



City of St. Catharines:

THE GREEN PLAN

Compiled by:
Green Plan Advisory Committee
Green Plan Implementation Committee
City of St. Catharines
Approved by City Council on June 19, 1995

City of St. Catharines File Reference: 60.2.45

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ACKNOWLEDGEMENTS

Map: Green Space Inventory - City of St. Catharines

The Green Plan was prepared over a two stage process.

The Green Plan Advisory Committee, consisting of representatives from City Council, and the public at large, assisted staff with the preparation of the policy aspect of the document from 1992 to 1993. The committee spent many hours debating the direction of the Greening policy for the City and the areas that needed to be addressed for program implementation. At this time, the following individuals should be acknowledged and thanked for their contribution:

His Worship, Mayor Al Unwin, Chair
Alderman Bill Wiley
Ronald Barnsley
Hilary Hawman
John Middleton
Marie Poirier
Harry Tomarin
Douglas Woodard

Secondly, subsequent to Council's approval in May of 1993, of the Green Plan policy, Green Spaces/Green Places, an implementation Committee was formed. It consisted of staff and two members from the public. This committee devoted countless hours to the preparation of a feasible implementation strategy which forms the second half of the Green Plan. This was a diligent effort by three departments working together to form a common strategy. The following Committee members should be acknowledged and thanked:

Marie Poirier, Chair
Jennifer Pelligrini
His Worship, Mayor Al Unwin
Bill Fenwick, Director, Parks and Recreation
Stuart Green, Planning and Development Technician, Parks and Recreation
Rick Tapp, Planner, Planning Department

Dave Shantz, Operations Manager, Engineering Department
 Peter Colosimo, and Jim Coughlin (Director) of the Planning Department, also made contributions in their areas of expertise relevant to various aspects of the Plan. And, a special note of thanks to John Anderson, whose editorial contribution in the last months of the project brought the Plan together so eloquently.

EXECUTIVE SUMMARY

The City's Green Plan is an action plan that identifies the City's green spaces and proposes strategies to protect and enhance those spaces.

Seven areas are addressed:

1. Conservation
2. Linkages
3. Naturalization
4. Development Initiatives
5. Other Municipal Initiatives
6. Public Education and Communication
7. Monitoring

Each of these areas sets out objectives, recommendations, implementation strategies, responsibilities, and timing.

The Action Plan is summarized on the following pages.

ACTION PLAN

RECOMMENDATIONS	STRATEGY	RESPONSIBILITY AND TIMING
1. <u>Conservation</u> - Objective: * to develop a viable and diverse green system		
* Adopt a green space classification	Completed.	Green Plan Advisory Committee

* Develop a green system	A comprehensive green system will be developed that incorporates the full range of green space classifications.	Parks and Recreation and Planning - short term
* Prepare Action Plan	The conservation strategies represent the Action Plan.	
* Amend Official Plan to incorporate green system	<p>Green spaces will be designated according to the green space classification as either "Environmental Protection Area" (EPA) or "Major Open Space" (OS).</p> <p>Parks Policy Plan will be amended to address ecological importance of green spaces. Environmental policies in the O.P. will reflect Green Plan policies (eg. stewardship and linkages)</p>	<p>Planning - short term and on-going</p> <p>Parks and Recreation - short term</p> <p>Planning - short term and on-going</p>
* Amend zoning by-laws to reflect O.P. designations	All remnant natural areas will be zoned "EPA". The other green spaces will be zoned "OS".	Planning - short term
* Establish stewardship programs	<p>Lands will be targeted in the green system that have potential for stewardship programs.</p> <p>A program(s) will be developed to enable private land owners to achieve the objectives of the Green Plan.</p>	<p>Parks and Recreation - short term</p> <p>Green Committee - long term</p>
2. <u>Linkages</u> - Objectives: * to provide a continuous network of green spaces and water that connect all parts of the City* to integrate the City's green system with the broader regional system		

<p>* to enhance the scenic landscape</p> <p>* to create and enhance wildlife habitat and migration routes* to provide appropriate access to the green system</p>		
<p>* Prepare a strategy schedule for the acquisition and development of significant linkages</p>	<p>Potential linkages will be identified and prioritized in the green system as it is prepared.</p> <p>Parks Policy Plan will be amended to reflect ecological importance of linear areas.</p> <p>Stewardship programs will be promoted where linkages are on private lands.</p> <p>Partnership with the Region will be pursued.</p>	<p>Parks and Recreation and Engineering - short term</p> <p>Parks and Recreation - short term</p> <p>Parks and Recreation and Planning - medium term</p> <p>Parks and Recreation and Planning - short term</p>
<p>* Pursue the removal of encroachments into public green spaces</p>	<p>The existing zero tolerance policy will be enforced.</p> <p>Areas will be annually targeted for inspection.</p>	<p>Council</p> <p>Parks and Recreation and Engineering - short term</p>
<p>3. <u>Naturalization</u> - Objectives: * to provide a diversity of green space environments* to recreate natural settings where wildlife and natural process will flourish</p>		
<p>* Establish criteria to develop a comprehensive city-wide naturalization program</p>	<p>City policy documents will be amended to recognize naturalization as a legitimate landscape alternative.</p> <p>Memorandum of understanding for joint policy recognition will be sought with resource management partners.</p>	<p>Parks and Recreation, Planning and Engineering - short term</p> <p>Parks and Recreation, Planning and Engineering - short term</p>

* Utilize native species	A list of native species has been prepared.	Parks and Recreation Completed
* Select 4 or 5 sites as demonstration projects	Locational criteria have been developed and 5 sites identified.	Green Plan Implementation Committee Completed
* Initiate a public information campaign	See Education & Communication (Section 6).	
4. <u>Development Initiatives</u> - Objective: * to ensure that municipal development practices support the Green Plan philosophy of the conservation and enhancement of green spaces		
* Support Provincial Governments' initiatives to control site alterations	A tree cutting by-law will be investigated. A tree inventory will be prepared. Acts and regulations relating to green spaces will be investigated.	Parks and Recreation and Council - short term Parks and Recreation - medium term Planning Department - medium term
* Initiate process to ensure that green spaces are incorporated into development proposals	Municipal development guidelines will be amended to ensure that green spaces are retained and managed according to Green Plan objectives (eg. as linkages, naturalization areas).	Parks and Recreation, Planning and Engineering - short term
* Review landscape standards	Landscape standards will be reviewed to ensure effectiveness in terms of enhancing "Garden City" image, especially in relation to uses having major impacts on the City scape (eg. parking lots)	Parks and Recreation and Planning - short term

<p>* Request Niagara Peninsula Conservation Authority to undertake watershed study</p>	<p>The City will request the NPCA to ask the Province for funding to undertake study; contact the Province supporting the study; and set aside funding for its share of the study.</p>	<p>Planning and Council - short term</p>
<p>5. <u>Other Municipal Initiatives</u> - Objective: * to ensure that municipal operations and initiatives support the Green Plan philosophy of the conservation and enhancement of green spaces</p>		
<p>* Examine all maintenance programs</p>	<p>Alternative means of regulation control will be determined. Naturalization will be implemented as a maintenance practice (eg. 10 ft. "no-mow" buffer strip along ravines and watercourses).</p>	<p>Parks and Recreation and Engineering - short term Parks and Recreation and Engineering - short term</p>
<p>* Implement a Street Tree Planting Program</p>	<p>Plans for tree planting will be prepared annually. Use of native species will be a priority. A variety of species (shape, size, colour) will be considered to complement the built environment. The City will attempt to undertake joint projects with Conservation Authority, MNR, etc.</p>	<p>Parks and Recreation - short term Parks and Recreation - short term Parks and Recreation - short term Parks and Recreation, Engineering and Planning - medium term</p>
<p>* Other Areas of Concern</p>	<p>The Green Plan will be considered in any plans for waste disposal sites and landfills. The Green Plan will be used as a promotional tool for the</p>	<p>Parks and Recreation, Planning and Engineering - on going All Departments and Council - on going</p>

	economic development of the City.	
6. <u>Public Education and Communication</u> - Objectives: * to instill in people a sense of urgency about environmental conservation* to enable people to make informed decisions about the environment		
* Initiate public information campaign	<p>The Green Plan will be circulated to:</p> <ul style="list-style-type: none"> - all Staff and Councillors - developers and consultants - government agencies - Public Interest groups <p>Information sessions will be initiated.</p>	<p>The Green Committee - short term</p> <p>The Green Committee - short term</p>
	<p>Annual tours of the City's Green Spaces will be undertaken for Council and Staff.</p> <p>A variety of media techniques will be utilized to advertize and promote the Green Plan.</p> <p>Workshops will be conducted to inform major property owners of maintenance practices which fulfil objectives of the Green Plan.</p> <p>Money will be allocated to keep Staff up-to-date on appropriate operational practices.</p> <p>Information materials</p>	<p>The Green Committee - on going</p> <p>The Green Committee - short term</p> <p>The Green Committee - on going</p> <p>The Green Committee and Council - on going</p> <p>The Green Committee - on going</p> <p>The Green Committee, Planning and Council - on going</p>

	(brochures, notices) and displays will be prepared. Communication links with resource partners and neighbouring communities will be established to facilitate joint undertakings.	
* Cooperate with local school boards to develop and promote an environmental curriculum.	In conjunction with the local school boards, a program will be developed to introduce the Green Plan philosophy to the schools.	The Green Committee and Council - short term
7. <u>Monitoring</u> - Objectives: * to monitor the effectiveness of the Green Plan Implementation Policies* to provide advice to Council on matters relating to greening issues		
* Establish a Green Committee	See Terms of Reference.	Council - immediately
* Hire staff person (6 to 9 months)		Council - immediately

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INTRODUCTION

In April 1991, City Council directed staff to establish a Green Plan Advisory Committee to prepare a plan for the City of St. Catharines that would:

- a) identify all of the City's green spaces
- b) propose actions/programs to protect and enhance the City's green spaces
- c) develop a public education program.

Subsequently, the document "Green Spaces/Green Places" was prepared and approved, in principle, in May 1993.

Council then authorized the formation of the Green Plan Implementation Committee (September 1993) to prepare a strategy to implement "Green Spaces/Green Places". A strategy was

developed and combined with the original document "Green Spaces/Green Places" to form the Green Plan for the City of St. Catharines.

The Green Plan addresses the following areas:

1. Conservation
2. Linkages
3. Naturalization
4. Development Initiatives
5. Other Municipal Initiatives
6. Public Education and Communication
7. Monitoring

Each of these sections sets out objectives, recommendations, implementation strategies, responsibilities and timing.

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Perceptions of green spaces, over the past few years, have undergone fundamental changes. The City's existing Official Plan views green spaces as lands for recreational activities or as hazard lands that are considered undevelopable until the hazards are overcome. Today, green spaces have taken on a much expanded role as reflected by the new Planning Act and the City's revised Official Plan policies. In fact, they are now considered to be an indispensable ingredient in achieving a healthy city, not only in terms of the physical environment (eg. air and water quality) but also in terms of mental and physical health. More specifically, green spaces fulfil a number of functions:

- a) **recreational** - green spaces have traditionally and continue to fulfil the varied recreational needs of the community - eg. sports activities, cycling and walking.
- b) **psychological** - green spaces have a restorative effect on the individual by providing a change of scenery and relief from the daily hustle and bustle of urban life.
- c) **aesthetics** - green spaces are important to the look and feel of a City. They offer a diversity of vistas and can provide a sense of identity for the City.
- d) **environmental** - green spaces serve many functions essential to the maintenance of our environment. For example, they aid in maintaining water and air quality, modifying local climate, as well as providing habitats for wildlife.

e) **educational** - green spaces present us with vast educational opportunities to experience and study ecological relationships and enable us to examine and understand how people are part of the ecological process.

f) **functional** - greenspaces also serve practical uses such as accommodating storm drainage and buried utilities that cannot be located elsewhere.

g) **economical** - green spaces can have a positive economical impact on a community in terms of enhancing its image and attractiveness to investors.

h) **historical** - green spaces can provide opportunities to experience the natural and cultural history of the community.

Clearly, green spaces have a direct and significant impact on our quality of life. It is essential, therefore, to ensure that municipal decision-making is responsive to the goal of protecting the City's green spaces.

1. CONSERVATION

1.1 Definition

In recognition of the critical ecological function that green spaces perform, as well as their contribution to a healthy lifestyle, it is crucial that adequate green spaces be secured in the Parks system for the benefit of the residents of St. Catharines. There are also many green spaces in private ownership that may also be worthy of conservation. These areas should be examined to determine their importance to the City's Green System.

There are various types of green spaces. The Parks Policy Plan identifies a hierarchy of parks from neighbourhood to regional. It also recognizes the importance of incorporating the more natural settings (eg. 12 Mile Creek, escarpment lands, Lake Ontario Shoreline) into an interconnected, linear parks system. Clearly, changing recreational needs (as the populace ages) and an ever increasing environmental awareness have combined to highlight the significance of these natural areas.

In order to recommend conservation measures, it is first necessary to know what types of green spaces exist. As a starting point, all green spaces in St. Catharines have been inventoried and classified. The green space inventory is illustrated on [this map](#). While it identifies all green space, both public and private, it should not be interpreted to mean that any of these private lands will or should be incorporated into the City's Green System.

Green Spaces are described as follows:

a) **Remnant Natural Areas**

include wetlands, ravines, woodlots, ponds and streams (eg. parts of Martindale Pond, Escarpment), i.e. lands that are relatively free from human disturbance and exhibit a diversity of landscapes which offer important environmental benefits as well as scenic vistas.

b) Naturalizing Areas

include lands where plant life is regenerating (either fortuitously or by vegetation management) to create self-sustaining quasi-natural areas. Examples include hydro right-of-ways, abandoned railway lands, vacant or underutilized lots and road allowances.

c) Low Maintenance Parkland

includes regional parks (eg. parts of Burgoyne Woods) and trail systems that are mainly used for unorganized activities such as jogging, picnics, cycling.

d) High-Medium Maintenance Parkland

includes Sports parks (eg. Lancaster Park), "showcase" areas such as Montebello Park and lands around City Hall, neighbourhood parks and gores.

e) Downtown Paved Spaces

include streets, plazas, markets where social and recreational activities happen either on a planned basis (eg. parade), or spontaneously (eg. meeting friends, watching the action).

According to the Parks Policy Plan, the City, with a few exceptions, has an adequate supply of parks for its recreational needs. However, there clearly exists a public perception that St. Catharines lacks green spaces or at least does not live up to its billing as the "Garden City". In any case, the City needs to protect its existing green spaces and develop a comprehensive green system that incorporates the full range of green spaces as classified above.

To begin, green space policies need to be established in the Official Plan and appropriate zoning categories applied. In terms of private green spaces where the City cannot afford to acquire such lands, it should provide information and assistance in terms of possible stewardship programs (i.e. programs to conserve private lands that rely on co-operative, voluntary participation) that would help in retaining these areas in their natural state.

1.2 **Objective**

* To continue to develop a viable and diverse green space system.

1.3 **Recommendations**

1.3.1 That the Green Space Classification be adopted.

1.3.2 That a Green System be developed that incorporates all categories of green space classifications.

1.3.3 That an Action Plan be prepared to implement the Green System.

1.3.4 That the Green System be incorporated into the Official Plan.

1.3.5 That the zoning by-laws be amended to reflect the Official Plan designations.

1.3.6 That the City, where warranted and feasible, and in co-operation with affected agencies and owners, establish a stewardship program.

1.4 **Implementation Strategy**

1.4.1 **Green Space Classification**

The Green Space Classification has been adopted by virtue of Council's approval in principle of the "Green Spaces/Green Places" report.

1.4.2 **Green System**

A Green System will be prepared by the Parks and Recreation Department incorporating the Green Space Classification. A Green System is a basis on which to plan, acquire and manage green spaces according to their classification to fulfil all of the objectives (ie. conservation, linkages, naturalization, development initiatives, municipal initiatives, monitoring and education & communication) of the Green Plan.

1.4.3 **Action Plan**

This Implementation Strategy represents the Action Plan of the Conservation section of this document as noted in Recommendation 1.3.3.

1.4.4 **Official Plan**

Land Use Designations

A review of the Official Plan has now been completed and Council has directed that Environmental Protection Area (EPA) designations refer to those green spaces that should be protected based on their ecological value. These green spaces will coincide with the "remnant natural areas" as classified in the Green Plan. Other major green spaces will be classified "MAJOR OPEN SPACE" and will coincide with one of the other Green Plan classifications. Smaller size green spaces will be covered by the comprehensive zoning by-law.

Parks Policy Plan

An update of the Parks Policy Plan has been recently completed. The above concerns regarding the Parks policies are addressed in the review. The ecological value of green spaces will be considered equally and jointly with the City's recreation objectives.

Green Plan/Environmental Policies

The Official Plan will be amended to include new Environmental Policies which in turn will reflect the Green Plan Policies related to Stewardship, Linkages, Development and Education.

1.4.5 Zoning By-laws

The existing zoning by-laws classify green spaces as "Greenbelt"(G), "Open Space"(OS), "Park and Greenbelt District", or "Environmental Protection Area"(EPA). The first three categories are in fact the same, the different names simply reflecting different by-laws.

The new comprehensive zoning by-law, in draft form, proposes two green space categories, "Open Space"(OS) and "Environmental Protection Area"(EPA). In most cases, all previous references to "Greenbelt" (G) and "Open Space" (OS) will become "Open Space" (OS) only.

Zoning, must accurately reflect the green space classification system proposed in the Green Plan. Therefore, all areas classified or proposed to be classified "remnant natural" in the Green Plan will be zoned "E.P.A." All other green spaces will be zoned "OS".

1.4.6. Stewardship Program

Parks and Recreation, in conjunction with the City's Legal Department and Realty Manager and the Green Committee, should prepare a stewardship program which provides ways and means for all residents and landowners to achieve the policy objectives of the Green Plan on their own lands. Program details can be guided by the information found in Appendix 1.

The stewardship program shall be aimed at:

- * **Informing** the community and landowners of their potential role in achieving the goals of the green plan.
- * **Educating** landowners through various means as to how and why they should participate; and,
- * **Encouraging** landowners to participate by various means as outlined in the stewardship program.

The stewardship program should focus on three areas of land ownership:

- * **Public Lands**- those owned by the City or the Crown on behalf of the Province and/or the country

* **Quasi Public Lands**- those owned by utility companies, the St. Lawrence Seaway, hospitals, school boards etc.; and,

* **Private Lands**- those owned by individuals, developers, businesses, corporations etc.

The stewardship program will be targeted to those lands which have been identified in the Green Plan and the Green System. It may also apply in the future to lands which may become vacant or part of the City of St. Catharines. This responds to the portion of the recommendation of the Green Plan which states "where warranted".

The recommendation also states that a stewardship program should be carried out where "feasible". **Stewardship will be enacted only when there is a willing landowner.**

2. LINKAGES

2.1 Definition

Linear park development should be an important focus of the Green System, which in turn should be an integral part of the urban setting. A collection of individual park sites sprinkled throughout the city fulfils a limited range of recreational needs. A linked Green System, on the other hand, provides a number of benefits.

It provides expanded recreational opportunities by better accommodating activities such as jogging, hiking, biking and sightseeing. From an ecological perspective, it provides opportunities for migration routes and a greater diversity of wildlife. It also creates the impression that there is more space than really exists. In other words, it provides the maximum visual impact and the maximum physical access.

Access is a major factor in ensuring maximum exposure and enjoyment of the Green System. Unlimited access, however, can create irreparable damage to the more sensitive green spaces (eg. wetlands, ravines). Obviously, different types of green spaces require different rules of access. For example, incidents of abuse are more prevalent when a sensitive area abuts a residential development. Access to these areas needs to be controlled to ensure their long term viability. Equally important, when encroachments into public green spaces do happen, the City must consistently enforce its policies and remedy these situations.

Within the City of St. Catharines there are several naturally occurring linkages from which to form a base: the Niagara Escarpment, Twelve Mile Creek and the Lake Ontario shoreline. There are also some utility corridors which now can be utilized as linkages, such as the existing and former Welland Canals.

2.2 Objectives

* To provide a continuous network of green spaces and water that connect all parts of the City.

- * To integrate the City parks system with the broader regional system (eg. Shorthills Provincial Park).
- * To enhance the scenic landscape.
- * To create and enhance wildlife habitat and migration routes.
- * To provide appropriate access to green space system.

2.3 **Recommendations**

2.3.1 That a strategy and schedule for the acquisition and development of significant linkages be prepared.

2.3.2 That the City pursue the removal of encroachments into public green spaces in accordance with its present policy.

2.4 **Implementation Strategy**

2.4.1 **Acquisition and Development**

Official Plan

The Parks and Recreation Department has an existing Trail Plan (as scheduled to the Parks Policy Plan) which partially fulfils the Green Spaces Classification. This plan is a good base for corridor/linkage mapping. Linkages will be identified in the Green System as it is prepared. The natural landforms, such as the Niagara Escarpment, Lake Ontario Shoreline and Twelve Mile Creek, provide direction for linkage site identification. Although outright acquisition is always the best means of securing land for a particular use, it is not always feasible especially in an urban environment where most land is privately owned.

The Parks Policy in the Official Plan has a section dedicated to Linear Park development (S.8.33). The objectives must be amended to reflect the ecological importance of linear areas as "linkages". It must be stressed that linear parks, or for that matter all parks do not always have to serve a recreational need, but also have ecological benefits. These include, wild life habitat, erosion control, genetic diversity, and floodplains.

Stewardship

Where significant linkages are on private lands, the stewardship program, as outlined in the conservation section will be activated. A good information and education component would ensure that individual landowners and citizens could volunteer as stewards.

Regional Initiatives

There are existing plans on a Regional basis which provide opportunities for implementing linkage policy objectives. The Regional Municipality of Niagara has two ongoing projects at present; the Regional Bicycling Study and the Welland Canal Parkway Plan.

Each of these plans is based on corridor-type land development. The opportunity exists for partnership in securing corridor lands. The bicycling study identifies the ecological benefits of cycling and environmental attributes of pathway cycling.

Meetings of appropriate staff to undertake partnership agreements for these initiatives should commence immediately. The agreements should consist of reciprocal recognition of policy objectives and suggest ways and means for co-operative securement of environmental corridors.

Citizen initiatives such as "Friends of Twelve Mile Creek" sponsored by the Niagara Peninsula Conservation Authority in fulfilment of their Watershed Conservation Strategy should also be considered for joint partnership possibilities.

2.4.2 Encroachment Policy

The City has recently adopted a zero tolerance policy for encroachments onto City lands. This policy must be enforced not only on a complaint basis, but by annually targeting areas for routine inspection by staff.

3. NATURALIZATION

3.1 Definition

Naturalization is a process whereby woodlands, meadows and wetlands are re-created through natural regeneration or deliberate planting over time. There are many reasons for undertaking naturalization projects, most importantly is the contribution natural areas make to a healthy ecosystem (as noted earlier). Secondly, these re-generated areas provide for more diverse recreational opportunities. Thirdly, they can provide attractive buffer areas. Lastly, they may help to relieve the rising cost of ground maintenance in the long term.

The main problem associated with naturalization projects is related to aesthetics. In some cases, it may appear that a naturalizing area has been abandoned or neglected by the City. Fortunately, this problem can be overcome by designing an area so that the naturalization looks purposeful. The critical factor in gaining acceptance is to inform the public about what is being done and why. It is also important to note that naturalization areas are not meant to replace all manicured areas. Rather, they provide an alternative (add to the diversity of the Green System) and a sense of identity.

Evidence from other municipalities suggests that naturalizing areas can be successfully incorporated into a parks system. More importantly, they have been successfully integrated into areas abutting residential developments. In one example, a storm water basin situated between the rear lots of a residential subdivision was transformed into a backyard wildlife sanctuary.

St. Catharines lies within the Great Lakes Deciduous Forest Region, as defined by The Canadian Forestry Service (see Appendix 2) within which unique vegetation and wildlife may flourish. The opportunity exists to utilize a diverse range of native plant species which would enhance the habitat quality of native wildlife. Naturalization programs should take full advantage of this opportunity to utilize native deciduous forest species.

Clearly, the naturalization process needs to be experienced to determine what methods work best and to dispel any myths. It is proposed, therefore, that 4 or 5 sites be selected as demonstration projects. Site selection criteria need to be developed, but various types of green spaces should be represented. Selected sites should be well signed to explain the City's intent and schools and other interested community groups should be invited to undertake similar projects.

The costs associated with naturalization are less well known as there is little information available. There are undoubtedly costs associated with implementing a naturalization program. On the other hand, it seems reasonable to assume that there will be economic benefits to be realized in the long term.

3.2 **Objectives**

- * To provide a diversity of green space environments.
- * To re-create naturalized settings where wildlife and natural processes will flourish.

3.3 **Recommendations**

3.3.1 That a comprehensive city-wide naturalization program be established.

3.3.2 That native species be utilized in naturalization programs to enhance the diversity of species and habitat quality.

3.3.3 That 4 or 5 sites be selected as naturalization demonstration projects that will be tested over a 5 year period.

3.3.4 That a public information campaign be initiated prior to implementation.

That explanatory signs be erected at each naturalization site.

That schools and community groups be approached to undertake naturalization projects.

3.4 **Implementation Strategy**

3.4.1 **Comprehensive Naturalization Program**

Naturalization must be identified and recognized as a landscape alternative in the policy documents of the City and also those of its resource management partners. Background Information can be found in Appendix 2.

All sections of the Official Plan, Comprehensive Zoning By-Law and Site Plan Guidelines which refer to landscaping should include wording which recognizes naturalization as a landscape alternative.

The environmental policies in the amended Official Plan address naturalization in terms of maintaining and enhancing the City's woodlands, wetlands, and flood plains. In addition, the use of native species to enable natural processes to flourish is promoted in relation to all development proposals.

The Parks Policy, (Section 8 of the Official Plan) specifically should address Naturalization as a component of each of the park types within the hierarchy. Park Development policies should identify Naturalization as a legitimate park land use.

On an ongoing basis, Parks staff must map and update mapping indicating naturalization sites and undertake monitoring of naturalization sites for successes and failures in meeting general Environmental and Green Plan policy objectives.

During this implementation planning process, contacts were made with the Ministry of Natural Resources, the Niagara Escarpment Commission and the Niagara Peninsula Conservation Authority to enter into memorandums of understanding for joint policy recognition. Details of these memorandums are to include the sharing of technical knowledge, reciprocal adherence to land use policies for lands owned by the municipality, and, recognition of policy objectives during plan review by partner agencies.

3.4.2 Native Species

Native plants are an integral part of the City's natural heritage. Over many centuries they have adapted to the specific conditions of this area and have contributed to it's present biological makeup in terms of plant and wildlife. The contribution of planting affects the area in a number of ways.

- * creates a healthier mosaic of land uses
- * maintains a diversity of plants and animals
- * maintains the gene pool of particular plant and animal species, promoting hardiness, disease resistance and adaptability
- * protects ecosystems and ecological communities
- * improves water quality
- * minimizes erosion
- * creates positive, progressive and constructive attitudes toward the natural world

* creates lower maintenance landscapes, reducing our dependency on water and the production and use of chemicals

Appendix 2 lists the native species to be considered by the City and others in naturalization projects.

3.4.3 **Demonstration Projects**

In order for naturalization to be accepted as a viable landscape option, the City itself must lead by example. It is important to demonstrate the concept of naturalization as workable and desirable. Therefore, demonstration sites must be selected to educate staff and the public and to monitor the various processes of naturalization.

The site(s) must exhibit the following characteristics.

High Visibility - the site(s) need to be highly visible to the walking and driving public therefore, they should be located in a high traffic area.(i.e. maximum exposure)

Separated from residential lots - the demonstration site(s) must not be located adjacent to any residences because of the possible negative impact. It is anticipated that with successful demonstration projects and public education, this restriction will not be necessary in the future.

Low Activity Area - the site(s) must not be located in areas that would encourage through traffic that would destroy young vegetation.

Manageable Size - the site(s) must be of sufficient size to create a visual impact.

Based on these site characteristics, the following sites are recommended in order of priority:

* Lighthouse Road

* Oakdale Ave.

* Government Road at Bunting Road

* Richardson Creek

* Jaycee Park

Specific information about planting details and mapping related to these sites can be found in the Demonstration Site component of Appendix 2.

3.4.4 **Public Information and Communication**

Recommendations regarding Information and Communication are outlined in Section 6.

4. DEVELOPMENT INITIATIVES

4.1 Definition

By definition, development removes land from a natural or agricultural condition. Thus, inside the urban area boundary, a strategy to conserve green space must be related to our development strategies. This section proposes measures to tailor the development process to the achievement of a more expansive and higher quality green space system. The main vehicle is publicly owned land, but strategies also need to be devised to ensure that significant privately held green spaces can contribute to the green space system.

Although beyond the scope of this plan, it is important to acknowledge the agricultural lands beyond the City's western urban boundary. These lands represent a unique resource that will require a co-operative effort on many levels to deal with the issues of the preservation and the sustainability of a viable agricultural community. In an effort to accommodate growth within the existing urban boundaries, City Council has endorsed the concept of residential intensification or infill development. Its purpose is to make more efficient use of the existing infrastructure and other services, thereby limiting urban sprawl.

A major problem in land development is often what occurs prior to actual development. There are many examples where valuable environmental features (eg. tree stands, wetlands) have been destroyed before the development process was formally initiated. At present there is no legislative authority for municipalities to address this situation. There are, however, initiatives underway, under the new Planning Act, that are looking at remedies such as the Trees Act and the Top Soils Preservation Act which would enable municipalities to control the alteration of sites (eg. grading, dumping, tree cutting, removal of top soil).

The City should take this opportunity to vigorously support these initiatives. At the local level, the City should also involve developers in a process which would establish procedures, guidelines and initiatives (eg. reduced setback standards, higher densities) which would help to ensure that natural areas are incorporated into development schemes.

Another important aspect in fostering a "Garden City" image is the effect that landscape areas have on the aesthetics of a site. In many cases, these areas turn out to be little more than neglected strips of grass. It is important, especially with infill development, that landscape standards be reviewed to ensure that they produce the desired "green" effect. This review should also look at improving landscape standards for parking areas, a major land use that can create barren landscapes.

Finally, development proposals need to be appraised on a more comprehensive scale than typically happens. A series of incremental changes, each of which alone seems acceptable, can together have serious impacts on the functions of the green space system. The new Planning Act talks about considering the natural environment before planning for change through watershed or sub-watershed studies which would address a number of matters including:

- water quantity and quality

- flooding and natural hazards
- tree cover
- erosion control
- wetlands, recharge areas, natural features

Watershed plans should provide municipalities with enough relevant information to make informed decisions regarding cumulative effects. These plans would normally be prepared by the local Conservation Authority.

4.2 **Objectives**

* To ensure that municipal development practices support the Green Plan philosophy of the conservation and enhancement of green spaces.

4.3 **Recommendations**

4.3.1 That Council support the Provincial Government's initiatives to enable municipalities to control alterations to sites through legislation such as the Trees Act and the Topsoil Preservation Act.

4.3.2 That staff be authorized to initiate a process that would provide guidelines and incentives to ensure that green spaces are incorporated into development proposals.

4.3.3 That staff review landscape standards for all developments (including parking lots) to ensure that sufficient area for planting is required to project the appropriate "green" effect.

4.3.4 That the City request the Niagara Peninsula Conservation Authority to undertake a watershed study of the St. Catharines Area.

4.4 **Implementation Strategy**

4.4.1 **Legislation**

Bill 163 enables municipalities to establish Tree Cutting By-Laws. The City should investigate the availability of this policy to develop its own direction in regard to the protection of trees and green spaces. The City must undertake a tree inventory to fully understand its priorities for management and the techniques available. Parks and Recreation along with Planning will prepare a report outlining the potential applications of legislation such as the Game and Fish Act, the Conservation Authorities Act and related regulations to assist in preserving green spaces as many green spaces are wild life habitat and floodplains.

The City can also work with Provincial corporations such as the Ontario Heritage Foundation, the Niagara Escarpment Commission and local agencies such as the Niagara Peninsula

Conservation Foundation to accept land donations and provide partnership funding for land acquisition and conservation projects.

4.4.2 Development Standards

Municipal Standards, in terms of Site Plan Agreements, Servicing Agreements, Plans of Subdivision, etc..., must be amended to reflect all aspects of the Green Plan. Municipal Guidelines determine exactly what a site will look like once development is complete. There is ample opportunity here to ensure that green spaces are not only incorporated but that they are retained and managed in the most appropriate manner.(i.e. as linkage sites; naturalization projects; recreational sites etc.) Specifically, under requirements and intents, the ecological benefits of green spaces must be included; not just references to the visual and recreational importance of landscaping. Under landscape considerations, naturalization must be mentioned as an option as well as suggest the use of more perennial and native species in fulfilment of the naturalization program. Some general statements can refer to stewardship as a management option for lands not necessarily covered by municipal control or in conjunction with municipal control. Council has already approved the enforcement of site plan agreements by means of requiring security deposits. This ensures that the City can restore the site, if necessary, to conform with the agreement.

4.4.3 Landscape Guidelines

In determining the potential for landscape treatment of individual sites, we first need to qualify the specific function of formal landscaping and naturalization. As suggested in previous sections of this report, there is a need to add to existing "green" areas. This could lend itself, where appropriate, to the addition of more naturalized areas, in that more linkages could be accommodated and unique physical features and significant vegetation could be preserved within the site. Naturalization would be considered an appropriate alternative in a passive sense, specifically, as a buffer from high use areas.

In terms of Formal Landscaping, the Landscape Guidelines Manual outlines appropriate species and landscaping methods that will aesthetically enhance, buffer, screen and help provide pedestrian and vehicular circulation within the site as well as provide a suitable streetscape. The percentages of land dedicated to landscaping are controlled by the Comprehensive Zoning By-law while detailed design considerations are regulated by Site Plan Control. The Landscape Guidelines Manual should be amended to reflect naturalization, conservation and linkage components of the Green Plan.

Parking Lots

All parking lots should be subject to Site Plan Control. It is through Site Plan Control that the majority of improvements are undertaken to enhance the overall appearance of parking lots. However, in order to accommodate a reasonable parking lot design that provides a sufficient number of parking stalls and landscaping, a balance between parking needs, community appearance and costs must be met. Typically, this would include a landscape strip around the entire perimeter of the site along with internal landscaping to break up the "sea-of-asphalt". As a

general rule, existing landscaped areas would be enhanced to provide more substantial "green" areas. These areas may be appropriate for naturalization. In terms of the amount of landscaping required for parking lots, the relationship should directly correspond to the size of the proposed lot. Further, special consideration for Formal Landscaping should be given to major street intersections, street frontages and abutting more sensitive residential properties, while Naturalization may be appropriate as a screen and buffer in passive use areas.

4.4.4 Watershed Planning

The new Planning Act recommends that planning take place on a watershed basis. Conservation Authorities in the Province are set up and undertake their resource management programs on a watershed basis. The Niagara Peninsula Conservation Authority's comments on the Green Plan reiterated the need to plan and undertake resource management on a watershed basis.

Rivers, shorelines and other natural landforms do not conform to municipal boundaries. Therefore, planning for the resource is virtually impossible. Clearly, there are many issues that transcend municipal boundaries. To effectively deal with such issues, the Municipality must adopt a policy of undertaking its planning and development on a watershed basis. At every opportunity, the City should support the Provincial regulations in relation to watershed planning.

The Niagara Peninsula Conservation Authority has on file, Terms of Reference for a Watershed Study for Twelve Mile Creek within the City of St. Catharines. Twelve Mile Creek is the major watercourse within the City and its watershed encompasses the majority of other watercourses. Council must adopt a resolution requesting the NPCA to ask the Province for its share of the funding to undertake this project; it must send correspondence to the Ministry of Natural Resources supporting the study and set aside funds for its share of the project costs.

5. OTHER MUNICIPAL INITIATIVES

5.1 Definition

City practices can have direct impacts on the health of green spaces. The most obvious are the ongoing maintenance programs. The Parks and Recreation Department maintains over 486 ha (1200 ac) of trees and turf. It must use chemicals in controlled situations to control insects, fungi and weeds. Chemicals are applied for 3 reasons. Firstly, parks and playgrounds must provide a safe environment, especially in those areas associated with athletic use. Secondly, the use of chemicals is cost effective in comparison to labour intensive maintenance. Thirdly, chemicals help in achieving a healthy and an aesthetically pleasing turf. Nevertheless, a recently completed review of chemical use in the parks system resulted in the reduction in quantity and frequency of application.

The Engineering Department has used chemicals to control vegetation in watercourses where vegetation appears to be the cause of storm water flow reduction. While these measures were necessary to reduce potential flood damage, there are other measures (eg. slow release storm water drainage systems) that would ease the problem and these types of remedies should be pursued.

Clearly, all maintenance programs need to be monitored to ensure that they satisfy minimum standards concerning such things as flood control and safety. At the same time, the City should reduce the use of chemicals.

Another significant initiative affecting green spaces is tree planting. In addition to the environmental importance of trees, tree planting programs also help to ensure the viability of the urban forest. At present, the City replaces trees that have been removed and plants street trees in all new subdivisions. Trees offer immediate visual confirmation of the City's commitment to greening. Certainly street trees can have a dramatic impact on the appearance of a street or an entire City. St. Catharines is fortunate in having a relatively temperate climate where a variety of species will flourish. The City should take advantage of this opportunity to add colour and diversity to its urban landscape.

A third initiative involves staff education which is essential to the success of this plan. The City should institute training programs concerning the growing body of knowledge on ecologically based practices.

5.2 **Objectives**

* To ensure that municipal operations and initiatives support the Green Plan philosophy of the conservation and enhancement of green spaces.

5.3 **Recommendations**

5.3.1 That the City examine on a regular basis all maintenance programs to ensure that they are necessary and that the most environmentally friendly standards are being followed.

5.3.2 That the City implement a street tree planting program that utilizes a variety of species that will provide colour and diversity to the urban streetscape.

5.3.3 That training sessions be instituted to keep staff informed of state of the art ecologically based practices.

5.4 **Implementation Strategy**

5.4.1 **Municipal Operations**

Maintenance Programs

Various departments undertake maintenance programs for a variety of reasons; aesthetics, streamflow, etc. Historically chemicals have been used to eradicate unwanted vegetation. These practices are under review. Alternative methods are being considered based on the types and locations of vegetation.

Appropriate department heads will undertake a review of existing practices and determine where alternate means of vegetation control can be undertaken and implement these changes as soon as

funds permit. The key will be to develop a sound public relations strategy which will present the changes as an ecological benefit rather than a reduction in service. This can be achieved immediately by preparing an information brochure and mailing it to residents and landowners adjacent to watercourses, ravines, culverts etc. (See Public Education and Communication Section 6)

Operational Techniques - Naturalization

Although the Plan has an entire section devoted to Naturalization, it should be noted here that Naturalization is a technique which can and should be used by various municipal departments in their actual maintenance and improvement operations. Section 3 should be consulted for complete Naturalization program details. However, specifically in relation to operations techniques, naturalization has a number of potential functions in the areas of park development, park maintenance, and engineering programs.

In designing parks, naturalization should be considered for its ability to provide wildlife habitat, buffers between conflicting use areas within parks, delineating specific use areas within parks, and aesthetics. Naturalization should be considered for low use, passive areas within parks, and perhaps entire parks to reduce long term maintenance in terms of cutting and other landscaping practises. Naturalization can reduce the related costs of traditional landscape techniques and increase the ecological benefits of parks in general.

Engineering practises can also incorporate Naturalization techniques into practises and operations. Naturalization can be used to buffer watercourses and storm sewers from existing surrounding land uses. Plantings used in Naturalization schemes are beneficial to operations such as erosion control, flow augmentation, storm water management and sewer and water quality filtration. Naturalization benefits can stand on their own, however, when combined with their ecological and environmental functions, the benefits become exponential. There are many references available for incorporation of naturalization techniques in municipal practises and they must be consulted. At this time, it is at least proposed to designate a minimum 3 metre "no-mow" strip along all ravines, watercourses and storm water ditches in the City.

Section 6 should be consulted regarding staff training and public education in relation to these suggestions. The City should note their committment to the incorporation of Naturalization into municipal operations in the memorandums of understanding proposed in Section 3 (3.4.1).

5.4.2 Tree Planting/Landscaping

Parks and Recreation staff will prepare annual plans for tree planting. These plans will follow long range planning targets set as part of an overall tree planting plan for the City. In these plans, a priority will be to use native species. The plans will consider a variety of species for shape, size, colour and location in order to enhance the relationship between the built and natural environment. Landscaping plans for Parks and City owned lands will include naturalization schemes and reflect the objectives of the program as outlined in this plan. The plans will consider an increase in the use of perennials. The City will meet with the Conservation Authority

and the Ministry of Natural Resources to determine if joint projects could be undertaken in conjunction with similar programs of these agencies.

5.4.3 Training Sessions - Refer to Section 6.

5.4.4 Additional Areas of Concern

Although the initial Green Plan did not make any recommendation in reference to the following program it was determined that during the preparation of the Implementation Strategy that these areas be addressed.

Waste Management/Landfill

The City must consider the green plan in any future plans for waste disposal sites and landfills. In any of its comments on regional waste management strategies, staff will ensure Green Plan policies are reflected.

Business Development

The Green Plan should be used as a promotional tool for economic and business development in the City. As such, this would provide a public information outlet for the objectives of the Plan and hopefully attract new types of industry such as research and technology. The Chamber of Commerce, Niagara Regional Development Corporation and the City's Business Development Department must take the Plan into consideration so that it can be used in the aforementioned manner. As part of the ongoing process, the Business Development Department should promote Green Plan policies as a desirable feature for attracting new business. The Green Plan must be considered by both staff and council as a integral part of any strategic plan for the city. Each department will receive copies of the Plan, and a briefing by the Green Committee to ensure that they fully understand its contents, benefits, and its possibilities.

6. PUBLIC EDUCATION AND COMMUNICATION

6.1 Definition

Environmental literacy is an important key to preserving our greenspaces and creating a healthier environment. The paradox is that while environmental consciousness is clearly at an all time high, many still view the city and nature as opposites, i.e. one must leave the city to be in nature. There is little recognition of the natural systems that exist in the city itself and little opportunity to study these systems at work.

The purpose of an environmental education program is to instill in people a sense of urgency about the problems of the environment and to confront people with the idea that natural process, conservation and resource management in the urban environment affect them directly. In addition, it is important that people understand the implications of "greening" a city. It involves choices. It does not mean choosing between development and conservation. It does mean

choosing a course of action that maintains a reasonable balance between development and protecting the environment.

Environmental education programs must be addressed on two fronts. The immediate thrust is to inform the general public and solicit their support for the City's environmental initiatives. The second phase is long term, focusing on the next generation through the school system.

6.2 **Objectives**

- * To instill in people a sense of urgency about environmental conservation.
- * To enable people to make informed decisions about the environment.

6.3 **Recommendations**

6.3.1 That the City initiate a public information campaign to promote the Green Plan.

6.3.2 That the City co-operate with the local school boards to develop and promote an environmental curriculum.

6.4 **Implementation Strategy**

6.4.1 **Public Information**

Plan Circulation

The Green Plan should be circulated to:

- * all staff
- * councillors and standing committees
- * land developers, consulting and engineering firms
- * government partners (NPCA, MNR, NEC, Regional Niagara etc.)
- * Public Interest Groups

Senior Management Team Meetings

Throughout implementation, but most importantly at the early stages of implementation, the Green Plan should be a topic for senior management meetings. This would facilitate the details of the Plan being filtered to all levels of staff by appropriate means. It would also ensure that every department is aware of the implications of the Green Plan on its operations. This would direct changes which could most efficiently implement the plan.

Information Sessions

The City should hold a seminar for land developers to explain both the policy and the implementation recommendations. The information sessions should outline not only the contents of the documents, but explain what the City is attempting to achieve and how developers could assist toward achieving that end.

Information sessions should also be held for City staff and relevant partner agencies and neighbouring municipalities. Council should also be informed and invited to attend any public session as a matter of interest and support for the plan.

Tours

It is recommended that a tour of the City's Green System be undertaken annually for staff, councillors and the Green Committee. This would reinforce and provide a gauge for monitoring the Green Plan.

Media

Information sessions should be advertised in The Standard. The Parks and Recreation guide, with a circulation of 55,000 households, could be accessed for advertisement of seminars and information contacts for the Green Plan.

The NPCA's "Focus on Conservation", "The Downtowner", "Niagara Magazine" and the "Weekender" and "Niagara Business Report" inserts of The Standard are also low-cost media sources for the distribution of information to developers, citizens, and other government administrators.

The local Community Cable Television Station (Cable 10) has a number of community program opportunities which can be accessed such as the Mayor's Show, and reports from the Federal and Provincial members of Parliament. This community channel is always looking for program ideas and the City could produce a show for constant running on "How You Can Help Make Your City Green". The Community Information Board which runs 24 hours a day should display a contact from time to time for information on the Green Plan.

Workshops

The City should also put together "operations workshops" for large property owners such as the school boards, Brock University, hospitals, the Seaway etc. to inform them of relevant maintenance practices which fulfil the objectives of the Green Plan. These could be provided at relatively low cost (staff time, a room, advertisement). A bibliography of manuals should be prepared for circulation in conjunction with the workshops.

Staff Training

Operations practices which reflect the Green Plan are continually evolving. Annual budgets should allow for staff to attend appropriate workshops and seminars. Niagara College School of Horticulture, Niagara Parks Commission School of Horticulture, Ontario Parks Association, Ontario Association of Landscape Architects and the Royal Botanical Gardens offer seminars in urban landscape practices which can be accessed.

Displays

The City should prepare a portable display to be set up at various locations such as the Lock III Museum Complex, libraries, shopping malls, community centres, the foyers of Brock University, Regional Niagara, St. Catharines City Hall and community fairs and special events.

Brochures/Notices

Changes in municipal practices will be more readily accepted by the public and adopted on private lands if affected landowners are notified. Delivery of letters and brochures by hand or mail are inexpensive and effective means of establishing good relations and facilitating co-operative green space management with private landowners including stewardship initiatives. Examples include, notification of cutting practises on cul de sacs, preparing a "how to" brochure (eg. for boulevard tree planting, non pesticide lawn care, ravine lot cutting) and preparing instructional videos for use by residential property owners. The City should promote through these information materials, the availability of technical assistance from staff to residential property owners.

Information Materials

The City should produce a variety of information materials for use by its own staff, special interest groups, public, quasi-public and private landowners. These would include pamphlets, booklets, audio-visual materials, guest speaker programs, reference manuals and bibliographies and/or referral services. There are numerous possibilities for joint effort and funding for both production and distribution of information materials. Some examples include Brock University, The Niagara Parks Commission School of Horticulture, Niagara Peninsula Conservation Authority, Ministry of Natural Resources, local nurseries, greenhouse operators, agriculture groups, conservation-type clubs.

Memorandums of Understanding

The City does not exist, nor function, in isolation of the communities around it. There are many processes, plans, legislations, and projects ongoing outside the City limits which effect what is going on in the City. It is therefore very important to establish strong communication links with resource partners and neighbouring municipalities. Staff and Councillors must sit down with representatives of Thorold, Pelham, Niagara-on-the- Lake, Lincoln, MNR, NEC, NPCA and Regional Niagara and establish with each one, joint areas of effort and identify common ground for understanding the Green Plan.

6.4.2 School Boards Curriculum

In fulfillment of recommendation 6.3.2., some initial discussions with the Lincoln County Board of Education staff have taken place. The complexity and magnitude of creating an education program dictates that it be developed in the future by staff and the Green Committee as it is a totally new initiative for the City. City staff should meet with trustees and staff of both Boards and private learning institutions with the specific purpose of preparing Memorandums of Understanding. The Green Committee and staff should examine:

1. existing curriculum which fulfils the objectives of the Green Plan;
2. existing programs of both parties which relate to Greening and the urban environment;
3. existing resources which could be shared for the promotion of the Green Plan and execution of the curriculum;
4. potential curriculum amendments or additions which reflect the objectives and philosophy of the Green Plan;
5. potential programs which could be undertaken jointly by means of sharing materials, staff, costs, spaces, etc.

Examples include: preparation of media materials, sharing of spaces and locations for the conduct of programs, reciprocal staff information days (during PD days), joint funding of materials and program costs, text and information exchanges, and, hands-on projects for students at municipal locations in fulfillment of curriculum and Green Plan objectives.

Further to these reviews, parties should create memorandums of understanding which outline a plan of co-operative action which fulfils the mandate of the education curriculum and the Green Plan objectives of the City.

Staff and the Green Committee should also meet with the Environmental Training Centre of Niagara College and the Environmental Policy Institute and College of Education of Brock University to examine the state of teaching curriculum related to Green Plan objectives and create with these institutions as well, some common action plans for education.

7. MONITORING

7.1 Definition

The keys to a successful plan are a sound implementation strategy and a system to monitor its effectiveness over time. This plan has proposed over 40 implementation strategies to be undertaken by various departments (often in conjunction with one another), over a variety of time periods.

These strategies range from relatively minor adjustments to existing programs and documents (e.g. maintenance practices) to major new initiatives (e.g. naturalization programs and public

education). As well, the progress of the Plan must be monitored to determine what has been successful, where problem areas exist, and what changes need to be made.

In addition, it is clear that the environment has assumed a significant role in all aspects of municipal decision-making as evidenced by the new Planning Act recently adopted by the Province. In response, the Municipality should use the Green Plan policies as a source of information to deal with environmental issues. As a result, it is proposed that a Green Committee be established to undertake specific implementation strategies, monitor the Plan, and advise Council on environmental issues. Terms of Reference are outlined in Appendix 3.

At the same time, it is recognized that it will take considerable time, effort, and expertise to initiate the many implementation strategies and set in motion the monitoring process. To that end, it is recommended that a staff person be hired to "kick start" the project. It is essential that this person be suitably qualified to undertake a diverse number of tasks in a relatively short time period. It is anticipated that the Green Committee will be able to assume the majority of monitoring tasks for the project within 6 - 9 months.

7.2 Objectives

- * to monitor the effectiveness of the Green Plan implementation Strategies
- * to provide advice to Council on matters relating to greening issues

7.3 Recommendations

7.3.1. That a Green Committee be established to undertake specific implementation strategies, monitor the effectiveness of the Green Plan Strategies, and advise Council on environmental issues.

7.3.2. That a staff person be hired on a short term basis to initiate the implementation and monitoring process.

7.4 Implementation Strategy

7.4.1. Green Committee

See Terms of Reference (Appendix 3)

7.4.2. Staff Person

APPENDIX "1"

STEWARDSHIP PROGRAM

INFORM:

All owners within the areas in the Green Plan and the Green Plan System should be informed by letter, to let them know where their property fits into the objectives of the Green Plan (eg. as an important linkage site, potential naturalization site, etc.). This could be followed up by a site visit using a summer program, for example, to show the landowner how they fit in and what options are available to them if they wish to become land stewards.

EDUCATE:

There are many means by which the City can educate landowners as to the objectives of the green plan and the availability of a stewardship program. These include:

i Media

The City has access to the City Page in Saturday editions of The St. Catharines Standard. This City is fortunate to have an "Environmental Reporter" on staff, which is a unique media option not available to most municipalities in the province. Therefore, press releases and feature articles are a low cost possibility which should be accessed.

ii Displays

The City should develop a display to be placed at libraries, City Hall, fall fairs and other special events and even some business establishments such as nurseries.

iii Seminars

At a relatively low cost, the City could offer semi-annual (or even more frequent), seminars conducted by staff to outline stewardship program options.

iv Speaking Engagements

Staff could attend speaking engagements at neighbourhood community centres, service club luncheons etc.

v Materials

The City could produce pamphlets and newsletters for distribution at various locations, public buildings, businesses etc. In co-operation with local TV, university and college centres, the City could also produce audio, video, and slide presentations to be used during speaking engagements, special events and for public borrowing. A copy of all educational materials should be available at city hall, all library branches and the university library and any other appropriate public centres.

ENCOURAGE:

Public Lands:

i. As stewards of the City owned land, the various departments responsible for City-owned property should reconsider their operations procedures to set an example for private land owners.

The City should review their land management practices to reflect the green plan (eg. undertake naturalization projects, downsize some operations at some parks, undertake remedial and mitigative procedures to protect remaining green spaces, acquire lands where they are available, and abolish unfriendly environmental practices).

ii. The City should develop a set of guidelines and develop a code of conduct for the use of city lands by all persons.

Private Lands:

The value of land has historically been based on how much revenue it can produce. Keeping land green to achieve the objectives of the Green Plan will have to provide some monetary compensation to the landowner. There are lower cost options which when implemented could provide private landowners with benefits that could be translated into dollar figures such as advertisement, and corporate recognition. The following are some examples of the implementation of a stewardship program on private lands:

1. Develop an awards program, similar to the Trillium awards for private land stewards;
2. Establish an annual fund to which applications can be made by private landowners (willing to designate their property in accordance with the Green System), for financial assistance with technical advice and/or the purchase of nursery stock, for example. Such a fund could also be used by corporate citizens and philanthropists eager to participate in the greening of the City by offering financial donations in the absence of any relevant land holdings;
3. Establishing a neighbourhood award for participation by a majority of homes in a neighbourhood;
4. Public recognition through the presentation of certificates during Council meeting and/or special events, listing in the newspaper, creating a dedication wall at City Hall, and planting honour trees.

APPENDIX "2"

NATURALIZATION INFORMATION

The Great Lakes Deciduous Forest Region

A small portion of the deciduous forest, which is widespread in the eastern United States, extends into southwestern Ontario between lakes Huron, Erie and Ontario. Here, with the deciduous trees common to the Great Lakes-St. Lawrence Forest Region, such as Sugar Maple, Beech, White Elm, Basswood, Red Ash, White Oak and Butternut, are scattered a number of

other deciduous species which have their northern limits in this locality. Among these are the Tulip-tree, Cucumber-tree, Pawpaw, Red Mulberry, Kentucky Coffee-tree, Redbud, Black Gum, Blue Ash, Sassafras, Mockernut Hickory, Pignut Hickory, Black Oak and Pin Oak. In addition, Black Walnut, Sycamore and Swamp White Oak are confined largely to this Region. Conifers are few, but there is a scattered distribution of Eastern White Pine, Tamarack, Eastern Red Cedar and Eastern Hemlock.

Native Species

Canopy

Characteristic Species

Acer rubrum red maple

Acer saccharinum silver maple

Betula lenta sweet birch

Fagus grandifolia American beech

Fraxinus americana white ash

Associates

Carya cordiformis bitter-nut hickory

Carya glabra pignut hickory

Carya ovata shag-bark hickory

Carya tomentosa mockernut hickory

Fraxinus quadrangulata blue oak

Gymnocladus dioica Kentucky coffeetree

Juglans nigra black walnut

Juniperus virginiana Eastern red cedar

Larix laricina eastern tamarack

Liquidambar styraciflua sweet gum

Liriodendron tulipifera tuliptree

Magnolia acuminata cucumber magnolia

Pinus strobus eastern white pine

Plantanus occidentalis american sycamore

Prunus serotina black cherry

Quercus alba northern white oak

Quercus bicolour swamp white oak

Quercus imbricaria shingle oak

Quercus palustris pin oak

Quercus rubra northern red oak

Quercus velutina black oak

Tilia americana American basswood

Tsuga canadensis eastern hemlock

Ulmus americana American elm

Ulmus rubra slippery elm

Woody Understory

Acer pensylvanicum striped maple

Amelanchier laevis Allegheny service-berry

Asimina triloba pawpaw

Carpinus caroliniana American hornbeam

Cercis canadensis redbud

Cornus alternifolia alternate-leaf dogwood

Cornus rugosa round-leaf dogwood

Dievilla lonicera northern bush-honeysuckle

Hamamelis virginiana witch-hazel

Lonicera canadensis American fly-honeysuckle

Morus rubra red mulberry

Ostrya virginiana eastern hop-hornbeam

Sassafras albidum sassafras

Rhododendron periclymenoides pink azalea

Staphylea trifolia American bladdernut

Vaccinium pallidum early lowbush blueberry

Viburnum acerifolium maple-leaf arrow-wood

Viburnum lantanoides hobblebush

Herbaceous Understory

Actea pachypoda white baneberry

Allium tricoccum ramp

Arisaema triphyllum jack-in-the-pulpit

Asarum canadense long-tail wildginger

Aster macrophyllus large-leaf aster

Cardamine concantenata cut-leaf toothwort

Cardamine diphylla crinkleroot

Caulophyllum thalictroides blue cohosh

Cimicifuga racemosa black bugbane

Claytonia virginica Virginia springbeauty

Clintonia umbrellulata white bluebead-lily

Collinsonia canadensis richweed

Dicentra candensis squirrel-corn
Dicentra cucullaria Dutchman's-breeches
Disporum lanuginosum yellow fairybells
Erythronium americanum American trout-lily
Hepatica nobilis liverwort
Maianthemum racemosum feathery false Solomon's seal
Mertensia virginica Virginia Bells
Mitchella repens partridge-berry
Osmunda claytoniana interrupted fern
Podophyllum peltatum may-apple
Polystrichum acrostichoides Christmas fern
Prenanthes trifoliolata gall-of-the-earth
Sanguinaria canadensis bloodroot
Sanicula marilandica Maryland black-snakeroot
Solidago caesia wreath goldenrod
Thalictrum dioicum early meadow-rue
Tiarella cordifolia heart-leaf foamflower
Trillium erectum stinking-Benjamin
Viola rotundifolia round-leaf yellow violet

Background Information

Woodland

Urban forestry involves the development of plant communities that have not supported native woodland for a long time. Three approaches to reforestation are possible.

1. **Plantation** in which similar species are planted, and where the final composition is determined by the initial planting;
2. **Natural Regeneration** where conventional landscape maintenance is discontinued in situations where a woodland seed source is available. In the absence of disturbance, succession occurs every time.
3. **Managed Succession** which is based on the principle of natural succession assisted and speeded up through management. In this approach, planting is initiated with pioneer or nurse species and evolves over time into a climax stand. The initial and final composition, character, and use of the woodland are, consequently quite different. Site conditions initially are modified by nurse crop functions to ameliorate soil and drainage, fix nitrogen, and create a microclimatic environment appropriate to the development of climax vegetation.

Meadows

The creation of meadows also involves approaches that include natural regeneration and managed succession. In natural regeneration, the original mowing of turf is simply abandoned and succession to a wildflower meadow occurs over time. Depending on adjacent seed sources, this could take up to five years or longer to achieve a stable plant community.

In managed succession, the evolution of the meadow may be assisted and speeded up by over seeding the existing turf with wildflower mixes local to the particular region. Alternatively, the meadow may be created from bare soil by seeding with a mix of wildflowers and grasses. Each of these approaches have different speeds of establishment.

Wetlands

Almost any depression in the ground that collects water will be colonized naturally with wetland species. Stormwater management areas and streams are prime candidates for naturalization since they provide the ideal sites for introducing diverse wetland plant associations through natural regeneration and introduction of appropriate species. While natural regeneration is the simplest and most economical method of establishing small wetlands which may, over time, develop a level of diversity, the introduction of species at an early stage can speed up the process of wetland creation.

Background Information (continued)

Urban wetlands can also be created using a variety of means. The Ontario Federation of Anglers and Hunters as well as Ducks Unlimited are experts in the field of wetland reclamation and should be consulted for technical advice and funding partnership where candidate sites have been identified.

TERMS OF REFERENCE

GREEN COMMITTEE

INTRODUCTION

In April of 1991, City Council endorsed the concept of creating a "GREEN PLAN" for St. Catharines. Staff were directed to prepare a policy document with the guidance of a Green Plan Advisory Committee. The Advisory Committee was made up of six members from the public, staff from Planning and Parks and Recreation Departments, and representatives from Council. The Green Spaces/Green Places document emerged from the year long exercise and that policy was approved by City Council in May of 1993.

To further its efforts toward regeneration and creation of a green community, the City also directed the formation of an Implementation Committee to develop specific ways and means for implementing the Green Plan. This Committee was established in the Fall of 1994 and consisted of a representative from Council, two members of the public and staff from Planning, Parks and Recreation and Engineering. The Implementation Strategy was presented to and approved by City Council in June of 1995.

A key recommendation of the Implementation Strategy was the creation of a committee to monitor the progress of implementation and assist the community, staff and Council with implementing the PLAN.

The City of St. Catharines has also adopted Official Plan Policies and developed programs and practices to work toward the maintenance of existing green space, and the regeneration of some that were lost. Both the policy and the Implementation Strategy aim to change attitudes and practices not only of the City itself, but of property owners, developers, the business sector and individual residents.

MANDATE

The Green Committee will advise and assist Council in the monitoring and implementation of the Green Plan.

REPORTING

The Committee will report to Council when necessary and will prepare an annual report at the end of each operating year.

RESPONSIBILITIES

In consideration of the Terms of Reference and the Green Plan, the Committee will set out a work plan at the beginning of each year. The Committee will also respond to requests from Council as may be made from time to time. Matters coming to the committee from staff, individuals, groups or sector representatives will be directed through the Planning Department.

Specifically, the Committee's activities will include, but not necessarily be limited to:

- a) providing advice in the preparation of technical and educational programs and practices;
- b) undertaking public information and education liaison work including speaking engagements, workshops, materials preparation, etc., and the raising of funds to undertake such projects;
- c) assessing annually the state of Green Space in the City;
- d) reviewing, by request, the appropriateness and feasibility of land acquisitions, dispositions, leases, encroachments, etc., in relation to the Green Plan policies;
- e) working as a liaison with public and private landowners to undertake naturalization on their lands;
- f) undertaking various aspects of the stewardship plan including public information, meeting with landowners and acting as a liaison between the City and landowners for various aspects of this component;
- g) co-ordinating efforts between the City and other groups and individuals for implementing the Green Plan;
- h) providing recommendations and review of projects, legislation amendments, developments, etc., that are related to the City's Green Plan and/or the Official Plan policy as it relates to greening;
- i) reviewing City programs and policies annually to assess the progress of Greening within the City;

COMPOSITION

The Committee will be composed of 7 members:

- * two members of Council
- * five members from the public at large

City staff representatives from Planning, Parks and Recreation and Engineering will provide technical advice.

APPOINTMENTS AND TERM

Appointments to the Green Committee will parallel the term of Council. Pursuant to Council policy, applicants are required to attend an orientation seminar.

The purpose of the seminar is to give members of the public an opportunity to learn about the workings and role of the St. Catharines Green Committee within the community prior to applying for membership.

In terms of process, an advertisement will be placed in the newspaper inviting people to attend this session. At the completion of the session, application forms will be given to interested parties. Council will make appointments to the Green Committee.

CONDUCT OF BUSINESS

The rules applicable to the committee are contained in City of St. Catharines By-Law Number 93-180. The Agendas for meetings are prepared by the Planning Department representative in consultation with the Chairman, and include: Call to Order; Confirmation of Previous Minutes; Delegations; Matters Referred from Council; Business (Statutory Duties and first Priority Matters); Information and Correspondence; Adjournment. Members wishing to raise matters outside the agenda must notify the Chair. Delegations must notify the Chair or Planning Department representative prior to the preparation of the agenda, in writing, stating the nature of the request. Observers are welcome, but may not participate in Committee business, as per Council's rules for Committees.

MEETING FORMAT

Meetings will be held monthly. A chairman and vice-chairman will be elected at the outset of the Committee's term. Decisions are made and implemented through motions that are made and voted on by the Committee. Special meetings may be called at the chairman's discretion.

STAFF SUPPORT

The Planning Department representative acts as Secretary-Treasurer to the committee, providing both professional and administrative support in matters such as minutes of meetings, records, correspondence, technical advice and research, and budget preparation and control.

BUDGET

Normal costs associated with the conduct and business of the committee will be deducted from the Committee's annual budget which will be set annually by Council. These will include incidental costs for the holding of meetings and expenses.

GLOSSARY OF TERMS

aesthetic: pleasing to the senses

conservation: any manipulation of natural resources while protecting the inherent value of the resources

corridor-type development: see linear parks

E.P.A.: Environmental Protection Area

ecological: having to do with the total relationships between organisms and their environment

ecosystem: an integrated complex living and non-living component in which each component is influenced by the other

encroachments: restriction of public use by private interests and intervention

environmental: the effects of the aggregate of surrounding things, conditions and influences

erosion control: methods of reducing or eliminating the process by which the earth is worn away by the action of water, wind, waves, etc.

flood plains: any land adjacent to a watercourse that is subject to flooding

genetic diversity: a suitable amount of plant and animal species necessary for sustainability of future ecosystems

gore: a landscaped parcel of land, usually found at road intersections that is too small or awkward for urban development

linear park: an elongated parcel of parkland, usually utility corridors, roads or lands abutting waterways which are utilized for walkways, bicycle and/or fitness trails

migration routes: the paths taken by birds, animals or fish, as they travel from one region to another, seasonally

preservation: allowing the continuation of an area in its present state

quasi-natural: a natural area created by conservation techniques

recharge areas: an area where rainfall and drainage seeps into the soil to refill the ground water table

regeneration: the restoration of natural resources which have been lost, removed or injured

remnant-natural: areas within the urban area of the City which have remained as they were naturally and contain habitats that have largely disappeared elsewhere. They may include marshes, hardwood forests or other negative types.

self-sustaining: the ability to survive with no or little external influences

sustainability: the ability to continue to benefit from a resource virtually indefinitely

stewardship: management of property with proper regard for the needs and benefits of greenspace for all

tree stands: a number of trees in a defined area, usually dominated by one particular species

underutilized lots: large parcels of land on which only a small area is used for urban development (ie. houses, buildings, etc.)

urban area boundaries: the defined limits between urban and agricultural areas within the City, as defined by the Niagara Regional Policy Plan

watershed: any area of land which is drained by one particular watercourse

wetlands: lands seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface

wildlife habitat: any area which provides the life sustaining requirements for any other species

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