frenchman's Bay holdings.

Frenchman's Bay

Most of the land along the west side of Frenchman's Bay and in two adjacent ravines is owned by MTRCA or the Town of Pickering. While Bruce Hanscombe Park is the only public waterfront along this stretch with direct access and visibility from a roadway, a walking trail has been established along the west side of the bay, using public lands and streets. Most of the Frenchman's Bay Yacht Club, near the southwest corner of the bay, is located on MTRCA land.

None of the east shore of Frenchman's Bay is in public hands, although long-term plans call for acquiring enough waterfront lands to create a nature trail and walkway around the entire bay. The southeast corner of the bay is currently the site of several marinas and boat yards. Proposed expansion of marina operations and development of condominiums would damage the important marshlands at the head of the bay, which MTRCA is also seeking to protect.

Current ownership of the land under the bay, as well as part of the marshlands and the eastern shore, is claimed by the Pickering Harbour Company. Because this company predates Confederation, the status of municipal controls over its land–use proposals is currently before the courts, and all plans are on hold until the legal issues are resolved.

MTRCA has acquired most of the properties along the east and west beach strips at the entrance of Frenchman's Bay, although several key parcels at the ends remain in private hands.

Future conflicts may occur in parts of the waterfront trail system, between trail users in the narrow strip of public land and owners of adjacent private residences. There is also concern that the existing entrance to the bay is dangerous for boaters from Lake Ontario.

Ontario Hydro Park Lands

A small municipal park at the foot of Liverpool Road, extending to the west boundary of the Pickering Nuclear Generating Station, provides for passive uses. A large area around the mouth of East Creek, adjacent to this park, is also owned by Ontario Hydro. Part of it is marshland; the upland portions east of the Creek have been developed as a passive park with a fitness trail and cricket pitch. Another piece of Ontario Hydro land, known as Bay Ridges Kinsmen Park, is leased to the Town of Pickering for park purposes. It has been developed with tennis courts, ball diamonds, and soccer fields.

Duffin Creek

An extensive area of conservation lands are owned by MTRCA around the mouth of Duffin Creek, including valleylands, marshlands, and some tablelands. On the Pickering side of this project area, the old waterfront residential area of Squire's Beach is owned mostly by MTRCA, although many of the houses there are still occupied. These lands extend westward to connect with the York-Durham Water Pollution Control Plant, which occupies a considerable tract of lakefront.

Town of Ajax

Duffin Creek

Most of the Duffin Creek lands fall within Ajax, with the valleylands publicly owned by MTRCA north to Bayly Street,

where the Annandale Golf and Curling Club occupies part of the valley.

The Rotary Club is assisting MTRCA in the development of Rotary Park at the mouth of the Creek, with a boat launch, an informal beach, playground, and small pavilion building. Plans also call for day mooring facilities, a nature interpretation centre, and a trail system up the valley. There is also potential for a pedestrian link across the Creek that would tie it to trail systems in Pickering. Wildlife and fisheries habitat enhancement projects are also included in the planning concept for the area.

Ajax Waterfront

Most of the Ajax waterfront east to Shoal Point Road is owned by MTRCA, and is being developed in accordance with a detailed master plan. Much of the development to date has been in the western section, where Lake Driveway separates a 125-metre (400-foot) shoreline strip of open space from housing developments. While pathways, flower beds, parking lots, benches and some trees have been provided, the overall effect is of a very open grassed expanse, separated from the lake by quite high bluffs.

Within this area, a single four-hectare (ten-acre) parcel at the foot of Harwood Avenue is owned by a private developer, separated from the lake by a narrow strip owned by MTRCA. There have been conceptual plans for a marina, accompanied by commercial and residential high-rise development, for many years, but there are apparently no immediate plans to proceed with development. A regional water plant, which permits easy access around its buildings, is also located within this waterfront open space corridor. A current study may recommend expansion of this plant as the preferred option for meeting regional water supply needs, but the proposal faces considerable local opposition.

All but a half dozen homes between Pickering Beach Road and Shoal Point Road have been acquired by MTRCA, but the

only recreational development there to date is a ball diamond and playground in Paradise Park, behind the waterfront strip.

Town of Whitby

Lynde Shores

This 176-hectare (425-acre) conservation area is owned by the Central Lake Ontario Conservation Authority (CLOCA). Development has been minimal, and the site is used mainly for nature appreciation, fishing, canoeing, skating, and picnics.

The major purpose of the area is to protect Cranberry Marsh (also known as Levay's Marsh), a Provincially Significant Wetland. Lynde Shores also contains a portion of the mouth of Lynde Creek, some sensitive wetland areas associated with it, and the beach lands. Proposals for development of adjacent lands, as outlined in the Lynde Shores Secondary Plan, may result in the addition of further wetland to the conservation areas.

Whitby Harbour

About three-quarters of the shoreline around Whitby Harbour is owned by the Town and designated as open space, providing opportunities for parkland, marinas, and other recreational facilities. While most of this land is undeveloped at present, Iroquois Beach Park and the Whitby Yacht Club are located on the west shore of the harbour, and the Town is developing a public boat launch on the west shore. At the north end of the harbour, the Town has temporarily provided three soccer fields. Iroquois Park and Recreation Complex, Whitby Arts, and the GO station are immediately north of the harbour.

A narrow strip of public land follows part of the east shore, with the remainder in private ownership as marinas and boat yards. At the mouth of the harbour, Lake Park provides passive uses, where fishing off the adjacent federal pier is a popular activity. The Whitby Water Purification Plant lies to

the east along the lakefront, with pedestrian access possible along the shore in front of the plant. To its east, Heydenshore Park provides a children's playground, beach and picnic areas, and the site for Heydenshore Pavilion.

Corbett Creek Marsh/ Intrepid Park

The Town of Whitby owns a 30-hectare (73-acre) property here that includes an important lakeshore marsh and part of the site of Camp X, the World War II spy training centre.

City of Oshawa

Lakefront Park West

This 37-hectare (90-acre) City property is now under development as a major waterfront park. Two clusters of four lob-ball diamonds and associated facilities have been constructed. An adjacent six-hectare (15-acre) undeveloped parcel of shore lands will soon be conveyed from CLOCA to the City as an extension of Lakefront Park West.

Lakeview Park

This is the largest and only developed park on the Oshawa waterfront. It contains Henry House Museum and two other historical buildings. As well as having the only supervised beach in Oshawa, the park also provides playgrounds, sports fields, a picnic area, unsupervised beaches, the Jubilee Pavilion, and pathways along the water. An easement granted by the Oshawa Harbour Commission allows public access from the end of the park onto the western pier at the entrance to the harbour, which has an excellent view of the lake back to the shore.

Future plans for Lakeview Park are to continue to develop it as a high-quality theme site. The Oshawa Waterfront Plan calls for the acquisition of several private properties within the western portion of the park, which has been the subject of considerable discussion.

Oshawa Creek

All the land in the Oshawa Creek valley south of Bloor Street is owned by CLOCA and the City. A trail system connects it to the waterfront and Lakeview Park, but no other significant development of the valleylands is planned.

Oshawa Harbour

All the land surrounding Oshawa Harbour, including most of Second Marsh, is owned by the Oshawa Harbour Commission. Limited public access is allowed, particularly to the marina and boat launch located in the central harbour area.

Town of Newcastle

Darlington Provincial Park

This waterfront park is located on the western boundary of Newcastle, adjacent to the significant natural areas of McLaughlin Bay. The park contains 350 campsites, a beach, a swimming pool, and a boat-launch ramp. Discussions are under way regarding the possible transfer of this park to CLOCA.

Bowmanville Harbour (Port Darlington)

A 37-hectare (90-acre) conservation area owned by CLOCA protects part of the marsh area at the mouth of Bowmanville and Soper creeks. Much of the eastern shoreline of the harbour has been privately developed as marina and residential condominiums. The primary owner of this area, and of part of the lake shoreline at the mouth of the creeks, is the Port Darlington Harbour Company, another entity with a pre-Confederation charter. Areas of substandard housing on some of the company's lands offer opportunities for acquisition, if that becomes financially possible. The Town of Newcastle also owns four small shoreline properties in the vicinity of the harbour, which are mostly undeveloped.

Graham Creek

The Town owns two small waterfront properties near the mouth of Graham Creek. One of these, forming the eastern shore of the creek mouth, will be developed as a local park for Newcastle Village with a boat-launch ramp, parking, and picnic tables. The other site, just to the east, is undeveloped.

PRIVATE OPEN SPACES

Along the length of the waterfront, there are scattered sites in private hands that provide either some form of commercial recreation, such as golf courses, or of informal public access, such as cemeteries. Some contribute to the greening of the waterfront in their present form while others offer opportunities for future public action to increase access or protect significant resources.

Halton/Peel

Along the shores of Burlington Bay, both the Woodland Cemetery and Holy Sepulchre Cemetery incorporate large tracts of open space, including important natural habitats along the steep, wooded slopes to the shore. The 18-hole Burlington Golf and Country Club covers 56 hectares (136 acres) and it, too, is a major green space in an urban setting.

On the northwest side of the Burlington Canal, 39 hectares (95 acres) of lakefill are the site of the Canada Centre for Inland Waters, which includes a water quality pilot plant, a launch basin, and a research laboratory.

Appleby College is a private boys' school that has been part of the Oakville waterfront since 1910. Most of the buildings are set back from the water's edge, but the school is considering establishing facilities to teach sailing along the waterfront. Local residents are able to make informal use of this 21-hectare (52-acre) site for walking, skiing, and tobogganing, although

acts of vandalism could place access in jeopardy. The college has ambitious long-range building plans, and fully intends to remain on the site.

At least two creek mouths — Shoreacres Creek and Fourteen Mile Creek — remain in private ownership but are candidates for eventual public acquisition. Both are in a natural state; Fourteen Mile Creek has considerable flood-prone hazard land near its mouth.

Along parts of the Oakville shoreline, large estate properties in private hands remain parcels of green along the shoreline; many have been redeveloped in recent years, a trend that appears likely to continue.

One large section of private open land just back from the Oakville shore is near Shell Park, which is currently part of the industrial land base but may be transferred to the Town. It is proposed that adjacent lands be maintained as private open space.

Just across the Mississauga border, a 19-hectare (47-acre) waterfront property owned by Ontario Hydro is not publicly accessible, but is ideal as a future acquisition for parkland.

Metropolitan Toronto

The intensity of land uses along the Toronto Waterfront has meant that very little private open space has been left undeveloped. The only major remaining parcel is the Toronto Hunt Club golf course in Scarborough, which is limited to members. During recent negotiations with the MTRCA over shoreline protection works, the Toronto Hunt Club refused to consider permitting public access along its waterfront.

Region of Durham

Durham Region is the only part of the Greater Toronto Waterfront with significant stretches of private shoreline still in an undeveloped state. While there are no formal provisions

for public access, they are suitable for major public open space initiatives in future. The pattern of undeveloped private shoreline increases from a small amount in Pickering to more than 60 per cent of the waterfront in Newcastle.

Across Durham Region, the 13 significant stretches of undeveloped private shoreline include:

- part of northeastern Frenchman's Bay;
- foot of Harwood Avenue in Ajax;
- Carruther's Creek to Ontoro Beach in Ajax;
- from Lynde Creek to the hospital lands in Whitby;
- Heydenshore Park to Crystal Beach in Whitby;
- Lakefront Park West to Park Road in Oshawa;
- Pumphouse Marsh in Oshawa;
- Oshawa Harbour to Darlington Provincial Park;
- Darlington Provincial Park to Darlington Generating Station;
- Bowmanville Harbour to Wilmot Creek retirement community;
- Wilmot Creek to Graham Creek;
- Graham Creek to Port Granby dump;
- Port Granby dump to East Townline Road.

In addition, much of the land owned by St. Mary's Cement is currently open and undeveloped, although extraction rights have been granted on the property.

TRAILS AND CONNECTORS

Virtually all of the developed waterfront parks include internal trails suitable for walking or cycling, or both. Because of the popularity of these activities, planning for new parks also includes provision for trail development wherever feasible.

There is generally less progress in connecting trails and bikeways, and a good deal of diversity between various municipal plans and policies. In most cases, the general intention is to provide good walking and cycling trails throughout the area, often with a special emphasis on the waterfront and river valleys. These connecting trails are sometimes intended to provide linear access along the waterfront, sometimes to link separate waterfront features, and sometimes to link those features back to the community. While trails and bikeways are often set in open space areas, they may also follow residential streets, or even arterial roads.

Burlington has begun to develop a bikeway system along Lakeshore Road from Spencer Smith Park to Burloak Road, with one significant gap to be completed in 1990. Its proposed five-year bikeway plan will connect all the nodal waterfront parks, as well as creating an extensive north-south network. In most cases, cycling and pedestrian routes will be separated on opposite sides of the street.

Oakville has a basic bikeway/pedestrian trail system in place, especially up the Town's two major river valleys, although many gaps remain. The Town intends to use its growing length of lakefront for trail linkages, as well as for establishing a well-marked cycleway across the main part of Oakville to connect the open space system. Oakville's existing cycleway plan does not deal strongly with the issue of links across the waterfront.

While the City of Mississauga currently has few trails along the waterfront, a comprehensive bicycle and pedestrian route study is scheduled for completion in September 1990, with construction of new trails to begin in 1991. Waterfront routes are expected to rank as high priorities. The ultimate goal is to provide a safe, continuous series of routes linking attractions across the City.

Metro Toronto's Parks and Property Department has developed a series of bicycle and pedestrian trails throughout

the City, especially in major river valleys. One of the most extensive existing trails along the waterfront is the Martin Goodman Trail in the City of Toronto, a 20-kilometre (12-mile) bicycle trail extending from the Humber River to the Eastern Beaches. It connects extensive walking and cycling paths leading up both the Don and the Humber valleys. Unfortunately, lack of maintenance and the trail's route along some busy or uncongenial streets have made for less than ideal conditions in some sections.

Other, shorter trails in the west connect the lower reaches of Etobicoke Creek to Marie Curtis Park, while, in Metro's eastern reaches, they lead across the Rouge River. There is a proposal to connect an existing trail system along Highland Creek to the waterfront, as part of the development of East Point. However, most of the trail development sponsored by Metro Toronto Parks now takes place in the middle and upper valleys, not along the waterfront.

The City of Toronto has an active Cycling Committee, which is involved in the planning of cycling routes. In Etobicoke, development of a comprehensive plan for walking and cycling trails is proposed as part of an Open Space and Recreation Master Plan. While Scarborough sponsors a program of Community Walking Trails, most are located in the northern part of the municipality, rather than along the waterfront. The shore protection works carried out by MTRCA provide a basis for trail development along the shore in the longer term. As part of their Greenspace Strategy for the Greater Toronto Region, MTRCA has proposed that a continuous waterfront trail be developed across the entire width of the Authority's watershed. According to this concept, the waterfront trail would connect to a series of valley trails, leading up the valleys of Etobicoke Creek, Mimico Creek, the Humber, the Don, Highland Creek, the Rouge, and Duffin Creek. These in turn would connect to trail systems along the Parkway Belt and the Oak Ridges Moraine.

Trail development in Durham Region outside the existing recreation areas is minimal. A trail has been developed up the Oshawa Creek valley, and new trails are proposed along many parts of the waterfront, especially in Oshawa and Whitby.

2. *Natural Heritage Values on the Waterfront*

The water's edge attracts more than just people; it serves as a focal point for fish and aquatic organisms using the shallow waters, and for wildlife taking advantage of the specialized habitat conditions along the shore. The action of wind and waves creates unusual and important landforms, with eroding bluffs in some areas, beaches and dunes in others. Together, these elements of the natural heritage make the waterfront a more productive and diverse environment than either the open waters of the lake or the lands to the north.

Unfortunately, the natural potential of many sections of the waterfront has been depleted by the pressures of industrial, residential and recreational developments. Although an appreciation of the natural riches of urban valleylands has encouraged public bodies to set aside broad swaths of green that extend through the urban fabric, the waterfront has not been equally appreciated. Understanding the ecological values of the Greater Toronto Waterfront is an essential first step in conserving and protecting those values.

FISHERIES

The waters along the Lake Ontario shore shelter a varied and complex community of fish and other aquatic creatures. Together with associated tributary streams, these habitats support at least 19 species of gamefish and 50 other smaller types of fish, 11 of which have been introduced into the lake over the past 150 years. In the waters around Toronto, on the other hand, at least 20 endemic species have disappeared.

Each species is adapted to live within a specific kind of habitat, in much the same way that terrestrial wildlife requires specific conditions. The distribution of fish is influenced by such factors as depth, temperature, oxygen levels, bottom type, and availability of cover, as well as available food supplies. Many species move seasonally or at different life stages. Some come closer to shore to spawn, or migrate

up streams. Many species require productive shallow waters or wetlands for spawning or for nurseries.

These key habitats, which in the Toronto area exist only as remnants of their former abundance, have a central place in sustaining the lake's fish communities.

> Relatively small or localized habitats that provide essential conditions for breeding, spawning, rearing and feeding of fishes may have an ecological role far more important than would be suggested by their size alone. In temperate aquatic ecosystems such as the Great Lakes, areas which we refer to as "centres of organization" tend to occur in the coastal or nearshore zone....
>
> (Steedman et al. 1987, 17)

Much of the lake bed along the Toronto shore is relatively featureless, offering little natural shelter or diversity. Former habitat characteristics such as coastal marshes, submerged aquatic plants, gravel bars, and rocky shoals have largely disappeared as a result of shoreline alterations and historic "stone hooking" for construction materials. Fish living in this simplified habitat are vulnerable to periodic natural upsurges of cold lake water, which appear to be an important factor in the ecology of Toronto waters. Many species of game fish are unable to cope with the sudden temperature fluctuations that accompany these upsurges. Other fish species have disappeared from overfishing, pollution or habitat alterations. As a result, open water species such as yellow perch, alewife, smelt, and white sucker are now prevalent.

Sheltered Habitats

Natural features such as the Toronto Islands increase diversity locally and provide "thermal refuge" from cold water upsurges. The creation of lakefill spits with sheltered bays has produced fish communities that are more abundant, diverse, and consistent than those along adjoining exposed shorelines.

Lakeshore wetlands are of vital importance to fish communities because they provide spawning and nursery habitat for many species. Removing lakeshore marshes, such as the extensive marshlands formerly at the mouth of the Don River, was undoubtedly a factor in the historic loss of fish species and abundance.

A 1989 survey of Toronto waterfront fish habitats by MNR and MTRCA confirmed the significance of sheltered areas, particularly the canals of the Toronto Islands, the lakefills at Humber Bay East and West, Tommy Thompson Park, Ashbridge's Bay, and Bluffer's Park, and the rivermouth marshes of the Rouge and Humber. Other waterfront marshes such as Frenchman's Bay and Oshawa Second Marsh, while not covered in the 1989 survey, are also thought to be important.

The protected waters of river mouths are especially productive where water quality and habitat structure permit their use by a diversity of fish species. The mouth area of the Humber River, for example, is known to contain at least 26 fish species; the mouth of the Rouge has 31. The Don River mouth, severely degraded by pollutants and habitat modifications, yielded only three species, according to an earlier study.

Tributary Streams

Tributary streams also play an important role as spawning grounds for species such as rainbow trout and white suckers. The use of tributary rivers by spawning fish depends largely on suitable water quality (cool and clean), and on the absence of dams or other barriers. Rivers along the western Lake Ontario waterfront that are host to major spawning runs include:

- Grindstone Creek;
- Bronte Creek;
- Oakville Creek;
- Credit River;

- Humber River;
- Rouge River;
- Duffin Creek;
- Bowmanville/Soper Creek;
- Wilmot Creek.

Constraints on the Fishery

Habitat degradation, not water quality, is the most serious constraint on the ability of native fish species to survive and reproduce. Physical alteration of wetlands and other key habitats is especially destructive. The Ministry of Natural Resources has adopted an objective of "no net loss" of fisheries habitat in the face of changing land use, consistent with the 1986 federal *Policy for the Management of Fish Habitat.*

The level of contaminants in fish does not appear to be directly affecting their survival and reproduction, although those effects have been documented in higher–level organisms that feed on fish. However, contaminants in fish flesh do affect the recreational use of the fishery by limiting the amount that can be safely eaten. Consumption advisories also contribute to a public perception of the waterfront as "polluted" and tends to limit angling in urban areas. A telephone survey carried out as part of the *Urban Fishing Feasibility Study* (Metropolitan Toronto and Region Conservation Authority 1986) found that, while more than half the households surveyed had members who fished, only three per cent of them usually fished locally. The reasons cited for not fishing in Toronto related largely to concerns about polluted water and contaminated fish.

Access to the fishery is another limiting factor, because deep–water salmonid fishing involves expensive power boats and equipment. Fishing access from the shore is generally poor.

The fish communities of Lake Ontario have been extensively altered because native predator species have been removed and replaced by introduced species such as coho and chinook

salmon and rainbow trout. Smelt and alewives, which were also introduced, have become very abundant, with far-reaching effects on other species. Efforts are under way to reintroduce Atlantic salmon, through a stocking program in the upper reaches of the Credit River and Wilmot Creek. If successful, it will re-establish this native salmon in the deep lake waters, with annual spawning runs into the tributaries.

Values of the Fishery

The introduced salmonids of Lake Ontario support one of the largest sport fisheries in the province, with an estimated annual harvest of 250,000 kg (550,000 lbs). To sustain this fishery, more than eight million young fish are stocked each year into Lake Ontario by Canadian and American management agencies. Because of the nature of the fish involved, relatively little angling is done from shore, leading to increased demands for boat-launch facilities along the waterfront. The charter boat business has expanded rapidly to take advantage of this fishery, with 400 to 500 charter boats now operating in western Lake Ontario. Fishery managers anticipate continued growth in the Lake Ontario sport fishery, with an estimated 25-per cent increase in annual angler-days by the turn of the century.

The recreational and economic benefits associated with catching fish are not the only reasons for supporting a healthy fish community: fish species serve as barometers of the health of the ecosystem, particularly when sensitive "indicator species" are monitored regularly. This ecosystem approach, which has been proposed as part of MTRCA strategy for the Rouge River, leads to management priorities based on ecosystem-based principles, rather than fish production. It means that protection, rehabilitation, enhancement or habitat creation efforts should focus on:

- sustainable development, not sustainable yield;
- management for healthy ecosystems, not for recreational fisheries;

- the presence of self–sustaining populations of indicator species, not on maximizing the productive capacity of the river to produce sport fish;
- rehabilitating/creating the important habitat characteristics of a river system, not on creating/expanding the most productive habitats for sport fish.

  (Metropolitan Toronto and Region Conservation Authority 1990, 64)

WILDLIFE

Despite its degree of urbanization, the Greater Toronto Waterfront continues to provide a mosaic of significant wildlife habitats along its length. In ecological terms, the waterfront is particularly diverse and productive because it provides an "edge" between land and water. Many species of wildlife are attracted to this edge for all or part of their life cycle, taking advantage of the variety of habitat conditions found along the shore.

The Lake Ontario waterfront shows a considerable degree of wildlife use throughout all seasons of the year. Shallow offshore waters are heavily used in winter by waterfowl, with migratory use by loons and grebes as well. Undeveloped shoreline areas and lakefill spits often attract open-country winter birds including snow buntings, snowy owls, and various finches. Several species of waterfowl are also frequently found in or near lakefill sites, offering ready opportunities for public viewing.

Summer Use by Wildlife

As shown on the Significant Habitats map (Map 2), wildlife use of the waterfront during the summer breeding season tends to be concentrated in key habitats. Lakeshore marshes are valuable breeding sites, not only for a variety of birds, but also for many amphibians that return to shallow waters to reproduce. Some marshes, such as Oshawa Second Marsh and Cranberry Marsh, are particularly well known as habitats for a diverse mix of breeding birds, including several rarities.

Many of the reptiles and amphibians that frequent the remaining waterfront marshes are also classed as rare. The eastern spiny softshell turtle, which is considered provincially significant, has been located at two sites along the waterfront, Grindstone Creek in Burlington and Lynde Creek in Whitby. The regionally rare Blanding's turtle is somewhat more widespread, with records from the Humber, Rouge, Cranberry, Oshawa Second, and Bowmanville marshes. Along the lakefront, there are single records only of such regionally rare species as wood turtle in the Bronte Creek valley, stinkpot turtle in the Humber marshes, and map turtle in the Rouge Marsh. Bullfrogs, common further north, are recorded along the waterfront only in High Park and Lynde Creek.

The importance of wetlands to amphibians and reptiles is highlighted by the Humber marshes, one of the few areas where a great deal of work has been done on this wildlife group. In addition to the two regionally rare species already cited, a decade ago the marsh was known to have at least six other uncommon species, including northern ringneck snake, milk snake, mudpuppy, northern water snake, redbelly snake, and wood frog. (Metropolitan Toronto and Region Conservation Authority, *Environmentally Significant Areas Study*, 1982) The number of these species that remain today is unknown.

The remnant marshlands and adjacent natural habitats are also the refuge of mammalian wildlife, which is restricted along much of the waterfront by human activities. Carruther's Creek Marsh supports 30 species of mammals, the greatest diversity recorded anywhere in the MTRCA watershed. The Lower Rouge valley, by contrast, is known to contain only 12 mammal species; East Point Park has records of only seven.

Wooded valleys leading back from the shore are also vital wildlife habitats providing nesting places for forest birds, as well as shelter for mammals, insects, and other species.

Island habitats are in very short supply along western Lake Ontario but, where they do exist, they provide

specialized habitat for colonies of nesting birds. Two artificial islands in Hamilton Harbour, created to support hydro pylons, are used as nesting habitat by common terns. Only two other common tern colonies are known across the waterfront, and the species is declining rapidly because of lack of suitable habitat and competition from ring-billed gulls. Caspian terns, which also require barren island habitats, did not breed at all in MNR's Maple District in 1989.

A former colony of black-crowned night herons from Mugg's Island has now established itself successfully on the Leslie Street Spit. The spit has functioned almost as an island habitat for some colonial species, but it is becoming less attractive because of an invasion of woody vegetation and competition from aggressive gulls.

At least two wildlife species have reproduced along the waterfront to the point that they are now generally considered a nuisance. Ring-billed gulls have increased dramatically in number and have adapted to the plentiful food source provided by urban conditions and to the new habitats created by lakefill. Giant Canada Geese, at one time thought to be extinct, are now so abundant in waterfront parks that their excrement is considered not only unsightly, but a potential health hazard as well.

Migratory Use of the Waterfront

Perhaps the most significant use of the waterfront by wildlife is as a staging and resting area for migratory birds, both in spring and in fall. The specialized habitats along the shore attract the birds, which stop to rest and feed. These stop-overs are critical in ensuring the survival of long-distance migrants like whimbrels.

The expanse of Lake Ontario is a serious barrier to many species of songbirds, which often work their way along the lakeshore during migration, or build up in numbers as they wait for favourable conditions before crossing. Suitable

feeding and shelter areas, such as the shrubby fields behind Cherry Beach, can be crucial during this period.

In speaking at the first round of Commission hearings, the Toronto Ornithological Club emphasized the importance of green areas like the Lakeshore Psychiatric Hospital grounds as concentration points (where birds congregate) for migrating warblers and thrushes. They also pointed out that the waterfront is the only place in the City where several species of sparrows can be seen in a day during migration.

Several species of hawks also travel along the shore during migration, using the updraught off the Scarborough Bluffs to help them soar. During October, saw-whet owls concentrate in the shrubbery of the Toronto Islands, making this one of the best sites in the world to see the species.

While most migrating use is by birds, the waterfront also serves as a staging and concentration area during the autumn migration of Monarch butterflies.

The corridors of natural habitat provided by urban valleylands appear to funnel the migration of many species in both spring and fall. While little work has been done to quantify the significance of these corridors, they may well be vital links in the migratory success of many species, particularly as the inhospitable urban area expands.

OTHER SIGNIFICANT FEATURES

Natural areas can be considered significant if they provide habitat for rare plants or vegetation communities, or if they have other scarce features such as unusual landform structures. Preserving them is important to maintaining the full range of genetic diversity along the Greater Toronto Waterfront. These features have been relatively well documented along the Greater Toronto Area shore, through programs such as:

- Area of Natural and Scientific Interest (ANSI) designation;

- Environmentally Sensitive Area (ESA) studies;
- wetland evaluation;
- nature club site studies;
- master planning or environmental assessment of parks.

As shown on Map 2, Significant Habitats, there is considerable overlap of these areas with fish and wildlife habitats.

Some of the features along the waterfront are quite striking. At both the Burlington Beach Strip and Joshua Creek, there are remnant sand dunes supporting a number of rare plant species. The well-known Scarborough Bluffs, themselves a provincially significant landform, are matched by the virtually unknown Bond Head Bluffs in Newcastle. There is also a small cliff near the south end of Burloak Road that provides the only exposure of Queenston shale on public land along western Lake Ontario.

Some of the more unusual plant communities found along the shore are a small scattering of remnant prairies, most notably within High Park and East Point Park. Many of the waterfront wetlands shelter rare plant species, but some species occur in isolated pockets of habitat. On the dry clay hillside of Burlington Bay Bluffs, for example, there are two stations for the hoary mountain mint (*Pycnanthem incanum*), one of only two places in Canada where this species is known to exist.

While some rare species will have to be actively managed if they are to survive and increase, many require nothing more than protection from incompatible uses.

Incompatible uses, however, are not restricted to the wholesale destruction of habitats by urban development. Species and habitats within "protected" parkland are too often at risk as well, from the crush of too many people, development of recreational facilities, and particularly from thoughtless landscaping. In High Park, for example, in the years since 1955, the nationally rare frostweed, the

provincially rare prairie buttercup, and the regionally rare bristly crowfoot have all disappeared. At least 26 rare plant species have disappeared from the Toronto Islands since the first records were kept there. In both places, insensitive landscaping is thought to have been a factor.

The pattern of gradual decline in diversity and numbers is reflected in birds and mammals as well. Black terns used to nest in the Humber marshes; now the nearest colonies are east of the Metro Toronto boundary. Rattray Marsh used to be one of the best birding spots along the shore; now its value is greatly reduced by surrounding urbanization and the effects of sediment and stormwater pollutants.

History has taught us that protection of rare species and overall species diversity depends on a careful strategy of setting aside sanctuaries, providing appropriate links to other habitats, and ensuring that management takes into account the needs of wildlife and wild plants.

Although the natural assets of the Greater Toronto Waterfront have been greatly depleted by past abuses, much remains, even in the more urban sections. Scarborough's East Point Park, for example, contains the largest and healthiest colony in Ontario of a prairie plant called spike prairie blazing star, as well as the largest gentian population within 80 km (50 miles) of Toronto. The survival of these plants should be an integral part of planning for recreational uses of this site. In the same way, protecting and enhancing ecological values in any green space along the shore should be a first order of business.

3. *Waterfront Policies and Plans*

Each of the agencies involved in waterfront management has its own set of policies and plans related to its own priorities. Those policies are usually developed in consultation with other agencies and the public, and there are many examples of effective co–operative effort. Nonetheless, there is a remarkable degree of diversity in the policies adopted by various agencies.

This section discusses the general future of various sectors of the waterfront, assuming that existing plans and policies are followed. The major policy documents or proposals of conservation authorities, municipalities, and other relevant organizations are briefly reviewed. Current plans, proposals or ideas for open space and recreation developments on specific sites in each municipality are presented.

A review of regional and municipal official plan policies related to waterfront land use and development is found in Appendix A.

HALTON REGION

Halton Region Conservation Authority (HRCA)

The HRCA participated in development of the Halton Waterfront Plan, and has responsibilities in regional waterfront parks including:

- acquisition of land;
- master planning and engineering studies;
- environmental assessments and landfilling;
- shoreline protection works;
- basic park development.

This mandate has been constrained considerably by lack of provincial funding. For example, some properties on the Burlington Beach strip are being acquired by the City of Burlington, with title transferred to the HRCA, in the

expectation that provincial funding to cover the Authority's involvement will eventually be forthcoming.

HRCA is also responsible for preparing a shoreline management plan and an engineered regulation line to prevent future flood or erosion hazards. Funding to start the detailed mapping associated with this work is being made available in 1990, but HRCA is expressing serious concerns about the time required before shoreline regulations become effective, and the lack of provincial support for the increased administrative costs associated with enforcing these regulations. Shoreline regulations for Halton are not anticipated until 1994 or 1995.

Regional Municipality of Halton

The Region of Halton played a lead role in the development of the Halton Waterfront Plan, adopted as Amendment 1 to the Halton Official Plan in 1982. Unlike the 1974 Halton–Wentworth Waterfront Study, which envisioned a waterfront open space strip along the entire shoreline, the Halton Waterfront Plan identifies regional waterfront parks as nodes of intensive public use. The Plan also provides for linked cycle, pedestrian, and vehicle access along Lakeshore Road and Northshore Boulevard to connect the proposed nodal parks.

As noted in Appendix A, the Plan is designed to maximize public access to the waterfront, provide a variety of recreational opportunities, preserve stream valleys, and establish policies for the control of waterfront development.

The Halton Waterfront Plan emphasizes erosion control as a first priority for funding, with land acquisition second. It also sets out the tasks of the other participants in the Plan, and identifies the Region's main responsibilities as being co–ordination, review of master plans, and provision of partial funding. The two local municipalities involved are to operate and maintain the waterfront parks, under a cost–sharing arrangement, and also provide many of the park facilities.

Halton Region has also sponsored a feasibility study of the proposed Great Lakes Science Centre, which would be a major tourist attraction located near the Burlington Ship Canal.

City of Burlington

Most of Burlington's 12 kilometres (eight miles) of waterfront are privately held by homeowners, interspersed with three regional park sites, five local City parks, and six street–end parkettes that open to the lake. The commercial downtown core also extends to the waterfront at the foot of Brant Street.

The City's Official Plan contains general waterfront policies, with a special emphasis on the need to include shore protection as part of development proposals, and recognition of hazard lands near creek mouths. In addition to participating in the development and operation of regional waterfront parks, the City has extensive plans for cycling routes throughout the urban area.

The first priority in the implementation of the Halton Waterfront Plan is development of the three kilometres (two miles) of the combined Burlington Beach Strip and Spencer Smith Park. The 1987 Burlington Beach waterfront park master plan proposes that the beach be re–established as a natural area and swimming facility; a harbour be provided in front of Spencer Smith Park; and a theatre auditorium, a waterfront centre, and the Great Lakes Science Centre be constructed. The harbour development would use two lakefill headlands to shelter a transient marina for 120 boats and resident berths for 352 boats, along with boat–launch ramps, commercial shops and restaurants, and related facilities.

A bicycle/pedestrian pathway called "the Breezeway" would be used to link various features along the Beach Strip, as well as connecting to the Hamilton Beach Strip and downtown Burlington. A waterfront grand promenade in Spencer Smith Park would provide access to the water's edge.

Towards the east end of the Burlington waterfront, Shoreacres Creek has been identified as potential parkland to

be acquired when the opportunity arises. This valley would remain in its natural state.

The other proposed regional park in Burlington is Burloak Waterfront Park, located on the City's easterly boundary. Part of the necessary land base is publicly owned now, but funding constraints are hampering acquisition of the very expensive lakefront properties involved. It is proposed that development at this site include a 14–hectare (35–acre) lakefill that will create "Lake Ontario Pond", a representation, to scale, of the lake and its surrounding landforms. The site will also contain a children's museum, an outdoor entertainment facility to accommodate up to 1,000 people, an arts and crafts gallery, an interpretive path accessible to the handicapped, and various trails, lookouts, and picnic areas.

Burloak Park will also protect such natural features as the Queenston Shale cliff formation and bank swallow colonies.

Town of Oakville

Existing residential and industrial lands along much of Oakville's waterfront extend close to the water's edge. The Town has adopted an aggressive policy of acquiring a linear shoreline strip whenever a site is being developed or redeveloped. As a result, the Town currently owns approximately 6.2 kilometres (four miles) of its waterfront, about 38 per cent of the total. The Town also operates two recreational harbours, at Bronte Creek and Oakville Creek. Several policies in the Town's Official Plan recognize the long–term goal of a continuous waterfront park along the entire lakeshore.

Most of these waterfront parklands are in the form of narrow linear strips, or promenades. The Town plans to continue acquiring these strips through parkland dedication, particularly in the redevelopment of the large waterfront estates that still exist in parts of Oakville. Walking and cycling trails are being developed to encourage use of these linear parks. The Town has also acquired a strip of land at the top of the bank of

many smaller creek systems feeding into the waterfront, to allow for trail development.

As noted previously, work is currently under way for a major expansion of Bronte Harbour. The only other specific proposal along the Oakville waterfront is to expand the existing Arkendo Park along lower Joshua Creek by linking it to the adjacent Ontario Hydro lands in Mississauga.

PEEL REGION

Credit Valley Conservation Authority (CVCA)

The waterfront area in the CVCA's mandate roughly corresponds to Mississauga. The area was included in the 1967 Waterfront Plan for the Metropolitan Toronto Planning Area, and in 1970 the CVCA was designated as lead agency in its implementation. In 1972, the Authority prepared a waterfront plan specific to the Mississauga sector, generally in conformity with the earlier Metro plan. The major undertaking by the CVCA was the development of Lakefront Promenade Park.

In its 1983 Interim Watershed Plan, the Authority said that its role on the waterfront is to be partially involved, specifically in site development for projects that provide either major open space or protected basins for boating facilities. The emphasis in this role is on projects of a regional scale, with accessibility for a regional market. Projects must also meet environmental considerations, including the terms and conditions of the *Environmental Assessment Act*.

CVCA also has responsibility for delivering a shoreline management program, and has prepared a Draft Shoreline Management Plan. Before finalizing this plan, the Authority needs approved provincial criteria, provincial commitments to fund ongoing administration and capital works, and completed hazard land mapping of the shoreline. In the meantime, CVCA has prepared interim policies.

Regional Municipality of Peel

Peel Region has not been deeply involved in waterfront matters, but it does have a staff person sit on Mississauga's Waterfront Planning Advisory Committee. A Draft Regional Official Plan, not yet approved by the Minister of Municipal Affairs, supports CVCA and Mississauga waterfront policies.

City of Mississauga

About a third of Mississauga's 15–kilometre (nine–mile) waterfront is publicly owned and publicly accessible, while another 23 per cent is owned by public agencies (such as Ontario Hydro) that do not permit access. In an attempt to increase physical and visual access to the lake, and to provide further opportunities for recreational activities, the City established a Waterfront Planning Advisory Committee, with representation from the Region of Peel and CVCA. The Committee is preparing the Mississauga Waterfront Plan, the first draft of which is to be submitted to Council this year. The plan is based on 57 planning principles which guide its development. The plan will:

- present a long–term strategy for use and development of the Mississauga waterfront;
- identify potential recreational, commercial and cultural facilities that will promote year–round use and enjoyment of the waterfront;
- identify potential tourism opportunities that will generate economic benefits;
- establish guidelines to create an attractive waterfront environment, maintain views of the lake and, where appropriate, provide pedestrian access along the shoreline.

A linked trail system is an important underlying goal of the plan. In addition, it will recognize the previous master planning that has been carried out for the four regional parks in Mississauga: Lakefront Promenade Park, Jack Darling Park

and Rattray Marsh, Port Credit Harbour, and J.C. Saddington Park.

In 1987 the Port Credit Harbour Study was undertaken by the City in anticipation of the relocation of the Port Credit Yacht Club. The Study and related master plan recommend that the inner basin of the harbour be redesigned for charter boat fleets; the east harbour area be redeveloped to include a public square and market/gallery/museum; a pedestrian bridge be constructed across the river; terraced apartments be developed with street–level retail/commercial space on the west bank; the existing boat–launch be relocated to J.C. Saddington Park; and the west village be designated as a Heritage District.

Proposals to make changes in CVCA's J.C. Saddington Park, located just to the west of the river mouth, are related to this major redevelopment. A 1988 Environmental Assessment report prepared by the CVCA recommends development of a marina basin with 375 wet berths and boat–launch ramps, a second basin with 50 slips for transient boaters, three beaches, and additional parkland and parking. Development of a Sport Fishing Hall of Fame in the revamped park has also been suggested as part of the Port Credit study. However, all plans for redevelopment of J.C. Saddington are currently on hold, pending completion of Lakefront Promenade Park.

As Lakefront Promenade Park nears completion, scheduled for 1993, there has been discussion about possible trail links across the Ontario Hydro lands to the east, to connect ultimately with Marie Curtis Park. To accomplish this, access would also have to be negotiated across the Lakeview Sewage Treatment Plant, and across part of the Canadian Arsenals property currently owned by Canada Post. Redevelopment of this strategic property is under discussion, with a large residential development offered as one option. However, a wooded area at the south end of the property would make a welcome addition to Marie Curtis Park, and a logical connecting corridor to the west.

METROPOLITAN TORONTO

Metropolitan Toronto and Region Conservation Authority (MTRCA)

The Metropolitan Toronto and Region Conservation Authority (MTRCA) has been a major player in the development of waterfront open space, acquiring more than 1,100 hectares (2,660 acres) of land and creating six new lakefill parks. The expressed goal of the Lake Ontario Waterfront Program, established under the Authority's 1986 Watershed Plan, is:

> To create a handsome waterfront, balanced in its land uses, which will complement adjacent areas, taking cognizance of existing residential development and making accessible, wherever possible, features which warrant public use.

(Metropolitan Toronto and Region Conservation Authority, *The Watershed Plan of the Metropolitan Toronto and Region Conservation Authority*, 1986, 16).

Detailed plans for expenditures under the Waterfront Development Program are contained in the *Lake Ontario Waterfront Development Project 1987–1991*.

In January 1989, the Authority released *The Greenspace Plan*, which includes a Waterfront Strategy designed to:

- continue the goals and objectives of the Watershed Plan;
- continue land acquisition and land creation across the waterfront;
- encourage agreements with local municipalities where local interests are served;
- base all planning on the need for continuous public open space across the entire waterfront;
- co–ordinate all monitoring programs;
- prepare management plans for environmentally sensitive areas;

- negotiate with the Ontario Ministry of the Environment to assume responsibility for managing the Lakefill Quality Assurance Program; and
- review the current funding formulas.

(Metropolitan Toronto and Region Conservation Authority January 1989)

To achieve the objectives of this Strategy would require an estimated increase in the annual program cost from $1.3 million to $4.8 million.

One component of the Greenspace Plan is a continuous waterfront trail, together with a system of inter–regional trails up the valley systems to the Oak Ridges Moraine. During the next five years, the Authority proposes to develop those trail elements that pass through existing conservation areas.

Another element of MTRCA activities that contributes to green space objectives is the Shoreline Management Program, which seeks to stabilize shoreline areas against the erosive effects of wave action. In order to provide shore protection, the Authority normally acquires a strip of land or waterlots, which are retained for future public access. Stabilization programs are slated to continue along several sections of the Scarborough Bluffs, providing additional links among various sections of public land at the water's edge.

Municipality of Metropolitan Toronto

In 1967, after prolonged discussion, the Municipality of Metropolitan Toronto adopted *The Waterfront Plan for the Metropolitan Toronto Planning Area.* This document called for massive lakefill projects to create a chain of islands and new lakefront to support recreational, housing, and commercial uses. In 1970, when the MTRCA was assigned responsibility by the Province to implement the Waterfront Plan, it modified these proposals substantially.

Under a formal agreement signed in 1972, waterfront lands developed by the Conservation Authority are managed as

regional parks by the Metro Parks and Property Department. In addition, Metro manages its own lands at Exhibition Place and on the Toronto Islands. The 1983 *10–Year Concept Plan of Major Recreation Facilities* forecasts the development of recreational facilities in Metro–managed parks. Among the waterfront–related priorities listed in the Concept Plan are swimming, walking/hiking, bicycling, and boating. A more recent review recommended that access to fishing for children, seniors, and the physically challenged should also be a priority.

Waterfront policies in the Metro Official Plan are largely oriented towards supporting the role of MTRCA in waterfront development. The Official Plan is currently under review, with revisions scheduled for adoption by 1991. A 1988 background document, *Parks and Open Space,* suggested a more active role for Metro along the waterfront, particularly in the Central Waterfront Area, where Harbourfront and the Toronto Harbour Commissioners play a primary role. It also recommended that a trail network in and linking valley systems be completed by the end of the century.

In April 1989 Metro Council appointed a Metropolitan Waterfront Committee to identify Metro's position on waterfront issues, and to consider development of an updated Waterfront Plan. The document would then become part of the revised Metro Official Plan. A discussion paper raising waterfront issues is being prepared for release this spring.

City of Etobicoke

Urban development along the Etobicoke waterfront has traditionally been oriented towards the commercial facilities of Lakeshore Boulevard, with scant attention being paid to the shore. The City maintains a scattering of small waterfront parks, and a proposed Open Space and Recreation Master Plan would consider creating links by using bikeways and walking paths.

Etobicoke's Draft Official Plan is currently under review. It includes some provisions for setbacks and site controls on

waterfront redevelopment projects, and calls for a goal of improving access to, and public ownership of, the waterfront during redevelopment. Secondary plans and site–specific policies for several areas along the waterfront are oriented towards creating a more developed urban form, with designs that stress visual and pedestrian access.

Several site–specific proposals could affect the future of the Etobicoke waterfront. MTRCA has suggested that lakefill be used to construct an expanded park area and boat basin at Marie Curtis, as well as a completely new area at the foot of Royal York Road. No definite plans have been put forward in either case.

A City of Etobicoke background study on urban amenities and open space notes a severe shortage of parkland in the waterfront district, and recommends better links between existing parks, as well as the possibility of new lakefill developments. The report also suggests that careful attention be paid to the location and design of waterfront buildings to preserve views of the lake from adjacent public streets. (Baird/Sampson and M.M. Dillon 1988).

Recognizing the difficulties involved in increasing public access to the water in stable residential areas, the Toronto Waterfront Charrette suggested a series of "community back porch" finger piers constructed at the ends of road allowances in Etobicoke. These small–scale, informal gathering places would complement existing and proposed waterfront parks, and greatly strengthen the sense of connection between the community and the water.

A considerable area of new urban open space is proposed as part of the redevelopment of the Etobicoke motel strip. The most recent proposals, in the Environmental Management Master Plan (Johnson and Weinstein 1989), call for a continuous public boardwalk along the water's edge and bicycle paths linked to the Martin Goodman Trail and to a future Mimico Creek Trail. The proposal would also include a lakefill spit to create a sheltered boat basin, and develop

wetlands on part of the Humber Bay East park to treat stormwater. There is still considerable debate about the adequacy of these proposals, and an environmental assessment study of the lakefill deflector arm may be required.

City of Toronto

Most of the Toronto waterfront, with the exception of the Central Waterfront, is devoted to park and recreation uses. The City has retained park planning and management responsibilities over the Eastern and Western Beaches, and also owns related recreational properties such as High Park.

The Central Waterfront Area, which has a mix of public and private uses, has been under study for several years by a special committee established by City Council. In 1988, Council adopted the Central Waterfront Plan as an amendment to Section 1 of the City's Official Plan. This amendment seeks to increase the amount of parkland in the Central Waterfront, improve public access through building setbacks and by requiring public ownership of the water's edge during redevelopment, and provide various other environmental and aesthetic improvements. A continuous walkway and bikeway are proposed along the mainland shore. Development of a detailed waterfront parks plan by the City Parks and Recreation Department is now under way.

Two other agencies play a major role in the Central Waterfront. Both Harbourfront Corporation and the Toronto Harbour Commissioners recently put forward conceptual plans for major redevelopments, incorporating open space and recreation components. The Royal Commission made recommendations affecting both these agencies in its first *Interim Report*. Harbourfront and the City of Toronto reached an agreement during 1989 to transfer 16 hectares (40 acres) of open space lands to the City. Discussions about the future of Harbourfront and related open space are ongoing.

Several major proposals could have a dramatic impact on the shape of Toronto's waterfront and its open space system in

coming years. If Toronto is successful in its bids to host either the 1996 Olympics or the World's Fair 2000, many of the new facilities required would be located along the waterfront. On one hand, these events would provide impetus for the development of new recreational facilities, which would likely become permanent attractions to draw people to the waterfront. On the other hand, the scale of facilities required will add to the already strong development pressures along the waterfront, and heighten concerns that the waterfront will be "walled off" from people.

One of the components of the Olympics plan is the proposed construction of a new rowing course in Humber Bay, involving enormous quantities of lakefill. Concerns have been raised about the effects of such a development on water quality and circulation, as well as its impact on vistas across the bay.

Plans for improved open space at Harbourfront have already been reviewed by the Commission and will not be dealt with here. However, the Parks, Pleasures, and Public Amenities Work Group proposed development of a 19–hectare (47–acre) Port View Park on Toronto Harbour Commission lands along the East Bayfront. The THC itself has proposed the transfer of lands for development of a major City park along the north shore of the Outer Harbour, to the east of Cherry Beach. Both proposals fall within the Provincial Interest lands currently under review by the Commission.

City of Scarborough

Public access to much of the shore through the City of Scarborough is restricted by steep bluffs. While the City owns several small parks along those bluffs, most waterfront acquisition and development has been carried out by MTRCA. Scarborough's 1988 Recreation, Parks and Leisure Services' *Strategy for the Future* supports a continuation of this arrangement, with City co–operation in developing a waterfront trail system.

An Official Plan review was initiated in Scarborough late in 1989. As well, a Waterfront Committee has been established, with the task of incorporating waterfront policies in the revised Official Plan. That committee has adopted principles advocating protection of existing residential neighbourhoods, increased waterfront access and tourism, protection of the environmental well being of the waterfront, and planning control over lakefilling.

The only major waterfront project currently proposed in Scarborough is the development of East Point Park, including lakefill to create boat–launch facilities and a marina for 600 boats. Lakefilling is not expected to start until sometime after 1992, and is subject to an environmental assessment study.

MTRCA carries out an ongoing program of waterfront acquisition and erosion protection along much of the Scarborough shore. In the early 1990s, it proposes to carry out work in the vicinities of Fallingbrook, Crescentwood and Kingsbury, Spring Bank and Lakehurst, Fishleigh Drive, Meadowcliffe Drive, Sylvan Avenue, South Marine Drive, Guildwood Parkway, and Grey Abbey Trail. It is also planning to continue acquiring the remaining homes on Chesterton Shores.

REGION OF DURHAM

Conservation Authorities

Three conservation authorities have jurisdiction over parts of the Durham waterfront. MTRCA takes in most of Pickering and Ajax, Central Lake Ontario Conservation Authority (CLOCA) from approximately the Ajax–Whitby boundary eastward to just past Bowmanville, and the Ganaraska Region Conservation Authority (GRCA) covers the easterly part of Newcastle.

As described earlier, MTRCA has an active history along the waterfront, and its Greenspace Strategy identifies Petticoat Creek Conservation Area as a regional focal point.

In general, MTRCA's plans and policies suggest continued acquisition along the Pickering and Ajax waterfront where feasible, protection and management of significant natural areas, and development of other waterfront lands for land– and water–based recreational activities.

CLOCA also developed long–term plans in 1973 to acquire all available lakefront and major valley lands along the waterfront, but lack of financial resources has severely curtailed its ability to carry out these plans. As well, lack of development activity, particularly in the eastern parts of the watershed, has meant fewer opportunities for the Authority to assume ownership of waterfront open space dedicated during development. Since 1973, most of CLOCA's acquisition activity has centred on Lynde Shores, the Oshawa Creek valley, and Bowmanville Harbour.

CLOCA has established an interim policy, with agreement from the area municipalities and the Region of Durham, by which a strip of waterfront land about 120 metres (400 feet) wide should be retained as open space. However, there is no commitment on the part of the Authority to purchase those lands.

CLOCA is involved at present in three studies relevant to its future role on the waterfront. The Lake Ontario Shoreline Management Study, being carried out in conjunction with the GRCA and the Lower Trent Region Conservation Authority, will recommend a program for managing and protecting shoreline resources in the face of continued urbanization. The second study will provide detailed mapping of flood and erosion risk areas along the shoreline. The third, the Outdoor Recreation and Feasibility Study, will recommend the future direction and role of CLOCA in outdoor recreation.

The Ganaraska Region Conservation Authority's main focus in recent years has been on headwaters areas. Although the GRCA supports maintenance of an open space setback along the waterfront, no properties have been acquired along the Durham waterfront. Rather than the 120–metre (400–foot)

setback used by CLOCA, GRCA bases waterfront setback requirements on hazard land designations associated with flood susceptibility and erosion rates of shoreline and bluff areas. GRCA's 1983 Draft Watershed Plan contains strong policies to ensure public access to the Lake Ontario shoreline, but little action has resulted.

Regional Municipality of Durham

The Regional Municipality of Durham has neither a region–wide waterfront plan nor a special waterfront committee. Its 1990 Draft Regional Official Plan contains open space policies relating in part to the waterfront, but oriented largely to defining broader objectives. The Draft Official Plan does define a stronger recreation and public open space role for the waterfront in urban areas than in rural areas. It also encourages areas of open space down to the water's edge as urban separators between such communities as Whitby and Ajax.

The Draft Official Plan supports redevelopment of the Pickering, Whitby, Bowmanville, and Newcastle Village harbours for recreational purposes, and development of marina/hotel/residential uses at the foot of Harwood Avenue in Ajax, at the mouth of Graham Creek in Newcastle, and in the Bowmanville Harbour.

The Region of Durham assumes no direct role in providing regional parks and recreation resources, but expects the conservation authorities to assist with that task.

Town of Pickering

In large part, the Town of Pickering has been able to rely on the initiative and resources of MTRCA in acquiring and developing waterfront lands. The Town owns several properties along the west side of Frenchman's Bay, and supports efforts to secure a large part of the bay for recreational use. Pickering's District Plan encourages the

development of trails as links between open spaces, especially along the waterfront and in the Petticoat and Rouge valleys.

The major ongoing waterfront programs in Pickering involve gradual acquisition of lands east and west of Petticoat Creek Conservation Area and around Frenchman's Bay, and upgrading facilities in Petticoat Creek. Further progress on the east side of Frenchman's Bay is stalled pending resolution of jurisdictional issues involving the Pickering Harbour Company. MTRCA Fill and Construction Regulations have been registered for Frenchman's Bay, providing some measure of protection for the environmentally significant marshlands that remain in private ownership.

Town of Ajax

Ajax is fortunate in that most of its waterfront lands are publicly owned, thanks to far–sighted acquisitions by MTRCA some years ago. Development plans for this waterfront linear park emphasize passive activities, with phased improvements such as landscaping and trails working from west to east. A detailed master plan has been prepared by MTRCA for this area.

The Town of Ajax has a waterfront committee, and its 1989 District Plan (not yet approved by the Minister of Municipal Affairs) includes policies that limit construction within a 122–metre (400–foot) strip along the lakefront to public works structures or recreation–related buildings. The only exceptions are at the foot of Harwood Avenue, where commercial and mixed residential uses are permitted after construction of a marina, and the Ontoro Beach area, near the Town's eastern boundary, where an existing residential area is being upgraded.

Acquisition of the remaining homes in the Pickering Beach area is planned, along with eventual acquisition of Carruther's Creek Marsh (Shoal Point Marsh). MTRCA and CLOCA expect to receive title to the waterfront lands east of the marsh, if and when development occurs. The Region of

Durham has proposed a wide open–space buffer in this area between Ajax and Whitby, but the Town of Ajax wants more land designated for industrial and residential expansion.

Town of Whitby

Policies defining the Town's broad goals for the waterfront are included in the Whitby Official Plan and the Port Whitby Secondary Plan. The Official Plan identifies a strip of waterfront land approximately 120 metres (400 feet) wide as Hazard Land and Major Open Space; from Whitby Harbour eastward, the waterfront open space designation ranges from 150 metres (490 feet) to 225 metres (730 feet) in width. The Official Plan also recognizes the Lynde, Pringle, and Corbett Creek valleys, and the Cranberry and Corbett Creek marshes, as Hazard Land and Major Open Space.

While these open space lands will not necessarily be in public ownership, the plan suggests that, where possible, open space areas should be linked by walking and cycling trails. It also supports retention of marsh and wetland areas, and prohibits nearby development that could damage these natural areas.

A review and update of the Whitby Official Plan is at the proposal stage, with the consultant review expected to take two years.

Through the Lynde Shores Secondary Plan, which is awaiting approval by the Minister of Municipal Affairs, CLOCA will have the opportunity to expand the Lynde Shores Conservation Area to the east to incorporate woodlots and wetlands near the mouth of Lynde Creek, and to provide a physical link to the boundaries of the hospital lands. In addition, a strip of waterfront land owned by the Ministry of Government Services has potential as public parkland. The Whitby Psychiatric Hospital lands, which are owned by the Province, have been the subject of a recent master plan for redevelopment. It calls for establishment of a new residential community, with prestige industrial lands to the north.

As part of the open space system, it proposes a loop trail along the waterfront and up the east side of Lynde Creek. An environmental management master plan will be prepared for the hospital lands redevelopment proposal.

The Port Whitby Secondary Plan calls for the harbour area to become a diverse small craft harbour with a related residential and recreational community, using both public and private sector initiatives. More than three–quarters of the harbour shoreline is publicly owned; most of the open space will continue to be on the western shore and around the north end of the harbour.

A draft master plan for Port Whitby harbour has been prepared to give general guidance to the municipality. Iroquois Beach Park, in the southwest corner of the harbour, will be developed further, and the adjacent Whitby Yacht Club will expand to the north. It proposes surrounding the Club with a "natural reserve area", with a beach area for sailboats and canoes along the shore. It also suggests that, north of that, the new boat–launch facility be expanded to include a fish weighing station, Sea Cadets building, washrooms, and play areas. At the north end of the harbour, Port Whitby Park will include formal gardens, an amphitheatre/band shell, and picnic area.

The northeast part of the harbour area is slated for residential development and redevelopment. Two residential condominium towers, and private recreational and limited commercial development is now under way in this area. Further proposals include restaurants, a 450 slip marina, some harbour industrial uses, and a picnic area by the water. Further development is planned for the southeast portion of the harbour, including the Texaco and Coscan lands. This area will likely become residential, with permitted densities of up to 100 persons per acre, along with some parkland adjacent to Harbour Street. While a system of walkways and boardwalks has been proposed to link the park areas around the harbour,

the recommended route in this location will follow Brock Street, rather than the waterfront.

The master plan also calls for major upgrading of Lake Park, with removal of the railway line, improved beach and picnic area, development of a children's play area, and construction of a concession and washroom building. Heydenshore Park to the east will also be upgraded, including expansion of the Pavilion.

An extension of Water Street to the east of Heydenshore Park will separate waterfront open space lands from industrial lands to the north. After recent subdivision negotiations, the Town will acquire the waterfront lands along this stretch.

City of Oshawa

In 1987 the City of Oshawa completed a comprehensive waterfront development plan, calling for substantial land acquisition and parkland development. The City also has an active waterfront committee with representatives from several departments.

Development of the sports field complex in Lakefront Park West is nearing completion, with additional lighting to be provided this year. A banquet hall and restaurant are planned on this site, as are a 280–slip marina and boat–launch facility, beach and picnic area, lookouts, and a waterfront promenade and trail that will link westward to public lands in Whitby. A water theme park has also been proposed, but there may not be space to accommodate it on this site.

The waterfront plan identifies the shoreline of a proposed residential area to the east of the park to be acquired as public parkland. The width of the public waterfront strip in this area is not yet finalized, because the draft subdivision plan (for the Maurac subdivision) is currently tabled until the CLOCA shoreline management study recommends appropriate setbacks. The City wants a broad corridor, linking Lakeview Park West to the existing Stone Street residential area further east. At the east end of Stone Street, long–term acquisition of

some residential properties has begun, to link the lakefront to an existing municipal park and two school grounds. The shoreline walkway system would then be extended through this area.

There is a proposal to acquire Pumphouse Marsh, just to the east, for protection as a natural area. A walkway is planned around the perimeter of the marsh, along the lakeshore, past the water purification plant, and connecting to Lakeview Park.

The future of the Oshawa Harbour Commission lands, which include Second Marsh, is currently under study. In October 1989, the City passed an interim control by–law affecting these lands, to allow time to complete a comprehensive plan, although the degree of legal control this municipal by–law has over a federal agency is questionable. The 1984 Oshawa Harbour Development Plan prepared by the Harbour Commission proposed an industrial subdivision east of the current harbour, including construction of a new breakwater and cargo storage area on lakefill, and a new spit extending from the base of Second Marsh. The City's plans are likely to include more provision for recreational facilities and open space, possibly with a mix of residential and marina uses as well.

In any case, there is agreement that the Second Marsh will be retained in its natural state, probably by being transferred to City ownership. The City already owns some of the lands at the head of the marsh. It is planned to have the waterfront trail go around the harbour area, and likely around the marsh as well, because of the environmental sensitivity of the shoreline lands here.

The final proposal in the waterfront plan is to acquire sufficient waterfront land around McLaughlin Bay to protect the area and support the continuation of the waterfront trail to link it to Darlington Provincial Park. The City has already negotiated for some lands in this area, as well as for an easement providing access to the water's edge.

Town of Newcastle

Although the Town of Newcastle's Official Plan defines general open space policies for the urban areas of Bowmanville and Newcastle Village, there is no overall plan for the Newcastle waterfront. This spring, the Town will initiate a comprehensive plan for parks, recreation and cultural development, which will include an examination of waterfront recreation requirements. As well, the Town has recently begun the Bowmanville Waterfront Study, to plan for the section of its waterfront located between St. Mary's Cement and the Wilmot Creek retirement community. Proposals for residential development and tourist facilities have been made for this area.

In future, expansion of the Darlington Nuclear Generating Station or of the St. Mary's Cement quarry may further curtail public access to the shore. St. Mary's has recently carried out lakefilling to expand its wharf operations, and apparently has plans to apply for permission to add further lakefill. This is actively opposed by local residents who are concerned about the impact it would have on beaches and the environment.

St. Mary's quarrying also threatens three areas of wetland, including West Side Beach Marsh.

While there are no approved plans at present, the pressure for residential and private recreational development in future is likely to focus on Bowmanville Harbour and Newcastle Village Harbour at the mouth of Graham Creek.

A task force is currently looking for a permanent site on which to relocate radioactive wastes now in the Port Granby Radioactive Waste Dump, which was operated by Eldorado Resources until 1986. There is concern about the long–term impact of radioactive materials at the present site because of its proximity to eroding lakeshore bluffs.

4. Waterfront Recreation Trends and Demands

Waterfronts have the potential to be among the most diverse and rich recreational environments, accommodating a wide array of uses and users. This is true of the Greater Toronto Waterfront, where, despite the uniformity of much of the development, a variety of leisure activities takes place. Although precise statistics are not available, the most popular pursuits are:

- walking, strolling, beachcombing;
- relaxing, sunbathing, sitting out;
- sightseeing, photography, enjoying the view, boat-watching;
- picnicking;
- bicycling;
- enjoying nature, birdwatching, enjoying flowers;
- boating, yachting, sailing, board sailing;
- fishing;
- participating in special events (concerts, festivals, shows).

Although individual sites will attract people interested in particular activities, walking, strolling, and beachcombing appear to be the most popular activities along the entire waterfront. The order of the other activities is not according to any particular ranking.

The fact that the list is relatively short is due in part to the limited types of waterfront environments that have been created; furthermore, water pollution and cold water temperatures curtail swimming and related water-based activities.

There has not been enough research to determine the full range and degree of recreational use of all waterfront environments, including natural areas. As well, no comprehensive studies have been conducted to measure preferences

and determine priorities for waterfront leisure activities. Demand for boating facilities has received the most attention, while urban fishing studies have been carried out recently by MTRCA. The results of three park user surveys have been reviewed, including one by the Metro Toronto Parks and Property Department in 1984, another by MTRCA in 1985, and a third by the City of Mississauga Planning and Building Department in 1989.

BROAD TRENDS

Several factors are creating increased interest in the waterfront. One of the most significant is the increasing number of waterfront parks and facilities, created as the result of revitalization projects such as Harbourfront, lakefilling to create parks such as Bluffer's, and the retention and development of lakefronts such as the Ajax waterfront. As more open space and facilities are created, the waterfront offers an increased variety of opportunities, attracts more people and supports more uses.

Another factor is the rapidly increasing population adjacent to the waterfront. The population of the five regions in the Greater Toronto Area is expected to grow from about 3.5 million now to 5.4 million in the year 2011. Much of that growth is occurring on the fringes of the metropolitan area — Peel Region's population grew by 20.7 per cent from 1981 to 1986; Durham Region's by 15.0 per cent; while Metro Toronto gained only 2.6 per cent over the same period. The sheer increases in numbers of people, combined with an expected rise in the use of the waterfront by people living outside the Greater Toronto Area, will significantly increase demand for waterfront parks and facilities.

It is anticipated that many Canadians will continue to have more discretionary time, although this does not necessarily translate into more time spent on leisure activities. For some occupation groups, the average number of working hours per week has actually increased in the past decade.

For a variety of reasons, including increased travel costs and the high cost of owning a vacation property, more free time is being spent closer to home. This is causing a greater demand for leisure resources in urban and near-urban areas, and an increasing demand for water-based and waterfront facilities along the Greater Toronto Waterfront, as shown by calls for more boating and fishing facilities.

Changing attitudes, values, and lifestyles will also strongly influence the demand for leisure opportunities. Among these changes are increased interest in the environment and out-of-doors, physical and emotional well-being, the arts, self-initiated activities, spontaneous involvement in recreation activities, personally meaningful activities, heritage, non-competitive and social activities, and higher quality facilities.

An Ageing Society

The 1986 National Census revealed that 10.7 per cent of Canada's population (2.7 million people) and 10.9 per cent of Ontario's population was aged 65 and over. Statistics Canada predicts that by the year 2000, there will be roughly four million seniors in Canada. By 2030, the number of seniors will peak at seven million, or 27 per cent of the total population.

By the year 2011, the five-to-39 age group will decline in size, the number of those over 40 will increase dramatically, the population over 60 will significantly increase, and the 85-and-over age group will also grow substantially. The median age of Metro Toronto residents is expected to increase from 32 in 1981 to 47 in 2011, putting 60 per cent of Metro's population over the age of 40 at that time.

Recreation specialists anticipate that the seniors of tomorrow, particularly those from the Baby Boom era, will want to participate in as many as possible of the leisure pursuits they learned and enjoyed in earlier years, as well as taking up new activities that suit the times and their abilities. They will also want to be flexible and well-rounded in their

interests, and they will be aware of the value of recreation in their lives.

Participation by older adults has already begun to increase in golf, bicycling, gardening, walking for pleasure and fitness, skating, nature photography, fitness-oriented pursuits, boating, swimming, and similar activities. Future seniors will be much more active and involved, and most will likely have a strong appreciation of parks, open space, and the out-of-doors, as well as of a wide range of cultural and recreational facilities.

This means that demand will remain high or will increase for most types of waterfront pursuits, including such activities as walking, boating, fishing, picnicking and dining out, cycling, sightseeing, nature appreciation, swimming, and attending cultural, sports, and other events. It will be vital to create a variety of active, passive, and natural settings and to ensure a blend of programmed and unstructured spaces along the waterfront. Some adaptations to parks may be required — for instance, trails with modified grades and better surfaces, rest areas set closer together, increased lighting, and parking lots that are closer to activity areas. Other facilities may also have to be modified to suit differing abilities. In addition, it will be important to continue to adapt facilities for the physically challenged as they participate more in waterfront activities.

PERSPECTIVES ON FUTURE USE OF WATERFRONT PARKS

Interest in the waterfront clearly is strong and growing, even though there are few statistics to provide an accurate picture of present use or changes in use over time. One dramatic example of greater use is Harbourfront, where attendance increased from 150,000 in 1976 to 3.3 million in 1987. All major programs, including School by the Water, summer camps, and the Power Plant Art Gallery showed large increases in attendance in the 1980s.

A survey conducted in the spring of 1987 indicated that 62 per cent of Harbourfront visitors came from Metro Toronto and environs, 19 per cent from the United States, ten per cent from the rest of Canada, and nine per cent from other countries. (Harbourfront Corporation 1988, 11,12, 40–43)

The few studies that deal with use patterns, desired improvements, and future uses focus on specific parks or short stretches of the waterfront. While their results cannot be applied widely across the Greater Toronto Waterfront, they do at least give some perspective on potential demands.

A recent study conducted by the City of Mississauga found the following suggestions for change, listed in approximate order of frequency:

- more access to the waterfront with a park system linked by pathways throughout and between parks;
- clean water, beaches and sand;
- restaurants, food concessions, and outdoor cafes;
- public and private marinas, and boating/mooring facilities for water craft of all sizes;
- a mix of retail shops and entertainment areas;
- a general clean up and more garbage containers;
- more and better washroom facilities;
- more parking;
- geese control;
- leave the waterfront as it is.

A 1985 MTRCA survey of waterfront park users noted the following most-desired activities that were not possible due to a lack of facilities:

- swimming;
- children's play;
- tennis;

- badminton and volleyball;
- cricket and soccer.

The four parks included in this survey were Marie Curtis, Humber Bay East, Ashbridge's Bay, and Bluffer's. When asked what improvements they wanted to see, users listed the following:

- cleaner shoreline;
- more picnic tables and benches;
- improved food facilities;
- more washrooms;
- improved landscaping;
- improved sports facilities;
- more parking;
- more boating facilities.

A 1984 survey of Humber Bay East and West and Ashbridge's Bay conducted by the Metro Parks and Property Department turned up the following suggestions for additional or better facilities:

- support amenities;
- catering facilities;
- recreational facilities;
- picnic site improvements;
- security improvements;
- horticultural improvements;
- bike facility improvements;
- sports field improvements.

Opinions about the nature of appropriate waterfront development vary considerably by community. Some, like Whitby and Mississauga, support a blend of active, passive, and natural areas, mixed with residential, commercial, and

prestige industrial uses. Others, like Ajax, want their waterfront to remain almost completely devoted to passive use and natural public open space. In Burlington, residents favoured a waterfront primarily for casual use.

SPECIFIC RECREATION TRENDS

As noted previously, community-specific data must be treated with caution because they relate mostly to satisfaction with local supply rather than providing indicators of more global patterns and preferences. Unfortunately, good data on leisure trends and anticipated future demand are not readily available for most activities. No comprehensive province-wide research has been carried out since the early 1970s, although a study on current participation patterns and trends is soon to be released by the Ontario Ministry of Tourism and Recreation.

One source of information about trends can be found in the numerous parks and recreation plans completed for communities along the Greater Toronto Waterfront, which usually include public input. These plans are tellingly consistent on several points:

- interest in waterfront parks is very high and growing;
- support for land acquisition programs to expand waterfront park systems is also very high;
- the vast majority of residents agree that a linked parks and associated trail system is important;
- one of the top requested facilities is trails, not only along the waterfront, but throughout the community;
- support is very strong for acquisition and preservation of natural areas;
- there is increasing interest in activities, facilities, and parks that are less programmed and more available for unscheduled, spontaneous participation. Similarly, activities like walking, cross-country skiing, boardsailing,

bicycling, and golf are increasing in popularity — in part because participation can be more spontaneous. People are asking that facilities such as ball diamonds and soccer fields be more available for pick-up games and for those with less intense levels of participation and skill.

To the degree possible, given the scope of this report and available data, some of the key trends and participation characteristics of popular waterfront activities are noted below. In some cases, trends are not clear and additional research is required.

Patterns and Trends in Physical Activity

Interest in physical activity and fitness is shared by an increasing proportion of Ontario's residents. According to the latest available research by Sports and Fitness Ontario, " ... in the late 1970s and early 1980s, more of Ontario's adults became active and many were active more frequently. This increase reached its peak in mid-1981. Since then, there has been a levelling off in participation — possibly a result of the economic recession of the early 1980s." (Ontario. Sports and Recreation Branch 1986, 12)

The same report indicated that participation appeared to be increasing again in the spring of 1984. At that time, 65 per cent of Ontario residents were active at least once a week. Women were more active than men, with an increasing proportion of women becoming physically active. Men tended to jog or run, while more women walked and did calisthenics. It was also noted that young adults were more active than older adults, and more participated in high-energy activities such as jogging, bicycling, and calisthenics. Seniors were more apt to walk and garden for their exercise. However, it was also reported that an increasing proportion of older adults were becoming more active, with over half of seniors classed as active in the 1984 survey.

Walking/Jogging/Running

Walking is one of the most frequent recreational and fitness activities, especially during the warmer months of the year. Jogging and running, on the other hand, are top fitness activities, but are not among the top 20 choices of leisure activity according to provincial studies.

A recent survey conducted by the City of Mississauga found that, overwhelmingly, the most popular leisure activity on the waterfront is walking. Although final figures were not available, preliminary counts showed walking to be four times more popular than the next waterfront activity. Jogging and running were near the bottom of a long list of activities.

Sports and Fitness Ontario surveys show that as people age, they walk significantly more while jogging declines to near zero. More women than men walk for fitness; more men than women run. Overall, the percentage of Ontario residents who walk for fitness increased from 15 per cent in the summer of 1979 to 26 per cent in the summer of 1984. Winter participation was 20 per cent in 1978, 22 per cent in 1984. Participation appeared to stabilize in the early 1980s; no comparable data are available for 1985-1990.

The same provincial surveys indicated a stable participation rate in jogging of nine to ten per cent between 1978 and 1984. Season had almost no impact on the participation rate.

Bicycling

Bicycling remains very popular, showing up in the top ten as a summer activity in most municipal and provincial surveys. Reports vary as to whether the sport is gaining in popularity. Sports and Fitness Ontario research indicates that participation in cycling as a fitness activity remained constant between 1981 and 1984. In both years, it ranked third behind walking and swimming/scuba diving.

The cycling industry has reported that cycling is the fastest growing sports market in Canada, with increasing participa-

tion in organized events. For example, the Canadian Tire "Get Cycling" event attracted 40,000 participants across Canada in 1989, nearly double the 1988 figure.

The Ontario Cycling Association indicated increased interest in mountain bikes recently, and predicted a further increase in the next few years, mainly among people in the 25-40 age group who are looking for accessible, reasonable-cost leisure and fitness activities.

Swimming

Municipal surveys and facility participation data across the region indicate that swimming is usually the most popular summer activity. Depending on the supply and quality of municipal indoor swimming pools, it is also often a popular winter activity. The surveys indicate that about three-quarters of swimmers participate for fun and relaxation, and most people like sunbathing and wading at the beach or in other enjoyable settings.

Swimming has gained popularity as a summer fitness activity, moving from sixth to second place in the Sports and Fitness Ontario surveys between 1979 and 1984. As a winter activity, it went from sixth to fourth place between 1978 and 1984.

Swimming is not a popular activity in most natural bodies of water in Greater Toronto Waterfront parks because they are cold and often polluted, and some areas have poor beaches. For example, in the 1989 Mississauga survey, swimming ranked seventeenth in popularity as an activity. The same respondents ranked the need for clean beaches as third among their priorities, and clean water as fifth. Some respondents asked that a swimming pool be provided on the waterfront to compensate for poor natural swimming opportunities.

Sport Fishing

Prior to the 1970s, there was very little sport fishing in western Lake Ontario. Thanks to reduced phosphate pollution, control

of sea lampreys, and the introduction of several species of non-native salmon, the sport fishery has grown spectacularly. In 1975, the Toronto Star Great Salmon Hunt attracted 80 entrants. By 1984, 10,900 anglers were involved; in 1989, the total was 21,500. The trend appears to be toward even greater participation, both in the Star derby and in an Oshawa-Whitby salmon derby.

An estimated 400-500 charter boats service the sport-fishing industry in western Lake Ontario, with the ports between Hamilton and Newcastle accounting for between 77 per cent and 86 per cent of the port use by charter boats in 1988. The most popular ports are Port Credit, Bluffer's Park, Bronte, Frenchman's Bay, and Oshawa. Because charter boats are moored at public and private marinas, they have had a considerable impact on the demand for wet berths.

Fish catches in western Lake Ontario rose from about 8,000 in 1980 to 35,000 in 1986. Angler-hours increased from 200,000 in 1984 to 650,000 in 1986, and then levelled off around 625,000 for the next two years. (T.J. Stewart and P.J. Savoie 1988, 12–1 to 12–21) The Ontario Ministry of Natural Resources is projecting that the angler-days per year in western Lake Ontario will increase by approximately 25 per cent by the turn of the century.

All major issues for offshore fishing relate to access. Public access and parking are limited along the shores of Lake Ontario, particularly in the Toronto area. There is a lakewide shortage of suitable harbour sites, and angler use of existing facilities approaches or exceeds capacity at many sites during peak fishing periods. The resulting long waits at access points lower the quality of the recreational fishing experience, and limited access leads to light utilization of large sections of the lake. Serious concerns about safety are being raised due to the distance between access points and ports.

The increase in demand for boat-launch ramps is expected to be greatest in the Mississauga waterfront, where good fishing in that area is attracting participants. The demand for wet

berths for fishing boats (both private and charter) is likely to extend across the entire waterfront. In order to accommodate this upward trend in sport fishing, provincial support through an extensive artificial stocking program will have to continue.

A 1985 MTRCA feasibility study of urban fishing in the Metro Toronto area revealed good potential for enhancement and promotion. Although about half of the Metro households surveyed included family members who fished, only 3.2 per cent of the anglers usually fished locally, largely because of concerns about water and fish quality. Development of opportunities for shore fishing would provide recreational opportunities particularly accessible to children, seniors, the physically challenged, and those with lower incomes.

Boating

Interest in boating continues to grow along the Greater Toronto Waterfront. Although no up-to-date boat counts are available for the entire waterfront, in 1984 there were 5,790 boats wet-berthed and 1,473 boats dry-sailed between Mississauga and Ajax. Slightly more than 1,000 wet berths have been added to the supply since 1984, with another 1,300 scheduled over the next two years. These figures do not take into account facilities in Burlington, Oakville, Whitby, Oshawa or Newcastle.

The Ontario Sailing Association has estimated that there are more than 10,000 vessels and 220,000 boat users across the Greater Toronto Waterfront. They also note that there are 58 sailing clubs and schools between Hamilton and Oshawa. In their 1989 presentation to the Royal Commission, the Association reported that the Port of Toronto is one of the busiest in the world for recreational boating. Sailing and recreational boating have been a part of the Toronto waterfront since the mid-1800s.

Demand for boating facilities has shown different trends in recent years. As noted previously, the rapid growth in sport fishing has generated demand for berths for private and

charter fishing boats, as well as for launching ramps and associated parking.

The demand for transient docking has been concentrated in the Central Toronto Waterfront, where supply has not kept pace with demand. There is a shortage of day-trip docking facilities all along the Toronto waterfront. As municipal waterfronts and other facilities improve in places like Burlington, Oakville, Mississauga, Pickering, and Whitby, where marinas will be located near downtown restaurants and other attractions, the demand for transient and day-trip mooring space will likely increase there as well.

The growth in boardsailing has been dramatic in the past ten years, and is expected to continue, although there are no reliable predictions about when it will peak. The sport is popular because of its relatively low cost, and because it is easy to transport boardsails by car to many locations. The major limitation along the Greater Toronto Waterfront, particularly for novice boardsailors, is the direct exposure of most waterfront beaches to lake wave action with prevailing offshore winds. More sheltered locations such as Toronto's Outer Harbour adjacent to Tommy Thompson Park provide good conditions for novices.

As boardsailing has increased in popularity, interest in dinghy sailing has declined. As well, demand for dry-berth facilities has declined to the point that it is now exceeded by supply.

In 1985, available winter storage for boats was reaching capacity with a predicted shortfall of 600 spaces in the near future, and about 1,200 spaces by 1995.

Many studies of boating supply and demand have been carried out over the past 15 years, some province-wide, some regional, and some related to specific waterfront proposals. Because of differences in timing and location, the data and projections from the various studies are not directly comparable. However, they all support the broad trends noted

above, and more specifically, the following trends about wet berths:

- In recent years, the gap between the supply of wet berths and the demand for them has been widening.
- With most major marina proposals expected to be completed by the year 2000, the deficit in spaces will increase rapidly after that time if no other facilities come on stream. A 1988 study completed for MTRCA's East Point Park predicted a shortfall for Metro Toronto and Whitby–Oshawa of 920 berths by 1996, 1,436 berths by the year 2000, and 5,122 berths by 2011. A 1986 study for Bronte Outer Harbour predicted a shortfall in Halton Region of between 1,150 and 1,580 wet berths by 1996. Projections done in 1988 for J.C. Saddington Park in Mississauga indicated a 1996 shortfall of 400 berths, rising to 535 by 2001.

It should be noted that most of these predictions are based on comprehensive data collected in 1985, and that some observers believe there has been a significant shift since then towards more power boats and fewer sailboats province–wide. An updated comprehensive survey in the near future would help guide decisions on further facility expansion. However, all sources agree that growth in boating along the Greater Toronto Waterfront will continue to be very strong, and will be limited mainly by the availability of facilities.

Arts and Cultural Facilities and Events

Interest in arts and cultural programs, shows, and events has increased steadily in the past decade. All factors point to continued growth, especially with an ageing society. Waterfronts have proven themselves to be popular and attractive venues for cultural events and community gatherings, and the need to accommodate such activities should be reflected in the design of waterfront parks. One location where cultural events form a central part of

facility planning is the proposed Burloak waterfront park in the Region of Halton.

Sports Fields

Across the Greater Toronto Area, the demand for soccer fields and ball diamonds continues to exceed supply. In addition to the high cost of these facilities, a major limitation is availability of suitable, level, well-drained land. While some agencies oppose the use of waterfront lands for sports fields, these lands are increasingly being eyed as potential sites by recreation planners. Oshawa, for example, has constructed eight lighted lob-ball diamonds in its newest waterfront park. On the other hand, the Ajax waterfront is physically suitable for sports uses, but local residents strongly oppose any type of development other than pathways and picnic tables.

This debate is expected to grow stronger in future as suitable lands for outdoor organized sport become even more scarce and more costly.

Nature Appreciation

As urbanization advances, interest in natural areas seems to increase. While there are few statistics, there appears to be strong appreciation of the preservation and quiet use of natural areas, especially in places where few high-quality natural areas remain.

When MTRCA sampled public opinion in 1988 about development proposals for Claireville, Boyd, Petticoat Creek, and Greenwood conservation areas, a majority of participants in discussion groups expressed a very strong desire to have as much of these areas as possible remain natural. (RETHINK Inc., *Final report, public participation program,* 1988)

Some of the recently completed parks and recreation master plans for waterfront communities included surveys and workshops that probed public opinion about the importance

of natural areas. For example, a survey conducted in 1988 for the City of Scarborough showed that:

- 10.7 per cent of respondents noted that appreciation of nature was one of the types of activities they preferred when visiting a Scarborough park;
- 51.6 per cent indicated that they favoured relaxing activities such as strolling, sitting, talking, reading, and viewing flowers;
- 81.5 per cent agreed that the City should acquire and preserve more natural areas for parkland;
- 89.3 per cent agreed that the City should continue to develop a network of parks and trail systems;
- 86 per cent stated that the Lake Ontario shoreline should be acquired and preserved for parkland.

Another indication of support for wildlife and natural areas comes from a 1987 survey sponsored by the Federal-Provincial Task Force for the National Survey on the Importance of Wildlife to Canadians. Highlights from the Ontario response to the survey include the following findings:

- public support for wildlife conservation is strong in Ontario; more than 85 per cent of residents of the province believe that maintaining abundant wildlife and protecting endangered species are important;
- more than 70 per cent of Ontarians participate in non-consumptive wildlife activities around their homes or cottages, including feeding, watching, photographing, or studying wildlife;
- Ontario residents devote an average of 67 days a year to wildlife-related activities around their homes or cottages.

The survey also indicated that the trends since 1981 are toward increased interest in wildlife and related activities. (Ontario. Ministry of Natural Resources 15 November 1989)

5. Issues and Opportunities for a Green Strategy

THE NEED FOR A SHARED VISION

In preparing this document, we met with focus groups of municipal and conservation authority staffs to discuss their approaches to the waterfront and to identify gaps and issues. Three impressions from those meetings stand out.

First, an incredible amount of energy and a large number of financial resources has already gone into the waterfront — MTRCA alone has invested more than $50 million in waterfront acquisition and development. Second, the job is far from complete — virtually everyone agreed that waterfront open space and recreational facilities will not be adequate to meet future demand. And third, what is happening at present is the result, in large part, of a patchwork of individual agency priorities and ambitions, rather than of any overall concept of waterfront development.

As a result, the strategies used to protect the waterfront and provide access to it may differ fundamentally from one municipality to the next. A case in point is the City of Burlington, which decided that an earlier strategy of securing public ownership of the water's edge was not feasible, and which abandoned this concept in favour of the development of nodal parks. Yet, right next door, both the Town of Oakville and the City of Mississauga are placing great emphasis on the need to acquire a continuous linear strip along the water's edge.

Near the east end of the area we studied, the City of Oshawa has endorsed a waterfront plan that provides extensive trail systems to link waterfront parks to each other and to the community. The abutting Town of Newcastle has no provisions for trail development, and apparently sees little value in the concept of links between waterfront areas.

There are major differences as well in the roles played by various agencies. The Regional Municipality of Halton has been a major player in developing waterfront plans in its

jurisdiction; generally speaking, the three other regional governments have not (except for Metro Toronto's 1967 plan). Within its jurisdiction, MTRCA carries out most waterfront acquisition and development activities; just to the east, the Central Lake Ontario Conservation Authority has been unable to make significant investments in waterfront properties for 15 years (because of a lack of funds, not a lack of interest). Instead, Oshawa and Whitby are acquiring and developing waterfront parks at the municipal level.

There are discrepancies at other levels as well. The provincial government has funded a great deal of the waterfront work to date, yet in at least three instances has overruled or ignored local jurisdiction to allow incompatible waterfront developments: the Maurac subdivision in Oshawa, the Wilmot Creek retirement community, and St. Mary's Cement's lakefill construction.

At the federal level, lands owned by the Oshawa Harbour Commission, which operates under a federal mandate, and the independence of that agency from municipal planning powers, are a major stumbling block to a cohesive waterfront plan for Oshawa.

Other instances of jurisdictional "turf wars" and lack of co–ordinated action are noted in *Parks, Pleasures, and Public Amenities*. As that Work Group report points out, however, "... not all — and perhaps not even many — planning and land use conflicts are the result of lack of co–ordination: many are the result of different, but deeply held, visions of 'the good waterfront.'" (Royal Commission on the Future of the Toronto Waterfront 1989, 100).

We believe this lack of a shared vision of what the waterfront could and should become underlies many of the current difficulties in achieving a greener and more accessible shore. Although the symptoms of this short–sightedness are most often seen at the local level, a major part of the problem clearly lies with the Province, where the absence of a long–term vision

for the waterfront is reflected in the absence of leadership, policy direction, and appropriate financial support.

A Green Strategy for the Greater Toronto Waterfront should be developed and could become the foundation for that vision. To do so effectively, there are questions that must first be addressed.

The Waterfront as a Provincial Resource

A number of persuasive arguments hold that the Greater Toronto Waterfront should be considered a provincial resource. Because it encompasses so many communities, no one municipal agency, even at the regional level, has jurisdiction. With 40 per cent of Ontario's population crowded onto less than one per cent of the land in the regions adjacent to the waterfront, a strong provincial presence is necessary simply to counteract the pressures of development.

Moreover, waterfront municipalities find that users of their facilities often come from beyond their boundaries, travelling either from the urban core and its suburbs or from hinterland centres like Waterloo.

Finally, the present reliance on a local/regional approach to waterfront development means great inequality in the financial resources available, between the relatively well–heeled MTRCA, for example, and adjacent conservation authorities with a smaller assessment base on which to draw.

Recognizing the waterfront as a provincial resource would not mean that the Province should step in and take over the work now being done by local and regional agencies. Nor should it require the establishment of any "superagency" at the provincial level to handle waterfront matters. What it should mean is that the Province accepts a clear responsibility for leadership and co–ordination, and applies that responsibility through its agencies to ensure that a shared vision for the waterfront is the basis for any action. Designating the waterfront as a provincial resource also has policy and funding implications, which will be discussed later.

Defining Continuity

A green waterfront is often envisioned as a continuous strip of publicly owned parkland along the water, perhaps varying in width in relation to the adjacent land uses, but always continuous. This concept forms the backdrop for the City of Toronto's waterfront policies, and is also the basis of waterfront programs in such communities as Mississauga and Oakville. In Ajax, that goal has almost been accomplished, with only a few segments of the water's edge still in private hands. In Scarborough, ongoing MTRCA programs may someday come close to achieving continuity.

In other municipalities, the idea of continuous public ownership appears either impossible or unreasonable. In the stable residential areas along much of the shoreline of Etobicoke and Burlington, for example, public acquisition of the entire waterfront would be prohibitively expensive and extremely disruptive to existing neighbourhoods. In several communities, industrial uses such as generating stations present barriers to continuous shoreline access. And in the rural municipality of Newcastle, public ownership of large stretches of shoreline is more likely to be viewed as an impediment to development than a service to municipal residents. In some places where continuous public ownership is a goal, it may take generations to reach that goal, which raises the question of suitable interim strategies.

An alternative to the continuous green strip concept is the development of a nodal pattern of protected habitats and public parks. Waterfront agencies buy up the remaining marshes or other critical habitats, and develop regional parks through land acquisition or lakefill to meet local and regional recreation needs. This is the approach adopted in Etobicoke, Scarborough, and Burlington, each of which has its own variations on the general theme.

Within these areas, the goal of continuity can be well served by incorporating interconnecting systems of trails and bicycle paths. Where possible, these connectors could be along the

water's edge. In many places, they would detour inland, either to bypass some legitimate waterfront barrier, or to take advantage of a feature of interest such as an historic neighbourhood. These links would not always be set in green areas; often they would follow residential streets, or even cut through active industrial areas, to provide a sense of the diversity of the waterfront (and to make the link possible.) Their sense of continuity would be reinforced by common design features such as signage, and by their recurrent pattern of returning to the water.

Parts of an interconnecting trail are already in place, for example the Martin Goodman Trail in Toronto. Many other links are planned as part of municipal trail and bikeway development. The challenge is to create continuous links along the entire length of the waterfront, and to bridge the gaps in difficult areas innovatively. However, we believe it is feasible to establish a trail that links to the Bruce Trail to the west and extends beyond the Newcastle border to the east to connect with the foot of the Ganaraska Trail in Port Hope.

Linking the Waterfront to its Watershed

As the first *Interim Report* of the Royal Commission pointed out, the waterfront cannot be considered in isolation from the watersheds that feed into it. This is particularly true in an ecological sense, because much of the pollution impairing the water quality along the shore arrives through the streams and sewers from adjacent watersheds. As well, many species of wildlife and fish migrate regularly from the waterfront into the watershed, and depend on the maintenance of connecting routes.

The major river valleys are vital connections between the lake and the watershed, and deserve special consideration in a Green Strategy. Along the Greater Toronto Waterfront, the quality of valley corridors and tributary waters ranges from excellent, in streams such as Wilmot Creek, to grossly impaired, such as the lower Don River. Any strategy for the waterfront should emphasize the need to rehabilitate

degraded streams and valleys, as well as the need to protect those valleys now in good shape.

These valleys can also serve as recreational links, by providing routes for attractive pedestrian and cycling trails. Because of their size and length, and because they are connected to major natural habitats or recreational areas upstream, special attention should be given to the valleys of Grindstone Creek, Bronte Creek, Sixteen Mile Creek, the Credit, the Humber, the Don, the Rouge, Duffin Creek, Lynde Creek, Bowmanville/Soper Creek, and Wilmot Creek.

Whose Waterfront?

In seeking to make the waterfront publicly accessible, we must recognize that "the public" is not a homogenous entity, but a collection of groups with varying interests and means. While the definition of a desirable and accessible waterfront may coincide among the various "publics", they inevitably diverge on some elements. When they do, guiding principles are needed to ensure that the result is a balance that is fair to all groups, and does not jeopardize the long–term integrity of the waterfront.

The kinds of waterfront facilities demanded by a resident of a nearby condominium, for example, are likely to be substantially different than those needed by a weekend salmon angler visiting from Guelph. Worse yet, most waterfront visitors who come from areas outside walking distance arrive by car, and the resulting traffic and parking problems are a source of irritation and inconvenience for those who happen to live near the waterfront. Local residents' concerns about traffic and overcrowding can become a major impediment to developing regional recreation sites along the shore, as is the case at East Point in Scarborough.

There are income distinctions among waterfront users as well. The recurring pattern of creating lakefill parks as bases for wet berth marinas and boating clubs, for example, caters largely to the demands of those who can afford to own a boat

and lease a seasonal slip. While these parks also provide some walking trails and picnic grounds open to all income groups, a substantial part of their "open space" is occupied by parking lots and docks. They do not incorporate facilities for low–cost boat rental that could make the lake more accessible to lower–income groups. Other suggestions for making the waterfront accessible to lower income groups have been included in the recommendations of the work group Parks, Pleasures, and Public Amenities. (Royal Commission on the Future of the Toronto Waterfront 1989, 71).

Defining the group for whom the waterfront is meant also means striking a balance between public and private objectives. There appears to be a clear consensus that existing private owners of waterfront lands should retain their rights to enjoy and control access to their lands. No one is suggesting, for example, that large tracts of private waterfront residences be expropriated in order to expand public access. However, when private lands are being developed, or redeveloped for different uses, the balance between public and private objectives becomes much more complex.

Many waterfront municipalities require that the water's edge be transferred to public ownership, or at least become publicly accessible, during development. This principle has been a major element in plans for redevelopment of the Etobicoke motel strip, for example. In terms of the private interest, waterfront residential developments are more saleable if the water's edge is not public. Indeed, it appears that a major new condominium and private marina development on the east side of Whitby Harbour will not be required to incorporate public access to the water's edge.

Another example of conflicting public and private objectives is the parcel of privately held land at the foot of Harwood Avenue in Ajax, set in the midst of a wide continuous belt of green space. Local authorities would like to see a private lakefill marina developed there, but proposals for the adjacent land base call for construction of a high–density residential/

commercial complex. It has been argued that such a development would be out of character with the surrounding community, and be intrusive visually. In such cases, a clear set of guiding principles is vital, to ensure that public interests in the waterfront are not lost.

Setting Goals for a Green Waterfront

Inherent in the concept of a Green Strategy for the Waterfront is the need to set goals and minimum standards that must be achieved to ensure the quality of the waterfront environment and public access to and along the waterfront. These goals and standards would serve as a benchmark against which to measure progress, and against which to evaluate individual plans and proposals.

One starting point in developing a set of goals for the waterfront is the statement produced for the Metro Toronto Remedial Action Plan. While all 12 goals established by the RAP's Public Advisory Committee could be applied along the entire Greater Toronto Waterfront, several of the more specific statements deserve mention as examples of particularly useful goals:

1. Goal 2a: Any fish species indigenous to the Toronto waterfront and its watersheds should be able to return to the region, to live and naturally reproduce here.

2. Goal 2b: Opportunities to sustain and create fish and wildlife habitat throughout the Toronto watershed should be pursued in parallel with water quality initiatives.

3. Goal 2c: Within the waterfront, watershed, and headwaters, protection of the remaining wetlands should be a primary concern. A priority for any development or remedial measure should be, where possible, to avoid effects on existing wetlands, and where possible to provide increases in wetland habitats.

4. Goal 2d: People should be able to consume fish from the Toronto waterfront and its watersheds without any restrictions resulting from contaminants of human origin.
5. Goal 2e: People should be able to swim and engage in water sports in Lake Ontario and Toronto's watersheds without risk of disease or illness.

Some of the goals established in a Green Strategy should also deal specifically with protecting and enhancing habitats for wildlife and rare species. One goal might state, for example, that "no species of native wild plant or animal now found along the waterfront should become extirpated from the waterfront area". Another goal might say that "the diversity of wild plants, mammals, birds, herptiles, and fish along the waterfront should be maintained and restored to levels more closely aligned with the natural potential of their habitats".

Other goals developed as part of a Green Strategy could focus more specifically on access and recreational issues. For example, one might set a minimum width for linear strips of public access along the shore. Another could set general standards for linking routes along public streets, providing separate bicycle lanes on busy streets.

One of the underlying issues to be addressed in any goals and standards statement is the degree of consistency that is desirable along the extended waterfront. If the overall object is to create a system of linked recreational and natural nodes, how much flexibility should local agencies have in responding to local conditions and preferences? If Burlington chooses a nodal approach while neighbouring Oakville seeks a continuous linear strip, does that difference represent a problem, or merely a means of enhancing diversity within an overall waterfront system?

A second underlying issue is the question of how much waterfront open space is enough. If there is a consensus that the recreational base available now is not sufficient for future needs, as suggested strongly by municipal representatives, can we establish some way to estimate how much more we

need? Municipal recreation agencies often use a ratio of parkland and facilities to population as a guide, but such ratios do not appear to be especially useful in dealing with the regional recreation patterns along the waterfront.

One difficulty in responding to this issue is the absence of comprehensive demand surveys, which would give a clearer picture of the types and quantities of waterfront recreation demands likely in the future. From the limited information available now, such as that for boating facilities, it appears that future demand for at least some types of recreation may well exceed any realistic ability to provide land or facilities. The answer to the "how much" question may well be "as much as we can afford, within the environmental limits of the waterfront". The question deserves consideration and further study as soon as possible so that effective planning can take place.

RESTORING THE WATERFRONT ECOSYSTEM

One of the primary purposes of a Green Strategy for the Waterfront is to assist in protecting and rehabilitating natural ecosystems, both terrestrial and aquatic. Even in its present condition, the waterfront is an important habitat for fish and wildlife populations, and for other ecological features such as unusual plant communities. In many places, however, habitats have been degraded by the effects of urbanization, and even by intensive use and management of recreational green spaces. Much could be done to reverse that trend.

One of the most pressing ecological concerns along the waterfront, of course, is the ongoing impairment of water quality. In the past, nutrient pollution has contributed to the loss of deep–water species like lake trout, and toxic contaminants have caused deformities and reproductive failure in fish–eating birds. In terms of the near–shore fish communities, however, populations are generally limited by availability of suitable habitats, rather than by water quality.

In just a few areas such as the lower Don River is water quality so poor that only a limited diversity of fish can survive.

The impact of degraded water quality on human uses of the waterfront is much more evident. Beach closures because of high bacterial levels have become a routine part of Toronto summers. Public advisories on safe levels of consumption for Lake Ontario predatory fish are issued each year. Public enjoyment of the waterfront is often impaired by unpleasant odours and unsightly floating debris.

Perhaps of equal importance recreationally, there is a widespread perception that Lake Ontario waters and organisms are seriously polluted. That perception, while vital to generating the public support necessary for remedial action, also acts to discourage recreational visitors to the shore. A 1986 survey of Toronto households, for example, found that more than half have members who fish, but only 3.2 per cent of the anglers usually fish locally. The reasons given for not fishing in Toronto included:

- think the water is too polluted (59.4 per cent);
- are concerned about fish quality (28.6 per cent).

(Metropolitan Toronto and Region Conservation Authority, *Urban fishing: feasibility study*, 1986, 31).

While water quality issues will be dealt with in more detail in the Commission's environment and health hearings, they must be noted as important factors in establishing a Green Strategy. Continued impairment of near–shore waters can undermine a great many of the recreational and ecological benefits of a Green Strategy; significant improvements in water quality will open new opportunities for waterfront enhancement and use.

Establishing Indicators of Ecosystem Health

Fish and wildlife species act as integrators of many forces in their environment, and can serve as valuable indicators of the overall health of the ecosystem. It is no coincidence that some

of the earliest warnings of the eutrophication of Lake Erie came from collapsing fish populations, or that awareness of the effects of toxic chemicals in the Great Lakes arose from deformities in cormorants. Similarly, the decline in the numbers of nesting bluebirds earlier this century told us a great deal about the ways in which changing farm practices were affecting wildlife habitats.

A recent strategy prepared for the Rouge River Basin suggests that certain "indicator" species should be monitored as barometers of ecosystem health (Metropolitan Toronto and Region Conservation Authority 1990, 16). Policies and management practices shown to maintain or enhance these indicator species could then contribute to sustaining the overall ecosystem. This concept, which emphasizes management for ecological objectives rather than to increase recreational or commercial potential, could be applied to the Greater Toronto Waterfront as well.

Characteristics of a "healthy ecosystem indicator" could be developed, with minor modifications, using the Rouge Basin approach. An indicator species could be defined as:

- resident throughout its life cycle, or for an important component of its life cycle, in the ecosystem;
- having habitat requirements reasonably well suited to the actual conditions existing along the section of waterfront being considered;
- having enough information available about its habitat requirements to allow judgements on which habitat criteria are key;
- representing higher trophic level (i.e., a predator) because these species' habitat needs tend to integrate a broader range of ecological parameters;
- having habitat requirements generally representative of the needs of associated species in the resident community (species guild); if it is one of the more sensitive species,

protecting its needs should ensure that the needs of associated species are also met;

- a species recognized as having some value to humans and therefore having a priority in resource management decisions.

Fisheries indicator species for various conditions within the Rouge basin have already been selected (brook trout, bass, rainbow trout, pike). A different series of species would be needed along the open shoreline and in the sheltered embayments along the waterfront. The ecosystem indicator concept could also be extended beyond fish species, to relate to terrestrial and wetland habitats as well. Rare plant occurrences could serve as one valuable set of indicator species. Colonial nesting birds such as common terns are another.

Amphibians and reptiles that spawn in lakeside marshes are also rich in potential as indicators of ecosystem health. A systematic survey of the herpetofauna (reptiles and amphibians) of Waterloo Region showed that many species' distribution reflected land use practices (Francis and Campbell 1983, 51). A systematic look at the distribution of herpetofauna along the Greater Toronto Waterfront would almost certainly yield a pattern indicative of existing habitat quality. Such a survey could then become a baseline for monitoring future change.

Restoring a Near–Shore Fishery

Over the past two decades, the stocking of salmonids in Lake Ontario has created a spectacular sport fishery that contributes millions of dollars to waterfront economies every year. However, most of the angling opportunities provided through this fishery are offshore, requiring expensive boats and other equipment for participants. The salmon can be successfully fished from shore in only a few river mouths and lakefill spit locations.

Fishery managers now suggest that it is possible to create a fishery of similar popularity in the near–shore zone, accessible

from the waterfront. A 1986 study by MTRCA concluded that development of an urban fishing program was justified, based on

> ...the considerable angler–effort already expended in the Metro area; the large pool of anglers who reside in the Metro area but do not fish locally; the interest expressed in angling, particularly by parents for children's activities; the poor awareness of urban anglers specifically with regard to contaminant concerns; and the number of sites with the potential to be developed. (Metropolitan Toronto and Region Conservation Authority, *Urban fishing: feasibility study* 1986, i).

A near–shore fishery has the advantage of being more accessible to the handicapped, children, and lower–income groups. It could also be a powerful force in raising public support for action to restore water quality. In the short term, because of contamination problems, most of the near–shore angling would have to be oriented towards recreation rather than consumption. However, the feasibility study found that a large majority of shore anglers now fish primarily for relaxation and sport. Only between two and nine per cent of the anglers interviewed were fishing for food.

Management activities related to the development of a near–shore fishery would include provision of better access through fishing piers, better promotion to make people aware of shore fishing opportunities, and habitat enhancement, especially through construction of artificial reefs and wetlands. Construction of reefs has already been proposed along the Burlington Bay shoreline, as part of the Hamilton Harbour Remedial Action Plan. Stocking selected species such as brown trout, which return to the shore when mature, could also make shore fishing attractive.

Protection of Critical Habitats

In order to sustain the waterfront ecosystem, it is vital to retain critical fish and wildlife habitats used for spawning, rearing,

or feeding, as well as habitats of rare species. While a good many of these habitats are already in public ownership, some remain unprotected. Among the most significant private sites needing additional protection are:

- Joshua Creek mouth;
- Frenchman's Bay marshes;
- Carruther's Creek;
- Pumphouse Marsh;
- Oshawa Second Marsh;
- McLaughlin Bay;
- West Side Beach Marsh;
- Wilmot Creek; and
- Bond Head Bluffs.

It is worth noting that many of these unprotected sites are clustered along the shore of Durham Region, where chronic shortages of conservation funding have stalled protection efforts.

Other sites of more local importance should also be protected wherever possible. The natural creek mouths of Shoreacres Creek in Burlington and Fourteen Mile Creek in Oakville are two examples, as are the natural woodlots on the St. Lawrence Starch property and the Canadian Arsenals property in Mississauga, and the wetlands on the St. Mary's Cement property in Newcastle.

Appropriate management of natural habitats already in public hands is equally important in maintaining or enhancing their value. For example, recent surveys have shown that the sheltered waterways among the Toronto Islands are very significant fish habitats, and may require special attention if habitat requirements are to be met in the context of heavy recreational use.

Wildlife Enhancement and Management

As noted in the recommendations of the Commission's first *Interim Report*, there is a great deal of potential on the

waterfront for increasing the diverse array of wildlife, using such techniques as creation of an integrated green belt along the shore and employing naturalization as an element of park landscape design. Those same recommendations could be applied across the entire breadth of the waterfront, from Burlington to Newcastle.

This extended waterfront encompasses both good and bad examples of ecological management of public properties. The master plan for Burlington Beach, for example, provides for the restoration of a small area of sand dunes, using revegetation by native dune grasses and restricting access across the dunes to raised boardwalks. At the other end of the spectrum, the Ajax waterfront is currently managed as a kind of ecological desert — acre upon acre of close–shorn grass, with barely a shrub or tree in sight. Naturalizing some parts of Ajax's waterfront bounty would add diversity and interest for visitors, as well as greatly increasing its wildlife value.

There is scope along the waterfront for more creative habitat enhancement projects as well. Already, interesting proposals have been put forward for creating wetlands in Tommy Thompson Park and Humber Bay East, experimental approaches that might well be duplicated elsewhere. Construction of small, barren offshore islands as habitat for the beleaguered common and caspian terns is another concept worthy of investigation.

Another aspect of ecological management that deserves attention is the connection between waterfront natural areas and the river valley corridors that provide ribbons of green through cities and towns. The best example is probably the Don River Valley, which is separated at its base from the natural habitats of the Toronto Islands and Tommy Thompson Park. Would intensive urban development on the Port Industrial lands, especially high–rise development, prevent migratory birds from completing their flights between these important habitats? No one can answer with any degree of

certainty, but it would seem prudent to ensure that future development on the Port lands includes a generous north–south green link.

One wildlife issue that most waterfront managers feel must be addressed is the overabundance of certain kinds of birds, notably Canada geese, and, to a lesser extent, ring–billed gulls. There are fears that the rapid accumulation of faeces from these birds in many waterfront parks will become a health hazard, as well as being aesthetically unpleasant and creating management headaches. While there is no proof that a carpet of bird droppings actually deters people from visiting the waterfront, there can be no question that it interferes with many people's enjoyment of waterfront parks.

Curtailing the numbers of nuisance birds will not be easy. Waterfront parks provide ideal habitat conditions for them — short grass, nearby water, and an abundance of food from sympathetic visitors and human refuse. Converting some of the lawns into low shrubbery or naturalized areas would help a little, but more drastic population control measures are likely to be necessary. In this regard, the continued involvement of the federal government is necessary, because the management of migratory species is a federal responsibility.

Community Forests on the Waterfront?

Originally, the Greater Toronto Waterfront was unbroken forest, which disappeared a long time ago as the result of agriculture and urban growth. The trees that remain are valued for a variety of functions — as habitats for wildlife and adventurous children, as providers of oxygen and shade to moderate the urban climate, as barriers to screen the sights and sounds of urban life. But trees do not grow overnight, and it is time to consider whether far–reaching new tree–planting initiatives are needed along the waterfront.

That has recently happened in Britain, where the Community Forests program was launched by the Countryside Commission. Its goal is to create massive

envelopes of woodland around Britain's major cities. According to the Countryside Commission, these forests "will be multi-purpose, more concerned with providing an infrastructure for new housing, factories and recreation facilities than with growing timber; they will utilize existing derelict and waste land, urban fringe farmland where the problems of vandalism make farming difficult, and those areas of land that at present are sterilized, such as hospital grounds, power stations and factory and office sites." (Bucknall 1989, p. 14)

Clearly, there are areas along the waterfront, including parts of the Port of Toronto lands, generating stations, water and sewer works grounds, industrial sites, and elsewhere, that could qualify for such a program. But before such an initiative could be considered, questions about sponsorship and funding would have to be resolved. Some guidance on the types of trees planted would also be useful — a diverse mix of species native to this area would be far more ecologically appropriate than the spruce and pine normally planted for commercial forestry.

IMPROVING ACCESS ALONG THE SHORE

Meshing Demand and Facilities

Anticipating the future, as our society has learned repeatedly from bitter experience, is an inexact science. Predicting what kinds of recreational experiences we will demand on our waterfront a generation hence, or even a decade from now, is likely to be even less exact. Yet the decisions on the type and magnitude of various facilities developed along the waterfront must, of necessity, be based on informed guesses about what the future will bring.

A case in point is the current explosion in demand for wet-berth boating slips, a phenomenon along almost the entire waterfront. Despite the high capital costs involved, the number of slips in the Toronto market area alone has grown

from 915 in 1964 to approximately 6,500 now. At some facilities, there are extended waiting periods for a berth. Part of this upward spiral in demand is related to the success of the salmon sport fishing industry —a charter boat industry that was almost non–existent a decade ago and now demands berthing for more than 400 boats. The increased cost of vacation properties also contributes to escalating demand along near–urban waterfronts.

Over the next decade, a further 3,230 wet berths are scheduled for completion, with a potential for 1,225 more in unconfirmed projects. Yet facility planners still forecast a substantial shortfall in supply at the turn of the century.

The danger here is twofold. First, there is a risk that attempts to keep up with rapid increases in demand will lead to marina projects that endanger wetlands or other shoreline recreational uses. Second, there is a real danger that future shifts in boating patterns will cause the rapidly increasing supply of wet berths to overtake actual demand, at a considerable waste of public resources.

This is not to suggest that new marina projects should grind to a halt; rather it is to point out that future demand figures that are a straight–line projection of the past should be treated with caution. Conditions can change — it is not beyond the realm of reason, for example, to speculate that the booming salmon fishery could collapse. Sudden collapse is, after all, the historical pattern of almost every fishery ever established on the Great Lakes.

One element of waterfront recreation planning, then, might be to maintain the greatest degree of flexibility possible in the timing and scale of new projects. Another important element might be a conscious decision not to attempt to meet all the forecast demands. The waterfront land base and environment is finite; at some point we must decide that no more of its shore will be devoted to any one use. The public purse is also finite, and the amount of capital allocated to marina construction must be weighed against other uses.

The whole concept of balance in shoreline recreation — of trying to meet competing demands for space with a finite land base — surfaces repeatedly along the waterfront. Perhaps the most difficult part of the balance is between active and passive uses. What proportion of dollars and land available should go to swimming pools and marinas and playgrounds? What per centage to developing trails and natural settings and lookouts for quiet enjoyment? There are no easy answers, especially in the absence of comprehensive demand studies to find out what potential waterfront users want.

One additional layer of complexity is the increasing demand in adjacent communities for such land–hungry recreation facilities as soccer fields and slow–pitch diamonds. Waterfront management agencies have generally discouraged such facilities in waterfront parks, arguing that shoreline lands should be reserved for water–related uses. But in Metro Toronto at least, where serviceable lands for sports fields are becoming increasingly scarce and expensive, parks planners would like to see that policy change.

Ensuring the Quality of Public Access

Within urban areas where green space is at a premium, the quality of public access becomes a vital issue. Harbourfront's initiatives over the past two decades are one example. Its activities have physically increased public opportunities for access to the waterfront, but the scale and nature of associated development have led people to worry that the waterfront is in danger of becoming less accessible in visual terms.

The same kinds of issues are being faced along other parts of the waterfront, such as in relation to Etobicoke's motel strip. How can the urban design employed there best ensure that the waterfront is not only accessible, but is also seen to be accessible? The challenge, in the context of high–value urban development projects, is to create public open spaces along the water that are visible and that feel welcoming to the outside

visitor, rather than seeming to be reserved for those who live next door.

This need for a clear differentiation of public and private open spaces has also been an issue along the Oakville shore, where there has been a tendency for the public waterfront linear strip to be gradually incorporated into adjacent residential lots. Oakville has found it necessary to insist that fencing be installed to clearly mark the line between public and private lands, to ensure that the public feels comfortable in making use of the shore.

Another aspect of the quality of access to the waterfront is the degree of integration with adjacent communities. Compare Toronto's Beach District, for example, where the waterfront is at the very core of community identity, with Parkdale, where the waterfront is separated physically, visually, and psychologically from community life. This lack of integration is felt most keenly in parts of the City of Toronto. We refer readers to the many suggestions which have made in other publications of the Commission to overcome these difficulties. We do note, however, that barriers separating the community from the waterfront exist elsewhere, as in the railway lines along the waterfront in Scarborough's Port Union area, where creative design will be needed if their effect is to be minimized.

Two other issues related to quality of access deserve brief mention. The first is the quality of visual access, especially from travel routes parallel to the shore, which must be considered in the design of development proposals. The second quality issue, in our view, is the regrettable tendency towards "cookie–cutter" design for most of the existing and proposed lakefill/marina projects along the shore. Instead of designing lakefill projects that reflect something of the flavour of adjacent communities, or creating distinctive visual environments, lakefill planners have chosen to replicate a similar form and landscaping across the waterfront. The result

is a lost opportunity to enhance the diversity of recreational environments along the shore.

Creating Links to Overcome Barriers

A good deal of creativity is needed if links are to be established between areas of public land along the shore where there are barriers to continuity. The barriers are of three types: natural barriers, residential areas, and industrial sites.

Natural barriers include river crossings, embayments and marshes, and shoreline bluffs. In many cases, the first upstream bridge from the waterfront provides a suitable crossing point for pedestrians and cyclists. In a few cases, such as the Rouge River and Etobicoke Creek, special pedestrian bridges have already been provided. More such crossings are part of plans for developing the waterfront, for example, at the mouths of the Credit River, Mimico Creek, and Duffin Creek. Several studies show that a high priority should be given to linking the Western Beaches to a redeveloped motel strip across the Humber River mouth.

Some progress has been made in providing trail links around natural embayments such as Frenchman's Bay, although the intense pressure for marina and residential development around these sheltered inlets makes them difficult in spots. Even though a beach strip makes waterfront linkages along some waterfront marshes physically possible, it may be better to loop the trails behind such marshes, in order to avoid undue recreational pressures on sensitive wildlife habitats.

Access along the base of the Scarborough Bluffs is being gradually increased by MTRCA's shore protection works. Trail links are planned down the face of the bluffs at several locations such as Guildwood Park and Bluffer's Park. In other places with lower bluffs, such as major stretches of the Durham Region waterfront, access along the top of the bluffs is not yet precluded by adjacent private development.

Loss of public waterfront access because of shoreline residential development is a major problem in Burlington, Oakville, Etobicoke, and Scarborough, with smaller segments of the waterfront blocked by residential areas in most other municipalities. In the majority of cases, these residential neighbourhoods are stable and will not soon offer opportunities for developing new waterfront links. In a few instances, such as the Wilmot Creek retirement community in Newcastle, residential development was permitted relatively recently, without provision for public shoreline access.

Three options to overcome residential barriers are being tried. The first is to acquire waterfront residential properties as they become available in order to create "windows" of parkland at various places on the lakeshore, or to buy limited strips of property for the same purpose — especially in former cottage areas where structures are often substandard. This option is very costly, and obviously has limited overall application.

The second possibility is that the municipality require that a strip of shoreline be dedicated as public parkland when there is any development or redevelopment, even if it is on a single lot. While this policy has been applied in Oakville with relative success, it creates management difficulties in dealing with isolated individual strips of public waterfront. Many of these are not used much until they can be connected to longer trails linking existing parks. There is no guarantee that this option will result in continuous links, even in the long term, in residential areas with little redevelopment activity.

The third option, which has broader potential, is to develop connecting links using existing residential streets, parklands, and valleylands. In some areas, street patterns lend themselves easily to such added use; a degree of consistency in signage, and the presence of plantings or design enhancement, are all that is needed to make people aware that they are at a waterfront link. In other residential areas, the street pattern makes linking more difficult, and it may be necessary

occasionally to acquire a property in order to provide off–street links. Acquisition priority might be given to areas where the only alternative is routing the links along busy arterial roads.

The other barrier to continuity is the presence of major industrial sites, which occupy scattered sections of shoreline lands. Such sites include:

- port industrial lands in Toronto and Oshawa;
- Ontario Hydro generating stations at Lakeview, Pickering, and Darlington;
- active private industrial sites such as the Petro–Canada refinery in Mississauga and St. Mary's Cement in Newcastle; and
- contaminated sites such as the Port Granby radioactive waste dump.

In recent years, several major industrial sites along the waterfront have become available for redevelopment, such as the Texaco property in Port Credit and the Johns–Manville site in Scarborough. The process continues, with the recent announcement that St. Lawrence Starch will be closing its plant on the Mississauga waterfront. When that kind of site is redeveloped, it offers an opportunity to secure waterfront access or links. In some cases, however, contamination from previous industrial activity may seriously limit any potential for recreational uses.

Some existing industrial sites have potential as public links or recreational lands. That has already happened at the Ontario Hydro property at the Pickering Nuclear Station, where some buffer land was made available to local agencies for parkland. Similarly, Ontario Hydro lands adjacent to Lakeview Generating Station in Mississauga could be used as a trail link between Lakeview Promenade and Marie Curtis parks. In some cases, these links could incorporate examples of our industrial built heritage, which was discussed in the Royal Commission publication, *Environment and Health.*

One possible way to protect habitats or to secure access across industrial lands is to use conservation easement, legal instruments that secure the desired public rights while leaving ownership in industry's hands. While the use of conservation easements is relatively new in Ontario, they are employed to protect almost 800,000 hectares (two million acres) in the United States. Industries could be encouraged to donate easements at no cost (perhaps in return for a charitable donation receipt), as a means of improving their corporate environmental image. At least one access easement already exists on the waterfront, providing a route across General Motors lands to McLaughlin Bay.

While purchase of easements on waterfront lands is likely to be prohibitively expensive, they might occasionally be useful in securing a trail right–of–way through residential or industrial subdivisions, with the easement negotiated during the development approval process.

One of the most imposing waterfront industrial barriers is the combined Darlington Nuclear/St. Mary's Cement plants in the Town of Newcastle. Both will be there for a long time — St. Mary's has extracted limestone from only 20 per cent of its site — and both effectively block off the waterfront. More detailed study is required to determine whether it might be possible to create a link through this area without having to cross Highway 401.

Shoreline Management and Lakefill

Physically and ecologically, the shoreline is a dynamic place: the energy of waves constantly pounding the shore erodes the shoreline landforms, producing sand that is transported along the shore and deposited in beaches. This process of "littoral drift" varies with the rise and fall of lake levels, and is critical to the way nearshore zones function.

Along much of the Toronto waterfront, this natural process is of great concern to shoreline owners, particularly in source areas such as the Scarborough Bluffs where erosion threatens

residential properties. As a result, building setbacks have been established in areas where new development is taking place, in order to prevent homes from eventually toppling into the water. In places where erosion is already occurring, considerable effort has gone into stopping this natural process by stabilizing the shore through groynes, toe protection, breakwalls, or lakefill projects.

These stabilization programs bring a mix of benefits and problems: over the years, they have expanded the amount of recreational access to the water, particularly in Metro Toronto, where MTRCA normally acquires a strip of lakeshore land before undertaking erosion control projects. At the same time, however, there is the inescapable fact that shore protection programs have created an artificial shore along much of the Greater Toronto Waterfront. Stabilizing the Scarborough Bluffs will inevitably lead to the loss of their distinctive natural characteristics; in time most of them will become wooded slopes rather than cliffs.

When that happens, the main source of sand for littoral drift will have dwindled to insignificance, with serious long–term effects for receiving areas such as the Eastern Beaches. Moreover, shoreline protection programs carry substantial long–term maintenance costs, because failure to repair damage quickly leads to loss of waterfront property, or of hard–won waterfront parkland. The issue of who pays for necessary maintenance has not been fully resolved.

The impact of lakefill programs, which are designed principally to meet recreational objectives, raise some of the same concerns about littoral drift. As the report, *Environment and Health,* points out, lakefill projects also raise questions about water quality, which prompted the Commission to recommend a moratorium on further lakefill projects until a provincial lakefill policy is in place.

A provincial discussion paper on lakefill policy is scheduled for release for public comment this spring. The policy eventually adopted will potentially have a major impact on a

Green Strategy for the Waterfront, both by contributing to the rehabilitation of water quality, and in affecting the feasibility of future lakefill projects for recreational facilities.

One of the striking aspects about the Greater Toronto Waterfront is the extent to which current planning for open space and recreation is based on further lakefill. In large part, that is because available land along the existing shore is extremely limited and expensive. In addition to lakefill projects currently under way, we found documented plans for new or expanded projects at:

- Burlington Bay;
- Burloak Park;
- Bronte Harbour;
- J.C. Saddington Park;
- Humber Bay;
- East Point;
- Petticoat Creek.

Lakefill for industrial use is proposed at Oshawa Harbour and at the St. Mary's Cement site. In addition, lakefill projects have been suggested for future consideration at:

- Marie Curtis Park;
- Royal York Road;
- Humber Bay Rowing Course;
- Bluffer's Park Expansion;
- Harwood Avenue in Ajax.

Clearly, one of the considerations in formulating a provincial lakefill policy should be the implications of that policy for future recreational developments along the waterfront.

BUILDING A COMMITMENT TO A GREEN WATERFRONT

A Provincial Policy for the Waterfront

One of the most frequent complaints of waterfront managers is the lack of a strong, consistent, and forward–looking provincial commitment to the Greater Toronto Waterfront; without it, a Green Strategy for the Waterfront will result in little real progress. Although funding is being sought, there is a need for a provincial policy to give direction and backing to municipal and conservation authority initiatives.

The most likely form of such a provincial policy would be a statement under Section 3 of the *Planning Act*, issued jointly by the ministers of Natural Resources and of Municipal Affairs. In fact, a related draft policy statement, the Great Lakes –St. Lawrence River Flood and Erosion Policy Statement, is currently being discussed. It follows a provincial promise, made on 16 December 1986, to issue a policy statement recognizing that flooding and erosion hazards along the Great Lakes are matters of provincial interest. A second review by conservation authorities was completed in January 1990; after further internal review, another version of the draft policy statement will be released for public comment under the *Planning Act*.

Not only has it taken a long time to formulate this policy, but there is a shortage of implementation funds, as well as serious concerns about the technical criteria the plan sets out. A committee established by the Maitland Valley Conservation Authority has proposed an alternative approach, *Sustainable Development on the Great Lakes Shoreline*, which would pay more attention to coastal zone processes of erosion and deposition, as well as to the importance of littoral drift. (Ad Hoc Committee for Sustainable Shoreline Development 1989).

There is also concern that the proposed policy statement lacks breadth: in its current form, it would deal only with those

aspects of shoreline management that relate to risks to human life, property damage, and social disruption. There is no provision for considering other waterfront values, whether habitat, recreation, or open space, although the proposed policy would certainly offer some incidental benefits to these other shoreline values through the use of development setbacks or shore protection works. In some cases, shoreline works could also harm natural habitats. Certainly, the policy, as written, is a missed opportunity for the Province to integrate all its interests in the waterfront.

In addition to addressing flood and erosion hazards, an integrated provincial policy statement might also include:

- a requirement that waterfront municipalities develop policies regarding habitat protection and public access to the waterfront in their planning documents;
- policies that support development of pedestrian and bicycle links for waterfront parks in and between municipalities;
- policies on disposing of provincial waterlots for public or private purposes;
- policies on disposing of provincial or municipal lands along the waterfront;
- provisions for adequate environmental review of major waterfront developments;
- direction on resolving conflicting policy objectives, for example, between affordable housing and open space on the waterfront.

The Role of Municipalities and Conservation Authorities

As noted earlier, there is a considerable variance in the roles played by municipalities and conservation authorities across the Greater Toronto Waterfront. While any waterfront strategy should allow for some flexibility in local arrangements,

there is a need, at the very least, for greater clarity about the minimum degree to which municipalities and conversation authorities are required to become involved.

Among the regional municipalities, Halton Region has taken the lead in waterfront planning for its jurisdiction, while Peel Region has had virtually no involvement. Metro Toronto is currently expressing renewed interest in a direct role in the waterfront; to date, Durham Region has shown only a cursory interest. In some instances there is probably little advantage in having regions involved in waterfront management — it is doubtful, for example, whether the Region of Peel could add greatly to the excellent efforts underway by Mississauga. But in Durham, the regional municipality could usefully play a much greater role, particularly by insisting on a higher level of planning consistency among its five waterfront municipalities.

The involvement and roles of the five conservation authorities across the Greater Toronto Waterfront also vary. While some historical factors are involved — especially in the Province's decision to assign MTRCA and CVCA responsibility for implementing the 1967 Waterfront Plan — a more significant root cause is disparity in financial resources. Conservation authorities that bring cash to the table play a bigger role in waterfront development than those that are cash poor and are bypassed in favour of direct municipal action.

This fact of life has a direct bearing on the future role of conservation authorities along the waterfront. Traditionally, conservation authorities are partnerships between the province and municipalities, with funding for most projects shared equally. In recent years, however, provincial constraints have delayed projects, causing great frustration among the conservation authorities expected to take a lead role. In many cases, municipalities carry more than their allotted share, simply to allow high–priority projects to proceed.

Municipalities appear more willing (or able) than their provincial partners to fund waterfront initiatives; if the trend continues, more municipalities can be expected to implement waterfront projects directly, rather than through conservation authorities. In Metro Toronto, the operation of facilities and lands developed by MTRCA is carried out now by the regional municipality. If provincial funding for conservation authority development activities continues to falter, the regional municipality may well consider directly implementing its new waterfront plan when that document is completed, rather than continuing to fund an increasing share of the conservation authority costs.

Finding the Funds for Green Strategies

A Green Strategy for the Waterfront requires more than grand statements of support from political leaders: it has to have the financial resources needed to turn fine words into actual deeds. The Toronto waterfront has fared relatively well in the competitive world of budget allocations — approximately half of the entire provincial allocation for outdoor recreation programs has gone to Lake Ontario waterfront projects, primarily within MTRCA and CVCA boundaries (Ontario. Ministry of Natural Resources, *A Review of the Conservation Authorities Program*, 1988, 69). Nonetheless, the provincial share of funding for waterfront projects has been shrinking, with most of the shortfall picked up by municipalities. One example illustrates the trend. Lakefront Promenade Park is the only major waterfront project sponsored by the Credit Valley Conservation Authority, and was conceived on the basis of 50/50 cost–sharing arrangements with the Province. In eight years, however, according to CVCA figures, the actual per centages of expenditures financed by the Province were:

- 1982 23 per cent;
- 1983 41 per cent;
- 1984 41 per cent;
- 1985 42 per cent;

- 1986 34 per cent;
- 1987 34 per cent;
- 1988 17 per cent;
- 1989 25 per cent.

MTRCA also reports a substantial shortfall in provincial waterfront funding, with grant levels much reduced from earlier years. To sustain its waterfront programs, MTRCA now sells lower–priority lands to finance acquisitions, and uses about half of its $1 million annual revenues from lakefill to invest in waterfront development (the other half going to monitoring lakefill quality).

The waterfront programs of the other three conservation authorities involved are even more limited, being virtually non–existent in a time of provincial restraint. Municipalities have been left to shoulder most of the burden, but taxpayers are understandably reluctant to have their local municipality pay the costs of establishing green spaces for the use of visitors from the broader region.

If, as argued earlier, the Greater Toronto Waterfront should be considered a provincial resource, it follows that the provincial government should be willing to share at least equally in the costs of its management.

Those costs go well beyond the initial investments of acquiring land and establishing facilities. It has been estimated, for example, that upkeep and maintenance of shore protection along the Halton waterfront will cost an estimated $5 million over ten years. Without timely and effective maintenance, these shoreline protection facilities can fail rapidly, wasting the money spent on installation. Nonetheless, there is no provincial program to support maintenance, and the municipalities involved have so far refused to carry the costs alone.

Given current provincial priorities, however, any argument that the Province provide more money is unlikely to succeed. Therefore, alternate sources of financial support must also be

considered, building on the momentum of the re–discovered waterfront as a desirable, attractive part of urban life.

With the release of his first *Interim Report,* The Honourable David Crombie suggested one mechanism for funding implementation of a Green Strategy: use excess revenues generated by the development of the "pooled" federal and provincial lands on the Central Toronto Waterfront to support green projects along the waterfront and in its valleys.

In addition to those funds, it would be worth investigating the possibility of a "Waterfront Trust Fund" that might draw on a number of sources, such as:

- the development of other federal or provincial lands along the waterfront, such as the Lakeshore and Whitby Psychiatric Hospital sites;
- revenues from selling or leasing Crown waterlots along the waterfront;
- excess revenues collected during lakefill operations, perhaps with increased fees to parallel higher disposal costs elsewhere;
- a special annual surcharge on waterfront boat slips;
- private–sector donations from waterfront industries or community groups;
- a special one or two–per cent levy on waterfront development or redevelopment projects, above the normal five per cent parkland dedication;
- private or corporate donations specifically to sponsor park facilities, tree planting, or other amenities, which would be acknowledged with commemorative plaques.

Proceeds from the trust fund would be used for conservation, public recreation and access projects, and to meet major maintenance needs, preferably on the basis of matching government contributions. In part, the trust fund could serve to meet the regional disparity in financial resources along the waterfront, by allowing outlying areas better access to the financial strength of the urban core.

IMPLEMENTING A GREEN STRATEGY

Co–ordinating Implementation Efforts

As noted in *Parks, Pleasures, and Public Amenities,* the lack of co–ordination across jurisdictional and geographic boundaries is costly in terms of dollars wasted and opportunities lost. While we endorse the call to establish a regular waterfront forum to exchange information, there are several specific areas where further steps could be considered.

One is to co–ordinate waterfront recreational planning with the development of transportation systems. To a certain extent, this is already done by linking regional waterfront parks to major road networks. There have also been innovative suggestions for linking waterfront parks by boat or hovercraft, perhaps as part of a water–borne commuter service.

However, the present planning for waterfront access and recreation is generally not well co–ordinated with public transit patterns and opportunities. As the extent and intensity of urbanization within the Greater Toronto Area increases, transit links to recreation will become increasingly important, particularly for people who do not own a car. In fact, the present need to travel to most waterfront sites by car could be considered a form of economic discrimination. It also means that a substantial and growing amount of valuable open space is used solely as parking lots.

Improved co–ordination with transit means extending transit services to existing waterfront sites and developing new sites in areas already accessible by transit. The extension of transit services to Harbourfront is a good start, but much more could be done on a local and regional scale. In the longer term, regional recreation sites could be developed to link to such GO Transit stops as the Rouge station in Scarborough.

Improved co–ordination is also needed in efforts to link trail systems to each other and to connect links across municipal boundaries. In addition, there are a few opportunities for joint

parkland development across municipal boundaries, such as the Joshua Creek site on the Oakville–Mississauga border.

There are also important opportunities to incorporate trail links and passive uses on lands owned by Regional Municipalities and the Province and used for water and sewer facilities. In some cases, such as Jack Darling Park in Mississauga and the Harris Filtration Plant adjacent to the Eastern Beaches, public use of these properties is encouraged; in others, it is discouraged or prohibited. A consistent policy is needed for these facilities, to ensure that they provide public access along the waterfront, and that public access is part of the design of new facilities. Only then can they become fully part of a Green Strategy.

There is also a clear need to improve co–ordination between municipal waterfront planning and the activities of federal harbour commissions. The Royal Commission identified the problem in its recommendations on the future of the Board of Toronto Harbour Commissioners. Similarly, the Oshawa Harbour Commission is effectively isolated from integrated waterfront planning, using strategic waterfront lands outside the control of normal municipal land–use planning criteria. Some progress has been made towards more co–operative action, for example in a proposal that, after the protracted struggle that has taken place, the Commission return the Oshawa Second Marsh to the City. However, most of the lands controlled by the Oshawa Harbour Commission remain an obscure patch of black on the face of a green strategy for the Oshawa waterfront.

It may be appropriate for the Royal Commission to consider whether, in the present economic and transportation climate, there is a need for the Oshawa Harbour Commission to remain an independent federal entity. Could the industrial needs of the Port of Oshawa be better served — as well as the region's environmental and recreational needs — if the Harbour Commission lands were more closely integrated with the normal land–use planning process?

Finally, one other harbour–related issue stands in the way of co–ordinated action along the waterfront. Parts of the shoreline both in Frenchman's Bay and at Port Darlington are owned by private harbour companies that pre–date Confederation. The extent to which land–use controls apply to these companies is in dispute, and a protracted court case is ongoing, to determine whether the Pickering Harbour Company can proceed with further marina development in Frenchman's Bay. The decision of the courts could have a significant effect on natural habitats and public access opportunities in these two sites.

Making the Most of Redevelopment

Renewed interest in the waterfront has brought with it a number of proposals for redeveloping waterfront industrial or residential areas. Among the properties actively being considered or thought to have redevelopment potential are:

- Easterbrook Estate, Burlington;
- Texaco Canada site, Mississauga;
- Port Credit harbour;
- St. Lawrence Starch site, Mississauga;
- Canadian Arsenals site, Mississauga;
- Lakeshore Psychiatric Hospital grounds, Etobicoke;
- Etobicoke apartment strip;
- Etobicoke motel strip;
- Port of Toronto Industrial Lands and East Bayfront;
- Johns–Manville site, Port Union;
- Frenchman's Bay;
- Whitby Psychiatric Hospital;
- Whitby Harbour;
- Oshawa Harbour;

- Bowmanville Harbour;
- Newcastle Harbour.

These redevelopment sites offer opportunities to create an attractive mix of waterfront uses, including provision for public access. Moreover, former industrial–sites redevelopment can be the impetus for rehabilitation of contaminated soils or the resolution of other environmental problems.

Newcastle: A Special Case

The Town of Newcastle differs in several ways from other municipalities along the Greater Toronto Waterfront. Large stretches of the Newcastle waterfront are rural, the only major undeveloped lands along the entire waterfront. Because Newcastle lacks an urban population base, it has little inclination or ability to seize the opportunities presented by its waterfront.

With foresight and determination, in 20 years Newcastle could be another Ajax: a developing community that has secured most of its waterfront as a public resource. But without outside financial help, that vision will almost certainly not be realized.

Already, development pressures are being felt along parts of the Newcastle shore, especially in the harbour areas. The Town faces several complex environmental issues in the Port Granby Radioactive Waste Site, as well as the loss of significant wetlands to St. Mary's Cement quarry operations, and the expansion of the wharf facilities by St. Mary's Cement. In the absence of a comprehensive waterfront plan for Newcastle, and because of the lack of financial means to acquire key waterfront properties, there is a serious danger that the opportunities now available on the Newcastle waterfront will be squandered.

Involving the Public in a Green Strategy

Most of the activity along the waterfront to date has been sponsored by government agencies, although, in many cases,

this was prompted by the demands of public interest groups. As part of a Green Strategy, however, there may be ways in future to profitably involve the public and the private sector more directly in waterfront planning and management. Three possible approaches should be considered.

First, like government agencies, public–interest groups could benefit from regular exchanges of information and plans. While there is no lack of public interest in specific waterfront issues, there is no organized constituency looking at the waterfront as a whole. One interesting model might be the British Urban Fringe Alliance, which brings together various groups with a common interest in issues, and which acts as a common advocate.

A "Waterfront Alliance" of boaters, naturalists, resident associations, anglers, and like groups might have difficulty agreeing on every issue, but could certainly be a powerful force in advocating such common interests as improved water quality, protection of key habitats, and provision of more green space. The Metro Toronto Waterfront Coalition could form the nucleus for developing such an alliance.

Another British example might serve as a second option for greater involvement: thanks to a body known as the Countryside Commission, a series of 17 Groundwork Trusts have been established in various local areas to create partnerships among industry, local government, and the public to protect and enhance the environment. Set up as independent charities, these trusts are controlled by boards of directors representing local governments, industry, commerce, and voluntary organizations. They are supported in part by grants from senior and local governments, but are expected to finance many of their projects with private funds. They now have a high profile, have successfully raised funds and even persuaded such major firms as Esso, BP, and the National Westminster Bank to lend their executives.

A third area of potential public involvement is in establishing a system of waterfront trails. Most long–distance

trails in Ontario, including the Bruce, Ganaraska, and Rideau trails, have been developed and maintained almost exclusively by non–government organizations and volunteers. In recent years, the Bruce Trail has received more government attention and financial assistance in acquiring key properties and easements, as part of the Niagara Escarpment parks system.

If there is to be a similar long–distance, continuous waterfront trail, it might be crucial to establish some form of public trail association. While such an association might play a less direct role in actually constructing trails in urban areas, it could be valuable in planning and co–ordination; moreover, it could act as an advocate with local municipalities or other agencies if that were necessary. Members could be involved in such maintenance activities as clean–up days, or even in specific development projects such as constructing footbridges over small streams. Through organized hikes, trail guides, and promotional materials, the association could also be a significant force in raising public awareness of the waterfront's recreational and environmental values.

While a large part of the initiative for public involvement must come from the public itself or from voluntary organizations, government agencies could assist by providing seed money for organizational development, feasibility studies, or by bringing together representatives of groups interested in trail issues and possibilities.

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APPENDIX A

SUMMARY OF REGIONAL AND LOCAL MUNICIPALITY WATERFRONT POLICIES

These charts summarize selected facts taken from relevant draft and approved official plan documents. They are intended as a guide only. Readers should refer to the planning documents for complete information.

REGIONAL MUNICIPALITY OF HALTON

Official Plan Consolidation dated 1 August 1988, approved by the Minister of Municipal Affairs on 1 August 1980

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[3F] Goals and Objectives: Waterfront [B4] Growth Management Policies: Waterfront	• To improve and protect the Halton waterfront area as a major resource and a part of the provincially significant Lake Ontario shoreline. • To ensure the preservation of Lake Ontario and its shoreline as a major environmental resource. • To maintain the basic existing land-use pattern along the waterfront by developing the waterfront in a manner compatible with existing land uses. • To maximize public accessibility to the Halton waterfront by increasing the amount of well-distributed public open space. • To identify regional waterfront parks that provide a variety of recreational opportunities along the Halton waterfront. • To preserve stream valleys as an important open space feature of the waterfront. • To establish policies for controlling waterfront development in keeping with the objectives of the Waterfront Plan. • To encourage the appropriate government agencies to improve air and water quality, and protect and provide access for fish and wildlife resources in the waterfront area. • To recognize existing financial constraints in identifying priorities on the Halton waterfront. • To identify and protect historic, architectural, landscape, and geological features of regional significance, and incorporate them into Waterfront Public Use Areas, where feasible. • To increase public access to, and opportunities for, public enjoyment of Lake Ontario.	Waterfront Public Use Areas: permitted uses include passive and active recreation. Buildings and structures related to permitted uses also allowed. Regional and local waterfront park uses: passive and active recreation, specialized waterfront commercial, institutional. Marine and harbour facilities, cultural and historical facilities, and public works. Waterfront Open Space areas: limited structures permitted on approval by HRCA; pipelines and other uses permitted in Shell lands as noted in local official plan.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
A waterfront park linkage plan is required: to include bicycle paths, pedestrian walkways, and a scenic drive where appropriate, on existing roads and in waterfront parks. An interconnected Open Space System to be established, comprising various major open space features.	In developing regional waterfront parks, an Environmental Impact Analysis is required for regional park landfilling projects. The physical and biological features of environmentally sensitive areas (ESAs) are to be protected.	Plan contains two regional waterfront designations: Waterfront Public Use Area and Waterfront Complimentary Use Area. Plan also contains detailed policies on local and regional waterfront parks, waterfront open space, and waterfront urban areas. Master plans area required for regional waterfront parks; to be prepared by HRCA in consultation with, and approved by, the appropriate agencies. The demand for various recreational activities on the waterfront is to be reviewed and incorporated into master plans. Erosion protection of public waterfront shoreline required for regional waterfront parks is noted as first priority. Acquisition of waterfront property, as it becomes available, is second priority. For certain waterfront areas, conditions of (re)development include conveying of land along shoreline to a public body, shoreline protection where necessary, acquiring hazard lands as public open space, retaining a public open space buffer strip, and acquiring suitable waterfront property for public access to Lake Ontario. The HRCA is encouraged to implement fill regulations along the Lake Ontario shoreline. Implementation policies relating to the waterfront plan contained in official plan.

CITY OF BURLINGTON

Official Plan Consolidation (Amendment 49) dated September 1989, approved by the Ontario Municipal Board on 16 June 1971

Relevant Policy Sections	Goals/Objectives	Permitted Uses
[B 2.13] Greenways [B 2.15.2] Waterfront Policy [C 1.2.2.5.7] Burlington Beach Community	• Intent of the plan to preserve the sandy beach between CNR line and Lake Ontario shoreline, and certain lands between the CNR line and the Burlington Bay Skyway, for public recreation purposes.	No buildings permitted between the top of bank and the shoreline, on lands south of Lakeshore Road between the Burlington Ship Canal and Burloak Drive, except those for recreational or conservation purposes.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Greenways will link urban areas with parks or Lake Ontario in the built-up portions of the City and provide hiking trails, picnic areas, and links to recreational areas in the agricultural areas of the City. Park land: permitted uses include public recreational purposes. Only buildings and structures related to permitted uses will be allowed.	The mouths of those creeks (Greenways) emptying into Lake Ontario will require certain treatment; shoreline protection will have particular regard for such creeks.	Greenways include all major creeks, rivers and certain beach areas in the City. Shoreline protection required for (re)development of lands adjacent to Lake Ontario, subject to approval of HRCA and the City of Burlington. The development of land adjoining or in the vicinity of any part of a creek south of Lakeshore Road will have regard for hazard conditions such as flooding; no building permits will be issued, nor subdivisions or site plans approved, until flood plain lands are established by HRCA. Certain park areas along the Lake Ontario shoreline will be acquired when the opportunity arises in conjunction and co-operation with the policy of the South Halton and Peel Regional Planning Committee. Policies on lands under water also contained in official plan.

TOWN OF OAKVILLE

Official Plan Consolidation dated 15 December 1988, approved by Ministry of Municipal Affairs 21 December 1984

Relevant Policy Sections	Goals/Objectives	Permitted Uses
[D 4.4] Waterfront Parks [D 5.3] Shoreline Protection Areas [E 1.1] Old Oakville Community [E 1.2] Southwest Community [E 1.3] Eastlake Community [E 6.0] Lake Ontario Waterfront District	• Development of waterfront parks to be conducted in accordance with the Halton Region Waterfront Plan (OPA No. 1) where applicable. • Notwithstanding the Private Open Space designation of certain lands on the west side of the harbour, existing old industrial and commercial properties are encouraged to convert to low and medium density residential uses. • Acquisition of a parkland belt along the lake as part of the overall Eastlake community and Regional lakefront plan. • That portion of the planning area adjoining Lake Ontario will be developed with reference to the Regional Municipality of Halton Waterfront Plan and applicable official plan policies. In case of discrepancy between the two documents, the provisions of the latter shall prevail.	Shoreline Protection Areas: permitted uses include open space uses, docks, and erosion protection works on water lots, subject to the approval of HRCA and MNR. Oakville Harbour: pleasure boating and other public and private indoor and outdoor recreational uses, including restaurant facilities.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
An overall waterfront parks linkage plan shall be developed, including consideration of bicycle paths, pedestrian walkways, and scenic drives where appropriate. A pedestrian boardwalk will be developed linking public and commercial facilities overlooking Bronte Harbour.	Certain lands in the Sixteen Mile Creek Valley are to be maintained in their present state for wildlife areas.	Town of Oakville will co-operate with the Region of Halton, MNR, HRCA and CVCA in implementing development and management programs for waterfront parks. Land owners along the waterfront conveying required land to the Town for park purposes may be required to provide suitable shoreline protection. In cases of (re)development of waterfront land requiring parkland dedication, the Town may require that part or all of the dedication consist of a linear strip of land along the waterfront. In all cases where linear lakefront parks are developed, public and private properties shall be clearly identified, using appropriate landscaping, signing and/or fencing. Where property adjacent to Lake Ontario is the subject of (re)development, the Town, HRCA and MNR shall require that shoreline erosion protection be investigated by the proponent and results implemented to the satisfaction of the said agencies. The Town may also require suitable shoreline protection to be undertaken by the owner. Appropriate building setbacks shall be established by the town in consultation with HRCA and MNR. The town shall restrict private (re)development and placing of fill in Lake Ontario.

REGIONAL MUNICIPALITY OF PEEL

Official Plan dated July 1988, not yet approved by Council

Relevant Policy Sections	Goals/Objectives	Permitted Uses
[2.2] Regional Objectives [3.4] Natural Areas	• To protect areas of prehistoric, historic, archaeological, and environmental significance. • To maintain a safe and healthy environment, and encourage a balance between utilizing and preserving of natural features.	Regional Council shall support and participate with the CVCA and the City of Mississauga in reviewing existing and proposed land use activities along the Lake Ontario shoreline.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
	The provision of natural areas for preservation, recreation, and education purposes is the responsibility of MNR, respective conservation authorities, and respective municipalities.	It is the intention of Regional council to co-operate with agencies in upgrading and maintaining lakefront and river water quality, and to assist agencies in planning and managing of natural areas. Regional Council recognizes river systems, the Lake Ontario shoreline, woodlots, wetlands, etc. as natural features that create opportunities for recreation and education. The CVCA is the primary agency responsible for the recreational development and management of the Lake Ontario shoreline, as outlined in the CVCA Waterfront Development Plan.

CITY OF MISSISSAUGA

Official Plan Consolidation dated April 1989, approved by the Minister of Municipal Affairs on 16 April 1981

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[3.8] Recreation [4.7] Environmental Planning [5.6] Open Space [5.7.2] Environmental Protection Area	• To establish an open space system with a diversity of recreational opportunities, capable of adapting to changing public needs. • To establish a hierarchy of open spaces linked by linear parks. • To provide a City-wide system of pedestrian and bicycle paths. • To increase both physical and visual access to Lake Ontario, the Credit Valley, and Etobicoke Creek and increase recreational opportunities and activities in these areas. • Mississauga will co-operate in developing the waterfront in order to: · increase public accessibility and use; · provide opportunities for a range of recreational and leisure activities; · provide water-related recreational facilities; · permit an integrated management system for the entire shoreline; · increase visual attractiveness; · complement adjacent land uses; · improve environmental quality.	Open Space: permitted uses predominantly for recreation, leisure, and conservation. Agriculture, nursery gardening, forestry, cemeteries, and public utilities, and accessory uses and buildings may also be permitted. The waterfront will be made up of structured and unstructured parkland; from high-intensity activity nodes containing small boat harbours and launch ramps to undeveloped natural areas for low-intensity use. In environmental protection areas permitted uses include conservation, forestry, wildlife management, horticulture, public open space, agriculture, golf courses, public works, and private parkland.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Bicycle path facilities will be provided as shown in the official plan and detailed in secondary plans.	As one of the bases for environmental planning adjacent to watercourses and Lake Ontario, Mississauga will recognize the flood line and associated hazard lands identified by Halton Region, CVCA and MTRCA. Programs for preserving and maintaining natural conditions of those watercourses, wetlands, etc. having great environmental significance shall be established and implemented through appropriate agencies.	In developing lands adjacent to Lake Ontario, Mississauga will encourage and co-operate with CVCA and MTRCA in implementing waterfront development and management programs. Mississauga will co-operate with CVCA to implement waterfront planning in the Mississauga Waterfront Plan. Secondary plans provide detailed environmental protection area policies and open space and recreation policies.

METROPOLITAN TORONTO

Report No. 7: Parks and Open Space dated September 1988, not yet approved by Council

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[6.0] Waterfront Policies	• Protect the environment; conserve natural features. • Encourage and support Metro, City of Toronto and THC actions directed at maintaining the open space character of the shoreline. To ensure public access, the Central Harbour's shoreline should be part of the parks and open space system. • Official plan policies should reflect regional open space interests in the Central Waterfront to ensure that, if non-port related uses are permitted, no open space opportunities are lost. • Parks and open space system: interconnected and accessible to all Metro residents. • Continue acquisition and maintenance of accessible parkland to complete the system. • Protect system from incompatible development by pursuing a conservation-oriented philosophy (environmental/ecological perspective — land conservation and flood control). • For Etobicoke waterfront: more public access to waterfront via road and walkways; continuous public access along the waterfront. • For Toronto's waterfront: recognition of the area as one of regional importance; increased Metro involvement in realizing recreational potential of the area; more definitive policy statements addressing Metropolitan waterfront objectives.	

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Consider expansion of the Metro Trails system to link the valley park systems together by the end of the century. Metropolitan Toronto should review the overall Waterfront Plan in the western section of Metro to examine the possibilities for a linked parks and open space system. A more active acquisition program would ensure provision of a continuous pedestrian system along the waterfront, with added and improved access points from Lakeshore Boulevard.	Existing plan should be amended to recognize environmentally sensitive areas (ESAs) and their relationship to area municipal actions.	Existing Official Plan policies specifically address the waterfront. Metro supports MTRCA as its agent and sets out guidelines for approving plans for MTRCA's projects. Metro Planning Department has relied heavily on MTRCA for policy implementation. Document includes recommendations that: · The existing 1967 waterfront plan be reviewed and a new plan and/or policies be considered, specifically as they relate to the Central Waterfront and Etobicoke. Periodic reviews should reflect Metro interests to 2011; · Definition of waterfront be revised to reflect waterfront boundaries; · Metro undertake a comprehensive survey in consultation with local agencies, MTRCA, and the provincial and federal governments to determine future recreational needs; · Waterfront regulation line should be understood to be the same as the Fill Regulation Line established by MTRCA, which, in turn, should be understood to be the established setback line. For further regarding parks and open space recommendations see plan review document.

CITY OF ETOBICOKE

Draft Official Plan dated January 1990, not yet approved by Council

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[4.9] Open Space Designations [5.0] Site Specific Policies [6.0] Environmental Protection and Development Constraints [6.2] Waterfront [7.1] Municipal Open Space and Recreation	• To provide alternative land use and/or development standards for specific sites listed in Chapter 4 (Land Use Policies). • To provide additional policy direction, where required, on a site specific or area-wide basis. • To protect the environmental quality of the waterfront. • To recognize and protect ESAs from development. • The City shall have regard for the Metropolitan Toronto Official Plan and any waterfront program approved by MTRCA through their Master Watershed Plan. • The City shall work with MTRCA and Metro Toronto to provide and develop additional open space along the waterfront and acquire and provide additional access to the waterfront. • In considering significant development/ redevelopment in proximity to the waterfront, Council shall endeavour to: · preserve or create views to the lake; · improve public access to the waterfront; · require conveyance of property along the waterfront for public access and open space purposes. • To develop a comprehensive municipal open space system. • To provide an appropriate range and level of recreation service, and accessibility to that service, for all those who live and work in the City. • To provide an equitable and accessible distribution of parks. • To minimize deficiencies in parks and facilities wherever possible. • The Municipal Open Space and Recreation Master Plan to be prepared by the City shall include information on waterfront parks and shoreline access as it relates to municipal open space needs.	Open Space permitted uses include public parks in excess of 0.4 ha, including recreational facilities such as arenas, swimming pools, interpretive centres, and other similar uses; golf courses; cemeteries; marinas and yacht clubs; private open space; Ontario Hydro electric power transmission corridors, and ancillary uses including parking. The City shall regulate the use of waterlots through the provisions of the Zoning Code.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
The proposed Municipal Open Space and Recreation Master Plan shall include the concept of a continuous or linked public open space system incorporating bikeways and walking paths.	The Open Space designation may be applied to those lands that should be left in their natural state due to development constraints or constraints due to their significant natural attributes. Appropriate access to publicly owned open space areas will be provided where possible except where such access would have a negative impact on significant natural features. The proposed Municipal Open Space and Recreation Master Plan shall include natural areas such as ravines and woodlots and address the acquisition of valleylands and ESAs as part of the open space system. The Shoreline Impact Zone includes all land in the fill regulation lines established by the MTRCA. All development adjacent to, or in the Shoreline Impact Zone is subject to site plan approval.	Draft Plan contains detailed site-specific policies for four sites located on the waterfront, including Lakeshore Psychiatric Hospital lands. Proposed land uses for the remaining three sites along the water's edge are primarily residential and residential/commercial. Site-specific policies take precedence over land use policies otherwise applicable. No development or filling contrary to the regulations of MTRCA and the Ministry of Natural Resources shall be allowed in the Shoreline Impact Zone. All development in the Shoreline Impact Zone must be demonstrated, through an environmental impact study, to minimize erosion and adverse impact to water quality, slope stability and drainage. The Zoning Code shall establish appropriate setbacks from the Shoreline Impact Zone that minimize encroachment on the natural scenic resource of the shoreline, prevent slope instability and minimize environmental disruption. The Municipal Open Space and Recreation Master Plan is to address: the inventory of recreational and cultural facilities and open space under the jurisdiction of all levels of government; the need for acquisition of lands to augment the inventory and priorities for such acquisition; the need for improvements to the inventory of recreational and cultural facilities and open space; and the need for additional recreational and cultural facilities. The Motel Strip Secondary Plan (referred to the OMB) guides development of Etobicoke waterfront lands bounded by Humber Bay Park East and Palace Pier development to the west.

CITY OF TORONTO

Official Plan Part I Consolidation dated 1981, original plan approved by the Minister of Municipal Affairs on 1 October 1969

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[5.0] Parks, the Ravines, the Waterfront and the Railway Lands	• That the Lakeshore, the Toronto Islands, High Park and the ravines with other areas designated open space, form elements on which the major parks system (regional, district, and local parks) shall be based. • The Central Harbour is to be developed for general uses (residential, commercial, parks, recreation, and public uses). • The Port area is to be developed for industrial purposes with those portions designated open space to be developed for public use.	The Eastern Beaches, the Toronto Islands, the CNE parklands, and the Western Beaches shall be used only for park, recreational or ancillary uses. Any land created by fill shall be used only for parks, recreational or ancillary uses.

CITY OF TORONTO

Amendment to Part II of the Official Plan for Harbourfront, not yet approved by Council

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[2.0] General Objectives [4.0] Parks, Open Space and Recreational Uses	• The development of Harbourfront is supported as a mixed–use urban waterfront area. Appropriate residential, commercial, recreational and cultural (re)development will be encouraged. • Council will seek a range of recreational uses in parks and public areas in publicly accessible locations throughout Harbourfront, maximizing the benefit of the water's edge and Lake Ontario. • Council will seek the conveyance of selected parcels of land to be used for park purposes and public programming and for parks, community services, and facilities. • Council will develop a comprehensive parks plan for the Harbourfront parks system, to address issues including: public walkways for pedestrians; creation of an inviting environment; the relationship of parks, views to the water from the north, and the impact of development adjacent to Harbourfront.	

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
A major parks system with individual parks and continuous paths connecting these parks will be encouraged. These paths will be suitable for use by pedestrians, equestrians, skiers, and cyclists. Public access to parks located on the Lakeshore to be improved, provided their appearance and recreational value are not adversely affected, and adjacent residential areas are also not adversely affected.		Lands designated open space and owned by the City will not be disposed of. Lands designated open space and privately owned will not necessarily continue to have that land-use designation, nor are such areas free and open to the public, nor will such lands necessarily be purchased by the City.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
A public promenade to be developed along the water's edge will provide a link for other open spaces, buildings, and activities.		Official Plan Amendment contains detailed policies specific to the subject planning area, including policies that address the environment (noise, air, water, soil, etc.).

CITY OF TORONTO

Official Plan Amendment 463 approved by Council on June 1988, currently referred to the Ontario Municipal Board

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[5A] The Central Waterfront	• Council's primary goal is to promote increased public enjoyment and use of the area by ensuring that future developments and activity by public and private sectors, including the THC, will help to achieve objectives, including the following: · increase and improve public access along the water's edge and between parts of the Central Waterfront; · increase the amount of land and water–based public parkland across the entire Central Waterfront; · increase the availability, choice, and awareness of recreational opportunities and public activities throughout the year. • It is also Council's policy to incorporate a comprehensive parks plan for the Central Waterfront into this Plan by amendment.	

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Water's edge lands should be in public ownership and accessible to the public at all times. (Detailed policies contained in OPA, including wider public rights-of-way at the water's edge.) Continuous pedestrian and bicycle routes are to be established and maintained in, and adjacent to, the Central Waterfront and along the mainland shoreline and other areas, including the Outer Harbour Headland and the Toronto Islands District. Generally bicycle routes should be separate from pedestrian walkways and vehicular traffic, or where possible.		Further detailed site specific policies contained in OPA. These include references to public access and park lands located in the Port Industrial District, Central Bayfront, the Outer Harbour Headland (Leslie Street Spit) and the Exhibition district.

CITY OF SCARBOROUGH

Official Plan Consolidation dated March 1988, approved by the Minister of Municipal Affairs in 1959

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[2.5] Parks, Open Space, and the Natural Environment [3.8] Open Space	• To preserve and obtain public access to the waterfront and river valleys. • To preserve natural areas for conservation control measures and educational purposes. • To provide opportunities for a variety of recreational experience. • To promote the public's health, safety, welfare and enjoyment of leisure time.	No buildings or structures permitted on land having inherent environmental hazards. Within the Environmental Impact Zone (EIZ), no buildings or structures permitted unless Council is satisfied that the natural environment can be protected adequately. Open space permitted uses include active or passive recreational use, private or Metro-owned parks, golf courses, cemeteries, and municipal services or utilities.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
	Lands subject to environmental protection measures for the stability of the slope, storm drainage and setbacks. Environmentally sensitive areas (ESAs) within and outside the valley–land system include unique scenic landscape features and woodlots. Council shall endeavour to protect ESAs by incorporating these areas in Open Space designations wherever possible, and by paying special attention to these areas when considering development proposals.	The environmental impact zone (EIZ) is made up of all lands located below the crest of the valley slope or bluff area and lands within the first ten metres above and beyond the rest of a stable valley slope in major river valleys, tributaries, and the bluffs, and may include areas in table lands identified as ESAs. The City shall continue to seek aid from senior governments for shore protection and erosion control works that will enable public acquisition of the Bluffs and other environmentally sensitive or hazard land not now in public ownership.

DURHAM REGION

Official Plan Review dated 9 January 1990, not yet approved by Council

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[9.0] Urban Open Space [12.0] Major Open Space System	• To maintain river valleys and waterfronts as major regional resources in urban areas. • Development in and adjacent to urban open space shall support the natural environment. Development should maintain natural functions, preserve and enhance natural and cultural features, increase public accessibility and use, provide a range of recreational and leisure activities, and complement adjacent land uses. • To preserve and protect unique attributes of the region's landscape, including the Oak Ridges Moraine, the waterfront, conservation areas, valleylands, marshes, and other natural environments and recreational resources. • Major open space areas adjacent to urban areas shall be preserved to provide a clear distinction between urban and rural areas; to separate urban areas, and to provide open space near urban areas. • Public access to waterfronts and views of lakes shall be maximized. • Regional council shall develop comprehensive implementation strategies for components of the Major Open Space System, such as waterfronts or the Oak Ridges Moraine, and encourage area municipalities to undertake studies and incorporate appropriate provisions in their official plans for the Major Open Space System.	Urban Open Space: permitted uses oriented to conservation and passive recreation. Major Open Space System: passive uses; agriculture and farm-related. Permitted uses should enhance the natural environment, be compatible with existing uses, complement natural features, and not preclude unrestricted public access to natural features. Buildings and structures related to permitted uses are allowed.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
A continuous open space system that separates urban communities will be provided.	The Oak Ridges Moraine shall be protected. The area of the Ganaraska headwaters shall be preserved as a natural area until studies are completed and appropriate policies implemented. Waterfronts along Lake Ontario, Scugog, and Simcoe shall be protected as significant regional resources and landscape elements. Wherever possible, wetland areas along the shorelines are to be retained. River valleys shall be retained and enhanced as linear open space linking components of the Major Open Space System.	Regional Council shall encourage development of existing harbour areas for recreational purposes, including those harbours in Whitby, Pickering, Bowmanville, Newcastle Village. They shall also be encouraged to prepare related development plans. Selected developments may be permitted prior to preparation of such a plan and without amendment to the official plan, subject to the approval of municipal council and other involved agencies, and provided site plan control agreements are in place. The Major Open Space areas on the western and eastern sides of the Whitby/Oshawa/ Courtice Urban Area shall be maintained as urban separators. See draft official plan for further detailed information on the Major Open Space System and policies on shoreline residential areas.

TOWN OF PICKERING

District Plan Office Consolidation dated January 1989, approved by the Minister of Municipal Affairs on 23 March 1981

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[5F] Hazard Lands, Natural Environment, Open Space and Stormwater Management [9.A] Planning Community 1: Brock Industrial Area [9B] Planning Community 2: Fairport Community	• To ensure that new development in the Fairport Community Central Area takes into account the future use of Frenchman's Bay, avoiding conflicting uses of the bay and related shorelines. • To encourage development of the recreational potential and provide access to the valuable features of Frenchman's Bay and portions of the shoreline area. • To preserve and enhance the residential components of Frenchman's Bay and the shoreline area.	Open Space: predominantly active and passive recreation, conservation, agricultural and other farm-related uses. Also includes walkways or pedestrian paths, bicycle paths and equestrian trails for open space lands in Brock Industrial and Fairport communities. Permitted uses for Frenchman's Bay may include water-oriented recreational and commercial uses, restaurants, recreational facilities, and parking. Lands along the shoreline below the MTRCA regulation line shall be restricted to conservation and passive recreational uses. Valley lands of the Rouge River and Petticoat Creek to be used primarily for conservation purposes.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Encourage an open space corridor along the lakefront from Duffin Creek Conservation Park westward to the eastern boundary of the Pickering Water Supply Plant (Sherman Scott Water Treatment Plant). No scenic drive will be provided along the east shore of Frenchman's Bay: it has been found socially and environmentally unacceptable. A major open space system (may include hazard lands) is to be established in this area. Development of a north-south pedestrian and bicycle path system shall be encouraged through the Petticoat and Rouge Valley open space corridors. A system of links including walkways, bicycle paths, easements, etc. shall be developed to connect local parks with the major open space system.	Alterations to watercourses shall be approved by MNR and the respective conservation authority. Reforestation projects and preservation of wooded areas are encouraged. Conservation of valley lands, marshes, streams, beaches wooded areas, and other significant natural features. In Brock Industrial Community, buffering measures shall be provided when developing adjacent industrial sites. In Fairport Community Central Area, the marsh environment is to be preserved in its natural setting (from the mouth of Douglas Ravine to Frenchman's Bay). The related valley land and shoreline are also to be conserved as open space.	A major passive conservation park shall be developed at the mouth of Duffin Creek. Policies also include development of open space links and walkways to connect the open space system to selected residential areas. MTRCA is encouraged to continue its land acquisition program, in support of protecting the environmental quality of areas such as Frenchman's Bay and its shoreline.

TOWN OF AJAX

District Plan dated December 1989, not yet approved by the Minister of Municipal Affairs

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[6.0] Parks, Open Space, and Recreation	• Preserve unique natural features. • Expand the range of recreation activities in open space areas. • Provide visual and physical linkages.	

TOWN OF AJAX

A1 – Community Plan dated December 1989, not yet approved by the Minister of Municipal Affairs

Relevant Policy Sections	Goals / Objectives	Permitted Uses
[10.A.2.7] Parks and Open Space		Vast majority of the waterfront lands preserved as open space, permitting only open space and certain passive recreational uses. Upgrading of open space lands is encouraged, to accommodate passive recreational uses such as hiking, cross-country skiing, and picnicking.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
The parks and open space system is to provide interconnected parks and recreation facilities. Attempt to integrate district parks and the open space system with the major open space system defined in the Durham Regional Plan.		To maintain the entire Lake Ontario waterfront as open space, restricting construction in the first 122 m north of the highwater mark to public works structures or waterfront recreation buildings. Waterfront commercial — mixed residential uses are permitted at the south end of Harwood Avenue and the Ontario Beach area.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
In general, the open space system is geographically defined by the flood plains of Duffin Creek and the Lake Ontario waterfront lands.		Planning Community A1 fronting Lake Ontario contains approximately 312.4 ha of land used for parks and open space. Much of this area consists of Duffin Creek and a lakefront open space system. That parcel of land along the Ajax waterfront designated for waterfront specific uses will be subject to a detailed site design process to ensure unbroken, continuous public access to and through the waterfront lands. This site could include residential and/or commercial uses, but such uses will not be permitted before construction of a marina.

TOWN OF WHITBY

Official Plan Consolidation dated 25 February 1988, approved by the Minister of Municipal Affairs on 17 June 1974

Relevant Policy Sections	Goals/Objectives	Permitted Uses
[5.4] Harbour Industrial [7.0] Open Space [15.1] Port Whitby Secondary Plan	• To provide for a range of leisure activities. • To preserve and improve the natural features of the Town. • To select adequate open space for linear open space system; Town to develop open space system consisting of parkway belt including conservation areas, valley lands, the waterfront, and parks. • To maintain and enhance scenic visits. • To seek conservation of valley lands, etc. • To maximize public waterfront accessibility and develop the harbour for recreational and complementary uses. • To encourage (re) development of Port Whitby community maximizing its potential as a unique small craft harbour-related recreational and residential community.	Harbour Industrial lands permitted uses include those associated with boats (marinas), marine hardware, and supportive uses such as boat storage and marine supply. Conditional open storage permitted. Open Space: active and passive recreational and conservation uses. Also, agriculture, nursery gardening, forest, and cemeteries. Only those buildings and structures related to permitted structures will be allowed in open space areas. Whitby Harbour: industry complementary and supportive of a harbour-related residential and recreational community.

TOWN OF WHITBY

Official Plan Amendment No. 57: Lynde Shores Secondary Plan, not yet approved by the Minister of Municipal Affairs

Relevant Policy Sections	Goals/Objectives	Permitted Uses
[15.10.8] Major Open Space	• To develop a neighbourhood that responds to and reflects the anticipated expansion in the Port Whitby area. • To develop an open space system for the area that provides recreational opportunities, utilizes the Lake Ontario waterfront, and respects the environmentally sensitive nature of wetlands.	

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Wherever possible, the open space system shall be continuous and linked with paths and trails for use by pedestrians and cyclists. Visual and physical access shall be provided to all recreational areas, open space, parks and facilities. Port Whitby Secondary Plan includes an integrated pedestrian system linking major open space areas within the community.	Development in harbour industrial areas shall comply with the Environmental Protection Act (EPA). Policy of retaining all marsh areas along the waterfront in their natural environment. Oak Ridges moraine shall be protected from activities that adversely affect its conservation and recreational potential.	Whitby Harbour to be developed for water-oriented recreational uses; detailed policies in Official Plan address development of the Harbour and surrounding area. Area north of Victoria St. west of Henry Street (just northeast of Whitby Harbour) to be developed for intensive recreational purposes. Whitby Harbour area is noted as special study area #1. See draft Port Whitby Master Plan (1987) for additional information.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
A looped open space system shall be required to facilitate public pedestrian and bicycle access such that Iroquois Park, the Port Whitby Harbour area, Lake Ontario waterfront lands and the Lynde Creek area are linked.	As part of the Lynde Shore Secondary Plan process, proponents shall prepare an environmental management plan for the Major Open Space lands, prior to development of residential land within the plan area, taking into account the Environmental Evaluation and Management Plan (J.E. Hanna Associates Inc.).	It is the intention of CLOCA to acquire those privately owned, non-government lands below the regional floodline and within the Major Open Space designation.

CITY OF OSHAWA

Official Plan Consolidation dated 14 October 1989, approved by the Minister of Municipal Affairs on 12 February 1987

Relevant Policy Sections	Goals/Objectives	Permitted Uses
[2.6] Open Space and Recreation [2.11] Oshawa Harbour [5.0] Environment Management	• To provide an open space and recreation system that serves the City's recreation and environmental needs. • Areas designated open space and recreation include the Lake Ontario waterfront and the Oak Ridges Moraine. • The effect of development on the natural environment shall be considered.	Open Space and Recreation: recreation, conservation reforestation, cemeteries, allotment gardens, nursery gardening, golf courses, campgrounds, agriculture, and farm-related uses. Open space and recreation areas located along Lake Ontario will be used for recreation and conservation purposes. Oshawa Harbour permitted uses are predominantly port-related, including industrial, commercial, transportation, and recreational uses utilizing the port facilities or benefiting from close proximity to such facilities. Non-port related uses serving the harbour may be allowed.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Consideration shall be given to the development of pedestrian walkways, bicycle paths, and open space links between parks, open space areas, and adjacent land uses. Generally speaking, the City will develop a pedestrian and bicycle system that promotes opportunities for recreation and travel in the City.	Where possible the city shall retain environmentally significant areas (ESAs) in a natural state. Prior to approving development applications in ESAs, the City shall require the proponent to undertake an environmental study.	Policies on environmental protection of the Second Marsh as a wetland resource are currently deferred.

TOWN OF NEWCASTLE

Official Plan Consolidation dated July 1989, approved by the Minister of Municipal Affairs in July 1986

Relevant Policy Sections	Goals / Objectives	Permitted Uses
Bowmanville Major Urban Area Newcastle Village Small Urban Area	• To provide a range of leisure activities. • To preserve and complement natural features. • To provide adequate urban parks, recreational facilities, and active community recreation space. • To maintain and enhance scenic visits. • To encourage conservation of valley marshes, streams, etc. • Visual and physical access to be provided to all public facilities located in Open Space areas. • Encourage public acquisition of, and access to, the valley lands of the Bowmanville and Soper Creek systems, the Graham and Foster Creek systems, and the Lake Ontario waterfront, for passive recreational purposes.	Active and passive recreational and conservation uses compatible with the areas and with adjacent land uses. Buildings and structures related to permitted uses will be allowed.

Provision for Trails/Links	Environmentally Sensitive Areas/Habitat Protection	Other Comments
Consideration given to development of pedestrian and bicycle paths along publicly owned property.	An Environment Impact Analysis (EIA) will be required before examining proposed development on lands identified as environmentally sensitive. An EIA shall not be required where the proposed use has been authorized pursuant to the Environmental Assessment Act (EAA).	

APPENDIX B

REGIONAL AND MUNICIPAL PLANNING DOCUMENTS AND RELATED STUDIES

This table is a summarized reference of selected draft and approved official plan documents and related studies; it is organized by region, municipality and conservation authority.

HALTON

Planning Document	*Publication Date*	*Author**
Official plan for the Halton Planning Area, Regional Municipality of Halton: office consolidation	1 August 1988	** approved by MMA on 1 August 1980
Bronte Harbour Waterfront Park: Regional Municipality of Halton: final site plan	20 September 1988	Hough, Stansbury & Woodland Limited
Draft Shell lands secondary plan	6 October 1989	McCormick Rankin et al.
The Halton waterfront plan (official plan amendment no. 1)	December 1982	** approved by MMA on 2 September 1982
Bronte Outer Harbour feasibility study	August 1986	Hough, Stansbury & Associates Limited et al.

Burlington

Official plan amendment No. 49 (office consolidation): official plan of the Burlington Planning Area	September 1989	** approved by Ontario Municipal Board on 16 June 1971
Burlington Future Focus: A Strategic Plan	May 1988	
Welcome to Burlington's waterfront: package of material about waterfront development in Burlington	October 1989	

Oakville

Consolidation of the official plan for the Town of Oakville	15 December 1988	** approved by MMA on 21 December 1984
Waterfront related issues in the Town of Oakville: prepared for the Royal Commission on the Future of the Toronto Waterfront, Town of Oakville, October 27, 1989	October 1989	

Mississauga

Port Credit Harbour & Waterfront Concept	April 1987	Hough, Stansbury & Woodland Limited et al.

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

Halton Region Conservation Authority

Planning Document	*Publication Date*	*Author* *
The Halton–Wentworth waterfront study	June 1974	Acres Consulting Services Limited and Project Planning Associates Limited
Burlington Beach Waterfront Park	September 1989	Burlington Waterfront Symposium
Burlington Beach waterfront park master plan	October 1987	
Burloak waterfront park: master plan report	February 1987	

PEEL

Draft Official Plan for the Peel Planning Area	October 1988	

Mississauga

Clarkson–Lorne Park Secondary Plan: OPA 48 – City of Mississauga Planning Area (office consolidation)	February 1989	** approved by MMA on 18 June 1986
Dixie–Shorefront Secondary Plan – City of Mississauga subsidiary planning area (formerly amendment 293, office consolidation)	April 1989	** approved by MMA on 31 December 1980
Port Credit Secondary Plan: official plan amendment 129 – City of Mississauga Planning Area	October 1988	
The official plan of the City of Mississauga Planning Area: office consolidation	April 1989	** approved by MMA on 16 April 1981
Watersheds	Winter/Spring 1971	
The Mississauga waterfront: a list of sites and key documents and studies	October 1989	

Credit Valley Conservation Authority

Interim watershed plan: Mississauga waterfront program	1989	
Mississauga waterfront: a plan for the development of the Mississauga waterfront sector of the Metropolitan Toronto Planning Area	March 1972	Crysler & Lathem

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

Planning Document	*Publication Date*	*Author**
Environmental assessment: J.C. Saddington Park marina	March 1988	Hough, Stansbury & Woodland Limited et al.
Lakefront Promenade Park Master Plan	January 1985	Hough, Stansbury & Woodland Limited et al.
Draft Lake Ontario shoreline management plan	May 1988	
Lake Ontario waterfront, Mississauga sector: information guide for the Royal Commission on the Waterfront tour, Friday, October 27, 1989	October 1989	
Rattray Marsh master plan	May 1982	Hamilton, Jim

METROPOLITAN TORONTO

Parks and open space: a background document in the review of "The Official Plan for the Urban Structure: Metropolitan Toronto"	September 1988	Proctor, Redfern, Bousfield & Bacon
The waterfront plan for the Metropolitan Toronto Planning Area	December 1967	

Etobicoke

City of Etobicoke official plan update: urban amenity and open space issues and policy options	February 1988	Baird/Sampson Architects and M. M. Dillon Limited
Etobicoke Motel Strip waterfront public amenity scheme	6 September 1989	Brad Johnson & Associates and Philip Weinstein & Associates
Lakeshore planning study: Final Report	September 1986	CMP Barnard Associates and A.J. Diamond Planners Limited
City of Etobicoke official plan	1988	** approved by MMA on 11 April 1983
City of Etobicoke official plan update – Phase III: proposed draft official plan	May 1989	
Official plan of the Etobicoke planning area: the motel strip – amendment no. C–65–86: secondary plan	February 1988	
The Mimico Study	30 March 1983	
The Motel Strip Study	15 January 1986	
City of Etobicoke official plan: unapproved draft	January 1990	

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

Toronto

Planning Document	*Publication Date*	*Author**
A framework for preparing the 1991 Central Area Plan (Cityplan'91)	6 January 1989	
City of Toronto official plan: part I consolidation	August 1987	** original plan approved by MMA on 1 October 1969
Harbourfront part II official plan (office consolidation)	6 October 1986	** approved by Ontario Municipal Board on 10 December 1982 with exceptions
Amendment to the Official Plan for the City of Toronto respecting the Central Waterfront (official plan amendment 463)	17 June 1988	
City of Toronto Part II official plan amendment addressing Harbourfront (draft by–law)	[November 1989]	

Scarborough

Strategy for the future: recreation, parks and leisure services	June 1988	
Scarborough official plan: community plans	1985–	
Scarborough official plan: office consolidation	March 1988	** approved by MMA in 1959

Metropolitan Toronto and Region Conservation Authority

Ajax waterfront conceptual plan	January 1976	
Metro waterfront plan: Pickering–Ajax sector study report	January 1972	Project Planning Associates Limited
Agreement between Metropolitan Toronto and the Metropolitan Toronto and Region Conservation Authority relative to the development, operation and maintenance of waterfront plan areas within Metropolitan Toronto	12 September 1972	
East Point master plan update and site plan preparation study	January 1980	Hough, Stansbury & Michalski Limited
Environmentally significant areas study	1982	
A greenspace plan for the Greater Toronto Region	October 1988	

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

Planning Document	*Publication Date*	*Author* *
The greenspace strategy for the Greater Toronto Region: a conservation vision for the 21st century	July 1989	
Lake Ontario waterfront development program	n.d.	
Lake Ontario waterfront: a strategy	6 April 1988	
The Metropolitan Toronto and Region Lake Ontario Waterfront Development Project, 1987–1991	November 1985	
Shoreline management program	[1980]	
Strategy for the public use of conservation authority lands	30 May 1988	
Tommy Thompson Park: master plan	December 1987	
Tommy Thompson Park: master plan and environmental assessment	June 1989	
The Watershed Plan of the Metropolitan Toronto and Region Conservation Authority	1986	
Colonel Samuel Bois Smith waterfront area master plan	May 1978	Moffat Moffat and Kinoshita et al.

DURHAM

Office consolidation copy of the official plan of the Regional Municipality of Durham	1 August 1989	** approved by MMA on 17 March 1978
Review of the Durham Region official plan: proposed rural areas policies	25 April 1989	

Pickering

The Frenchman's Bay Water and Shoreline Development Plan	March 1979	Murray V. Jones & Associates et al.
Fairport community: Frenchman's Bay and shoreline area development plan	21 June 1989	
Planning community number 2: Fairport Community: Frenchman's Bay and shoreline area: amendment number 13 to the Pickering District Plan	n.d	

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

Planning Document	*Publication Date*	*Author**
Office consolidation copy of the district plan for the district planning area of the Town of Pickering	January 1989	** approved by MMA on 23 March 1981
Package of material about waterfront issues in the Town of Pickering	October 1989	
Town of Pickering waterfront issues	October 1989	

Ajax

District plan of the Town of Ajax planning area: A1– community plan, Town of Ajax	December 1989	
Office consolidation copy of the district plan of the Town of Ajax planning area	December 1989	

Whitby

A master plan for redeveloping the Whitby Psychiatric Hospital	1989	IBI Group et al.
Port Whitby Ontario Harbour Master Plan: Draft	1987	Johnson Sustronk Weinstein & Associates
Office consolidation copy of the official plan of the Town of Whitby planning area	25 February 1988	** approved by MMA on 17 June 1974
Port Whitby community secondary plan study	March 1981	Macpherson Walker Wright Associates Limited, Totten Sims Hubicki Associates Limited
Lynde Creek secondary plan: background reports	December 1988	Marshall Macklin Monaghan Limited, JE Hanna Associates Inc.
Port Whitby market study	22 April 1983	Project Planning Associates Limited et al.
Whitby official plan amendment number 57: Lynde Shores Secondary Plan Area	March 1989	
Review & update of the Town of Whitby official plan: an introductory discussion paper	October 1989	

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

Oshawa

Planning Document	*Publication Date*	*Author* *
City of Oshawa waterfront development plan: final report	10 September	Moore/George Associates Inc.
Office consolidation copy of the City of Oshawa Official Plan	31 January 1989	** approved MMA on 12 February 1987
Lakeview Park City of Oshawa master plan	June 1978	Johnson Sustronk Weinstein & Associates Limited
Proposed implementation program, Oshawa Waterfront Development Plan	1989	

Newcastle

Community profile: Newcastle	[1989]	
The official plan of the Town of Newcastle: consolidated office copy	1 July 1989	** approved by MMA on 4 July 1986
Port Darlington development study	1988	Maxion Corporation
Culture and recreation master plan, Town of Newcastle: part one – background study and part two – master plan	July 1983	MacLaren Plansearch
Summary of waterfront issues, opportunities, developments and policies for the Newcastle area	October 1989	

Central Lake Ontario Conservation Authority

Lynde Shores Conservation Area Masterplan	1977	
The Watershed Plan	May 1983	
Lake Ontario shoreline: C.L.O.C.A. area	1989	

Ganaraska Region Conservation Authority

The adequacy of the existing environmental planning and approvals process for the Ganaraska Watershed (MOE report no. 38)	15 November 1989	Ontario Environmental Assessment Advisory Committee
First draft watershed plan	6 June 1983	
A report on the Ganaraska Watershed	1944	Richardson, Arthur Herbert

* Where field is blank, author/publisher is the appropriate region, municipality or conservation authority.

* * Approved in principle, with appropriate modifications, referrals and deferrals by the Ontario Minister of Municipal Affairs.

APPENDIX C

SPECIFIC ISSUES AND OPPORTUNITIES IN WATERFRONT MUNICIPALITIES

The following is a very brief overview of possible waterfront opportunities and solutions, listed by specific waterfront area. It is not intended to be exhaustive — opportunities often arise with little warning — and parts of the list have been gleaned from the work of other agencies. However, it does offer some perspective on the dimensions of the green space challenge along the waterfront.

Burlington

- Connect two cemeteries through Easterbrook Estate redevelopment, and create trail connections to Royal Botanical Gardens.
- Establish street–based links through residential areas along Burlington Bay.
- Develop long–term strategies to ensure that the Burlington Golf and Country Club is retained as an open space.
- Implement major development of Burlington Beach and Spencer Smith parks.
- Develop trail links for cyclists/pedestrians along Lakeshore Road.
- Acquire the mouth of Shoreacres Creek.
- Implement development plan for Burloak Park.

Oakville

- Create links between Burloak and South Shell parks.
- Develop trail links past or around refinery properties.
- Develop a pedestrian bridge across the mouth of Bronte Creek.
- Extend pedestrian/parkland links to Coronation Park.
- Secure the mouth of Fourteen Mile Creek as natural open space.
- Ensure long–term retention of Appleby College as open space.
- Develop street–based links east of Oakville Creek.

Mississauga

- Add the Ontario Hydro property to Joshua Creek park.
- Investigate the potential for marina development at Lakeside Park.
- Develop trail links around the Petro–Canada refinery.
- Create street–based links through residential areas east of Jack Darling Park.
- Investigate ways of overcoming the constraints contamination imposes on redeveloping the Texaco property as a recreation/open space area.
- Construct a pedestrian bridge across the Credit River.
- Redevelop the Port Credit Harbour and J.C. Saddington Park.
- Investigate redevelopment opportunities at the St. Lawrence Starch property.
- Create links through the Port Credit East residential neighbourhoods.
- Develop a trail system between the Adamson Estate and Lakefront Promenade Park.
- Develop trail linkages across Ontario Hydro lands and the Lakeview Sewage Treatment Plant.
- Expand Marie Curtis Park onto part of the Canadian Arsenals property.

Etobicoke: See *Parks, Pleasures, and Public Amenities.*

Toronto: See *Parks, Pleasures, and Public Amenities.*

Scarborough: See *Parks, Pleasures, and Public Amenities.*

Pickering

- Complete the trial links and acquisitions east and west of Petticoat Creek.
- Acquire the remaining marshlands and sandbar properties in Frenchman's Bay.
- Create trail links along the east side of Frenchman's Bay during redevelopment.
- Develop trail links along Montgomery Road, past the nuclear generating station.
- Develop a waterfront trail when the York–Durham Sewage Treatment Plant is expanded.

Ajax

- Build a pedestrian bridge across Duffin Creek.
- Ensure that the Harwood Avenue development is compatible with open–space objectives.
- Protect open space and public access along the shore if the water plant expands.
- Complete acquisition and development of the Pickering Beach area.
- Secure protection of Carruther's Creek Marsh.
- Secure waterfront lands between Carruther's Creek and Ontoro Beach if and when it is developed in future.
- Develop street–based links through the Ontoro Beach residential area.

Whitby

- Secure waterfront open space west of LeVay's Marsh during development.
- Obtain land at the mouth of Lynde Creek and on the waterfront when adjacent areas are developed.

- Ensure that the waterfront is retained as parkland when the Whitby Hospital is redeveloped.
- Improve public access to the waterfront during the Whitby Harbour redevelopment.
- Secure the waterfront lands east of Heydenshore Park to Crystal Beach.
- Develop links through the Crystal Beach community to the Corbett Creek Marsh.

Oshawa

- Secure waterfront lands when adjacent areas are developed, in order to link Lakefront West Park to Stone Road.
- Develop street–based links along Stone Road.
- Acquire properties to extend Stone Road Park to the waterfront.
- Protect Pump House Marsh.
- Develop trail links past the water plant and houses into Lakeview Park.
- Provide greater public access and recreational use of the harbour lands.
- Provide permanent protection and buffering of the Oshawa Second Marsh.
- Secure public access and links along McLaughlin Bay.

Newcastle

- Plan the appropriate future use of the waterfront from Darlington Provincial Park to the nuclear station.
- Examine ways of achieving continuity of the trails around the nuclear station and St. Mary's Cement.
- Secure protection of the West Side Beach Marsh and adjacent wetlands.

- Complete protection of the wetlands and public access in the Bowmanville Harbour.
- Develop appropriate plans for the waterfront lands between the Bowmanville Harbour and Wilmot Creek.
- Develop a trail link through the Wilmot Creek retirement community.
- Secure public access when Newcastle Village Harbour is redeveloped.
- Secure protection of the Bond Head Bluffs and provide long–term public access along the top of the bluffs.
- Relocate radioactive wastes from the dump site.

COMMISSION REPORTS

Reports and working papers published by the Royal Commission on the Future of the Toronto Waterfront are available in both English and French. Publications may be obtained by contacting Andrea G. Short, Publications Co–ordinator, at the Royal Commission on the Future of the Toronto Waterfront, 207 Queen's Quay West, 5th Floor, P.O. Box 4111, Station A, Toronto, Ontario M5W 2V4.

Requests for information or comments about the content of the of the Commission's reports may be directed to Beverly Morley, Director of Community Relations.

1. *Environment and Health: Issues on the Toronto Waterfront.* Royal Commission on the Future of the Toronto Waterfront. Environment and Health Work Group. ISBN 0–662–16539–2. DSS cat. no. Z1–1988/1–41–1E

2. *Housing and Neighbourhoods: The Liveable Waterfront.* Royal Commission on the Future of the Toronto Waterfront. Housing and Neighbourhoods Work Group. ISBN 0–662–16936–0. DSS cat. no. Z1–1988/1–41–2E

3. *Access and Movement*: Royal Commission on the Future of the Toronto Waterfront. Access and Movement Work Group. ISBN 0–662–16937–9. DSS cat. no. Z1–1988/1–41–3E

4. *Parks, Pleasures, and Public Amenities.* Royal Commission on the Future of the Toronto Waterfront. Parks, Pleasures, and Public Amenities Work Group. ISBN 0–662–16936–0. DSS cat. no. Z1–1988/1–41–4E

5. *Jobs, Opportunities and Economic Growth.* Royal Commission on the Future of the Toronto Waterfront. Jobs, Opportunities and Economic Growth Work Group. ISBN 0–662–16939–5. DSS cat. no. Z1–1988/1–41–5E

6. *Persistence and Change: Waterfront Issues and the Board of Toronto Harbour Commissioners.* Royal Commission on the Future of the Toronto Waterfront. Steering Committee on

Matters Relating to the Board of Toronto Harbour Commissioners. ISBN 0–662–16966–2. DSS cat. no. Z1–1988/1–41–6E

7. *The Future of the Toronto Island Airport: The Issues.* Royal Commission on the Future of the Toronto Waterfront. ISBN 0–662–17067–9. DSS cat. no. Z1–1988/1–41–7E

8. *Interim Report August 1989.* Royal Commission on the Future of the Toronto Waterfront. ISBN 0–662–17215–9. DSS cat. no. Z1–1988/1E

Working Papers

A Selected Bibliography on Toronto's Port and Waterfront
CAT Z1–1988/1–42–1E
ISBN 0–662–17596–4

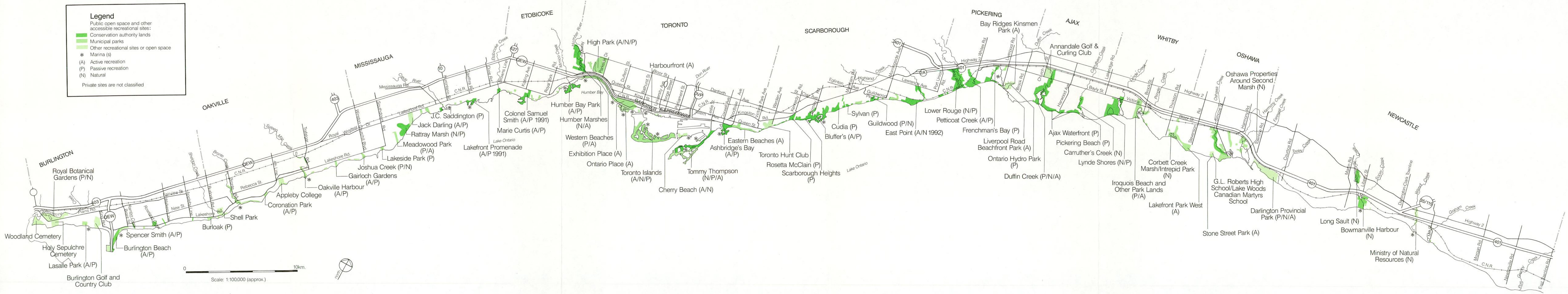
An Index to the First Interim Report
CAT Z1–1988/1–42–2E
ISBN 0–662–17597–2

Urban Waterfront Industry: Planning and Developing Green Enterprise for the 21st Century; a Report of the Symposium, November 16, 1989
CAT Z1–1988/1–52–1E
ISBN 0–662–17640–5

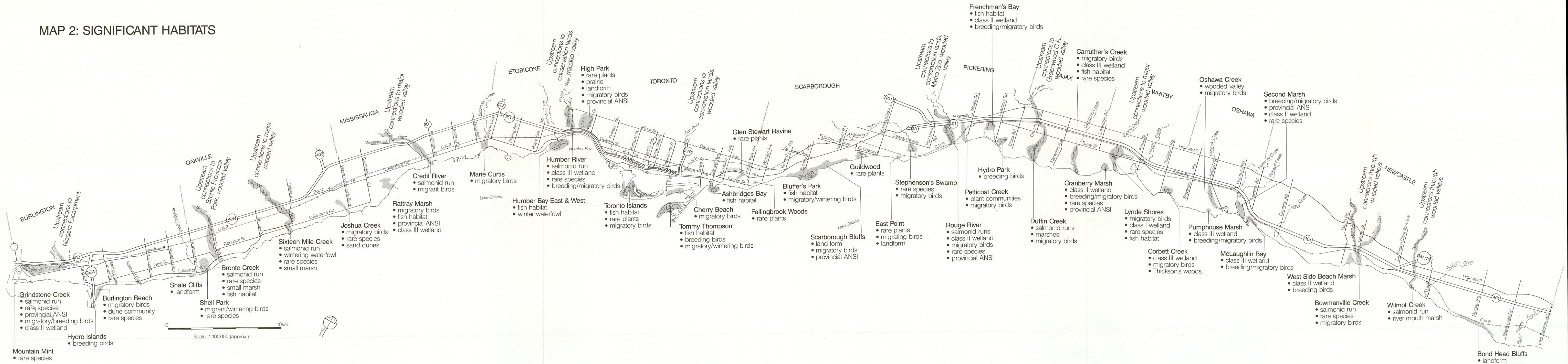
Maps

1. Existing Green Spaces
2. Significant Habitats
3. Issues and Opportunities

MAP 1: EXISTING GREEN SPACES



MAP 2: SIGNIFICANT HABITATS


BURLINGTON
Upstream connections to Niagara Escarpment
Grindstone Creek
• salmonid run
• rare species
• provincial ANSI
• migratory/breeding birds
• class II wetland
Mountain Mint
• rare species
Hydro Islands
• breeding birds
Burlington Beach
• migratory birds
• dune community
• rare species
OAKVILLE
Upstream connections to Bronte Provincial Park, wooded valley
Shale Cliffs
• landform
Shell Park
• migrant/wintering birds
• rare species
Bronte Creek
• salmonid run
• rare species
• small marsh
• fish habitat
Upstream connections to major wooded valley
Sixteen Mile Creek
• salmonid run
• wintering waterfowl
• rare species
• small marsh
MISSISSAUGA
Upstream connections to major wooded valley
Joshua Creek
• migratory birds
• rare species
• sand dunes
Rattray Marsh
• migratory birds
• fish habitat
• provincial ANSI
• class III wetland
Credit River
• salmonid run
• migrant birds
Marie Curtis
• migratory birds
Humber Bay East & West
• fish habitat
• winter waterfowl
Humber River
• salmonid run
• class III wetland
• rare species
• breeding/migratory birds
ETOBICOKE
Upstream connections to conservation lands, wooded valley
High Park
• rare plants
• prairie
• landform
• migratory birds
• provincial ANSI
Toronto Islands
• fish habitat
• rare plants
• migratory birds
TORONTO
Upstream connections to conservation lands, wooded valley
Tommy Thompson
• fish habitat
• breeding birds
• migratory/wintering birds
Cherry Beach
• migratory birds
Ashbridges Bay
• fish habitat
Fallingbrook Woods
• rare plants
Glen Stewart Ravine
• rare plants
Bluffer's Park
• fish habitat
• migratory/wintering birds
Scarborough Bluffs
• land form
• migratory birds
• provincial ANSI
Guildwood
• rare plants
SCARBOROUGH
East Point
• rare plants
• migrating birds
• landform
Stephenson's Swamp
• rare species
• migratory birds
Upstream connections to conservation lands, Metro Zoo, wooded valley
Rouge River
• salmonid runs
• class II wetland
• migratory birds
• rare species
• provincial ANSI
Petticoat Creek
• plant communities
• migratory birds
Hydro Park
• breeding birds
Frenchman's Bay
• fish habitat
• class II wetland
• breeding/migratory birds
PICKERING
Upstream connections to Greenwood C.A., wooded valley
Duffin Creek
• salmonid runs
• marshes
• migratory birds
Cranberry Marsh
• class II wetland
• breeding/migratory birds
• rare species
• provincial ANSI
AJAX
Carruther's Creek
• migratory birds
• class III wetland
• fish habitat
• rare species
Upstream connections to major wooded valley
Lynde Shores
• migratory birds
• class I wetland
• rare species
• fish habitat
Corbett Creek
• class III wetland
• migratory birds
• Thickson's woods
WHITBY
Oshawa Creek
• wooded valley
• migratory birds
Pumphouse Marsh
• class III wetland
• breeding/migratory birds
OSHAWA
McLaughlin Bay
• class III wetland
• breeding/migratory birds
Second Marsh
• breeding/migratory birds
• provincial ANSI
• class II wetland
• rare species
West Side Beach Marsh
• class II wetland
• breeding birds
Bowmanville Creek
• salmonid run
• rare species
• migratory birds
NEWCASTLE
Upstream connections through wooded valleys
Upstream connections through wooded valleys
Wilmot Creek
• salmonid run
• river mouth marsh
Bond Head Bluffs
• landform
• provincial ANSI
Scale: 1:100,000 (approx.)
0
10km.
Lake Ontario
Lake Ontario
Humber Bay
Highway 2
Highway 2
Lakeshore Rd
Rebecca St
New St
Mississauga Rd
Dundas St
Queen St
Kingston Rd
Bloor St
Dundas St
Dundas St
Eglinton Ave
Lawrence Ave
Finch Ave
Highway 7
Highway 7
Highway 401
Highway 407
Highway 403
Highway 427
Highway 27
Highway 48
Highway 35/115
Highway 115
Highway 12
Highway 2
Highway 2
Highway 401
Highway 401
Highway 401
Highway 401
Highway 401
Highway 401
Highway 401
C.N.R.
C.P.R.
GARDINER EXPRESSWAY
DVP
Bayly St
Taunton Rd
Conlin Rd
Bloomington Rd
Baseline Rd
Bowmanville Rd
Brown Rd
Bond Head Bluffs Rd
Grafton Creek
Wilmot Creek
Bowmanville Creek
Oshawa Creek
Cedar Creek
Duffin Creek
Rouge River
Petticoat Creek
Highland Creek
Humber River
Mimico Creek
Etobicoke Creek
Credit River
Sixteen Mile Creek
Bronte Creek
Shoreline Rd
Shell Park Rd
Shale Cliffs Rd
Lakeshore Rd
Mississauga Rd
Dundas St
Queen St
Kingston Rd
Bloor St
Dundas St
Eglinton Ave
Lawrence Ave
Finch Ave
Highway 7
Highway 401
Highway 2
Highway 35/115
Highway 115
Highway 2
Highway 401
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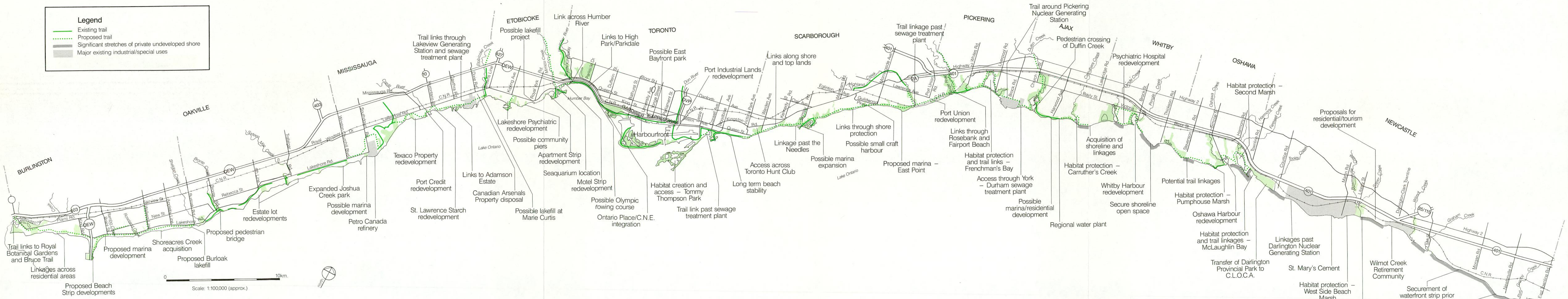
MAP 3: ISSUES AND OPPORTUNITIES