



St. Catharines

## Horticulture Management Plan



**Parks, Recreation and Culture Services**  
**December 2016**

## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>DEFINITIONS .....</b>	<b>2</b>
<b>HISTORY .....</b>	<b>3</b>
<b>THE MANAGEMENT PLAN .....</b>	<b>6</b>
Section A: The Horticulture Management Plan .....	6
Section B: Additional Staffing .....	12
Section C: Horticulture Materials and Supplies Funding.....	14
Section D: Community Involvement/Public Education .....	15
Section E: Measuring Success .....	17
<b>CONCLUSION .....</b>	<b>18</b>

## Executive Summary

Since the early 1840s, the City of St. Catharines has been recognized as the 'Garden City'. Historical documents indicate St. Catharines was called the "Garden City" for its location in the peninsula (which was known as the "Garden of Canada") and for its many gardens, orchards and nurseries. Today there are approximately 1,000 acres of parks, gardens, trails and open green space maintained by the Parks Recreation and Culture Services Department.

The City's horticulture inventory includes impressive historic sites, unique geographic features and newer landscape installations. The expanding horticulture inventory combined with reductions in operating budgets and staff complement have resulted in declining service levels necessitating the need for a horticulture services program review.

Horticulture has been recognized as a vital component of a municipality's green infrastructure. As with any type of infrastructure, horticulture requires strategic goals, adequate resources and planning to ensure that it provides benefits to its maximum capacity. Unlike built infrastructure, such as roads and sewers, green infrastructure adds value to the community over time and if properly maintained, the asset value increases with age.

In order to better maintain and prioritize the horticulture assets throughout the City, Parks, Recreation and Culture Services (PRCS) has developed a Horticulture Management Plan (HMP) that ranks horticulture sites based on significance, maintenance, aesthetics and location. As new horticulture features are added or considered, staffing and resource requirements will be requested. Where additional resources are not available, pending the new area's priority ranking, lower ranked sites will be removed from the inventory to maintain service levels.

The HMP identifies the actions necessary to improve the horticulture program and how these actions will serve as the framework for a successful management strategy to ensure a healthy, sustainable operation. The actions needed to improve horticulture services include: increasing funding and staffing levels to secure the remainder of the inventory, promoting community involvement and education and the decommissioning 30 low-valued sites in an effort to meet defined service levels.



## Definitions

### **Crime Prevention through Environmental Design (CPTED)**

A multidisciplinary approach of safeguarding the environment by designing features that can lead to a reduction in the fear and incidence of crime as well as an improvement in quality of life.

### **Green Infrastructure**

An interconnected system of natural areas and other open spaces that are protected and managed for the ecological benefits they provide to people and the environment.

### **Natural Resources**

Materials or substances such as minerals, forests, water, and fertile land that occur in nature and can be used for economic gain.

### **Xeriscaping**

Landscaping that reduces or eliminates the need for supplemental water from irrigation.





## History

The City of St. Catharines experienced an accelerated growth rate from the mid-1970s to the mid-1990s resulting in an increase in municipal services that included additional parks and horticultural amenities. Today there are approximately 1,000 acres of parks, gardens, trails and open green spaces within our urban boundaries. This gradual increase in inventory was not matched by a corresponding increase in the operating budget. In fact, staff and resource levels have declined since the late 1990s. As a result, horticulture service levels have diminished. In more recent years, significant landscaped areas have been added to the inventory without any corresponding increase to the horticulture operating budget. These locations include the Kiwanis Aquatics Centre, the Performing Arts Centre, Seymour Hannah Sports and Entertainment Centre and the Meridian Centre.

The Ontario Cosmetic Pesticides Ban in April 2009 has also impacted routine horticultural activities and standards at the City of St. Catharines. Under the ban, pesticide products and pesticide ingredients are banned for cosmetic purposes on lands that include municipal parks and open spaces. To deal with the pesticide ban staff recognized that routine grounds maintenance practices were fiscally and environmentally challenged. The deployment of natural alternatives to pesticides and proactive landscape maintenance practices have been required to maintain our assets and mitigate the effects of common landscape pests. These practices include specialized equipment, staff expertise, alternative design and communication networks with various communities and government agencies to implement a variety of Integrated Pest Management (IPM) practices that may reduce the requirements for pesticides. Weeding activities in particular have increased within the Horticulture section resulting in less time available for other necessary maintenance.

The City's horticulture inventory includes impressive sites, however, many displays are in need of renovation or removal due to aging infrastructure, staffing and funding decreases. Park and floral components require investment to maintain their value to the community.

To address these challenges, PRCS has created a proactive and practical plan to ensure that our horticultural amenities are managed to provide maximum benefit to the community and longevity to the asset.



In addition to the implementation of the HMP, horticulture services will continue to;

1. Prioritize maintenance schedules and implement new schedules that are more cost efficient.
2. Explore innovative ideas and expertise on new approaches and best practices across the industry and the integration of emerging trends and technologies into horticultural operations.
3. Include community/volunteer involvement/community partnerships.
4. Utilize consistent performance standards with clear levels of service and performance measures.
5. Improve communication mechanisms for public and internal inquiries.







## A. The Horticulture Management Plan

The HMP provides sustainable goals, objectives and methods of maintaining the City's horticulture inventory. The City maintains over 1,000 acres of parks and trails and has an inventory of 250 carefully manicured floral displays at 116 sites. These sites include gardens with significant botanical collections, integrated heritage sites, principal natural attractions and sites of community significance.

The HMP is flexible and able to incorporate new horticulture assets. New assets would be assigned to an annual operation cost which can then be considered early in design and budget stages. New assets of high rank without associated operations budget increase would necessitate removal of a lower ranked asset.

All new horticulture features should incorporate xeriscaping design principles to minimize water and fertilization requirements. New bed design in particular should be sized to provide maximum visual impact with the minimum sized bed.

The HMP supports the economic, social and environmental sustainability pillar objectives within Council's strategic plan.

Economic sustainability objectives will be enhanced through;

- Reduced on-going maintenance costs through removal of excessive and/or unnecessary planting beds and horticulture displays.

Social sustainability objectives will be enhanced through;

- Balanced service level distribution through more equitable city-wide staff/resource allocation.

Environmental sustainability objectives will be enhanced through;

- Optimized use of staff/resource allocation will ensure citywide horticulture inventory is maintained at acceptable standards ultimately improving the health and longevity of the asset.





## Methodology

In order to better maintain and prioritize the horticulture sites throughout the City, PRCS has developed a system that ranks horticulture sites based on the following criteria; Significance, Maintenance Requirements, Aesthetics and Location.

In addition to the four criteria, sites were also classified based on the purpose and general use of the horticulture area. Data was collected through individual inspection of every site, resulting in a total score as well as a classification.

The assessment strategy focuses on providing the best value for our resources. This requires an understanding of our current process performance, objectives and scope and applying the primary metrics to measure that performance. In terms of growth, diversification and performance consolidation it is an assessment strategy that is simple and accurate.

Based on the criterion, PRCS is able to assess the value and rank of each site which will drive our maintenance schedule. The assessment matches the existing staffing complement to the existing inventory and examines our resources to ensure that the de-commissioning, replacement or renovation of inventory is a practical decision. Figure 1 describes the criterion used in assessing the inventory and site examples.

### Figure 1 Inventory Assessment Criteria

#### Significance of Site

Score	Properties	Details	Site Examples
5	Historical, Government, Gateway, High Profile	<ul style="list-style-type: none"><li>○ The space has historical value, significance, or signage.</li><li>○ The space is on government property.</li><li>○ The space is a “feature” of St. Catharines image.</li></ul>	<ul style="list-style-type: none"><li>○ City Hall</li></ul>
4	Associated with Service Club, Group, or Organization	<ul style="list-style-type: none"><li>○ The space has partnership with a service club, group, or organization.</li></ul>	<ul style="list-style-type: none"><li>○ Niagara/Church Horticulture Society Dedication</li></ul>
3	City-Wide Display	<ul style="list-style-type: none"><li>○ The space is on property that is frequently seen by a large number of residents and visitors.</li></ul>	<ul style="list-style-type: none"><li>○ Lakeside Park</li></ul>
2	Neighbourhood Display	<ul style="list-style-type: none"><li>○ The space is a focal point for residents within walking distance of the area.</li></ul>	<ul style="list-style-type: none"><li>○ John Page Park</li></ul>
1	Background	<ul style="list-style-type: none"><li>○ Space consists of mostly natural plantings and conditions.</li></ul>	<ul style="list-style-type: none"><li>○ Johnson Park</li></ul>



## Maintenance Requirements

Score	Properties	Details	Site Examples
5	Manicured	<ul style="list-style-type: none"> <li>○ The main objective is first-class appearance, always impeccably clean and well groomed.</li> <li>○ Constant attention and detail is given to the area.</li> <li>○ No weeds or debris.</li> </ul>	<ul style="list-style-type: none"> <li>○ Montebello Park</li> </ul>
4	Well Groomed	<ul style="list-style-type: none"> <li>○ The area is well taken care of but not to the same perfection as a “manicured” space.</li> <li>○ The area is maintained frequently.</li> <li>○ No weeds or debris.</li> </ul>	<ul style="list-style-type: none"> <li>○ Centennial Library</li> </ul>
3	Groomed	<ul style="list-style-type: none"> <li>○ The space is neatly groomed and requires regular routine maintenance.</li> <li>○ Weeds and debris are tolerated between regular visits.</li> </ul>	<ul style="list-style-type: none"> <li>○ Geneva/Bond</li> </ul>
2	Moderate	<ul style="list-style-type: none"> <li>○ The space is generally neat, and moderately groomed.</li> <li>○ Weeds and debris is tolerated between moderate visits.</li> </ul>	<ul style="list-style-type: none"> <li>○ McCaffery Park</li> </ul>
1	Periodic	<ul style="list-style-type: none"> <li>○ The space is not visited often. The main objective is for the space to be self-sustaining.</li> <li>○ Upkeep is monitored and only attended to as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>○ Woodgale Park</li> </ul>



## Aesthetics

Score	Properties	Details	Site Examples
5	High Design Features, Specimen Plants	<ul style="list-style-type: none"> <li>○ Space requires considerable planning.</li> <li>○ Specimen plants are part of design.</li> </ul>	<ul style="list-style-type: none"> <li>○ Pearson Park Carpet Bed</li> </ul>
4	Year Round Display	<ul style="list-style-type: none"> <li>○ The display has plants year-round.</li> </ul>	<ul style="list-style-type: none"> <li>○ Victoria Lawn Cemetery</li> </ul>
3	Moderate Annual Plant Display	<ul style="list-style-type: none"> <li>○ The display consists of annual plants.</li> <li>○ Consideration is used in planning the display.</li> </ul>	<ul style="list-style-type: none"> <li>○ Hannelore Headley Parkette</li> </ul>
2	Some Display Aspects	<ul style="list-style-type: none"> <li>○ The display has some annual/perennial plants but mostly consists of native plantings.</li> </ul>	<ul style="list-style-type: none"> <li>○ Morningstar Mill</li> </ul>
1	Native Plantings and Shrub Beds	<ul style="list-style-type: none"> <li>○ The display consists of only native plants and shrubs.</li> </ul>	<ul style="list-style-type: none"> <li>○ Eastport Park</li> </ul>

## Location

Score	Properties	Details	Site Examples
5	High Profile and Visibility	<ul style="list-style-type: none"> <li>○ The space is visited constantly.</li> <li>○ A high amount of traffic passes the space daily.</li> <li>○ The space is a “gateway” to the City.</li> <li>○ Located on a busy road/intersection.</li> </ul>	<ul style="list-style-type: none"> <li>○ Mill Run</li> </ul>
3	Moderate Profile and Visibility	<ul style="list-style-type: none"> <li>○ The space is passed by often.</li> <li>○ The space is a part of a park.</li> </ul>	<ul style="list-style-type: none"> <li>○ Belton Blvd</li> </ul>
1	Low Profile and Visibility	<ul style="list-style-type: none"> <li>○ The space is an isolated location.</li> <li>○ The space has little to no road visibility.</li> </ul>	<ul style="list-style-type: none"> <li>○ Valleyview Park</li> </ul>





## Asset Classification

The City's horticulture inventory has been divided into nine (9) asset classifications. Each classification has a defined level of service intended to provide optimal aesthetic, social and environmental value and to ensure the sustainability and longevity of the asset. Figure 2 describes the asset classifications, service levels and examples.

**Figure 2 Asset Classifications**

Classification	Description	Service Level	Site Example(s)
Gateways/ Transition Areas	Entrance displays	Manicured, well groomed, no weeds or debris	<ul style="list-style-type: none"> <li>○ Welcome beds at the QEW/Ontario Street and Lakeshore Road/Malcolmson Eco-Park</li> <li>○ Welcome signs to Meritton, West St. Catharines and Old Glen Ridge</li> </ul>
Boulevard and Median Plantings	Horticultural plantings along arterial road ways	Groomed, weeds and debris are tolerated between regular visits	<ul style="list-style-type: none"> <li>○ Fourth Avenue and Louth Street</li> </ul>
Hanging Baskets and Planters	Horticulture displays in high traffic areas	Well groomed, no weeds or debris	<ul style="list-style-type: none"> <li>○ Downtown</li> <li>○ Port Dalhousie</li> <li>○ Victoria Lawn Cemetery</li> </ul>
Neighbourhood Parks	Natural plantings, primarily for activities and passive recreation	Periodic to moderate grooming, weeds and debris is tolerated between moderate visits	<ul style="list-style-type: none"> <li>○ Johnson Park</li> <li>○ John Page Park</li> </ul>
District Parks	Seasonal parks containing perennial displays	Periodic to moderate grooming, weeds and debris is tolerated between moderate visits	<ul style="list-style-type: none"> <li>○ Alex Mackenzie Park</li> <li>○ Community Park</li> </ul>
City Wide Parks	Frequently visited parks and consists of a variety of horticulture displays	Groomed, weeds and debris are tolerated between regular visits	<ul style="list-style-type: none"> <li>○ Jaycee Gardens</li> <li>○ Lakeside Park</li> <li>○ Montebello Park</li> </ul>



Community Gardens	Municipal parkland used for growing food crops	Groomed, weeds and debris are tolerated between regular visits	○ Torosian Park
Parkettes, Gores and Municipal Buildings	Horticulture displays that serve the entire population in highly visible areas	Manicured, well groomed, no weeds or debris	○ Mill Run ○ City Hall
Naturalization Areas	Natural plantings throughout parks and green spaces	Groomed, weeds and debris are tolerated between regular visits	○ Burgoyne Woods ○ Malcolmson Eco-Park

*Figure 2 demonstrates average service levels within classifications. Service levels may vary by location.*

**Action Item # 1 - The City of St. Catharines will approve the Horticulture Management Plan methodology to prioritize the horticulture inventory.**



## B. Additional Staffing

By 2016, Horticulture services will have assumed on-going maintenance of an estimated 6 new horticultural sites, or approximately 2,000 square meters of maintenance. The increased inventory without additional staffing/resource allocation will result in reduced service levels and declining maintenance standards experienced throughout the City. Horticulture services is challenged with adapting best management practices with limited funding, staffing and resources.

The Horticulture team is currently comprised of 1 supervisor, 11 full time Gardeners, 13 casual Gardeners and 26 seasonal maintenance students. This staff complement is responsible for inventory and maintenance of all floral displays, hanging baskets, landscape beds, gateways, native and natural landscapes and edible and community gardens at 116 sites. Horticulture staff are also responsible for non-horticulture activities including beach and trail maintenance, roadside mowing, special events setup and tear down, litter pickup, tree maintenance, custodial duties and playground maintenance.

Based on current staffing and resource levels, the HMP recommends the gradual decommissioning of 30 low-value amenities with a resource reduction of 2,257 hours annually. These sites are primarily neighbourhood parks and contain landscape amenities that do not offer acceptable value or are not recognized as necessary components of this type of park. Removal of these amenities is primarily a labour cost which will be offset by utilizing the scheduled staff hours which would have been allocated to bed maintenance. Material and supply costs are minimal and intended to be absorbed with the department's operating budget. Within the existing inventory, similar approaches will be executed throughout the City which may have a minor budget impact; however, those impacts would be offset by reductions in future labour costs.

There are also a number of parks sites (29) containing landscape beds that are vital components of the inventory but remain outside of the existing service levels to maintain properly. These parks are a mix of neighbourhood, district and city-wide. These sites contain landscape and horticultural amenities that are part of the park features and integral to the park design. It is recommended that these sites continue to include these landscape features. To achieve acceptable maintenance levels at these sites, Horticulture will require funding for an additional 3,165 hours annually.

Within the existing program staff complement the addition of the following staff are required to meet this deficit;

- **1 full time Gardener**
- **3 part time casual Gardeners**
- **2 Maintenance Students**





It is recommended that the request for additional staff be funded as part of the 2018/2019 operating budget process; the equivalent of \$213,000 annually. In the absence of additional staff complement, service levels will continue to decrease throughout the City.

**Action Item # 2 - The City of St. Catharines commits to revisit and fund the remaining gap in staff hours as part of the 2018/2019 operating budget process.**

By reducing the size and number of some horticulture features located throughout the City, residents will notice a more consistent level of service throughout our parks and, although some features will be removed, an overall higher and more sustainable level of service will be notable.



## C. Horticulture Materials and Supplies Funding

Horticulture services at the City of St. Catharines requires additional funding to maintain current inventory and meet defined service levels. In 2016, the funding for horticulture materials (plant material, soil, mulch, fertilizer, hanging baskets, planters, etc.) is \$81,000 or 0.446 per cent. This is less than one-half of one percent of the total PRCS budget. Within the municipal operating budget that percentage drops to seven one hundreds of one percent.

As a comparator municipality, the budget for the City of Guelph for the same service is \$198,340 which is approximately 150% greater than the funding for the City of St. Catharines.

It is recommended that the request for additional horticulture materials funding be included in the 2017 Operating Budget with an increase to \$120,000. This is an increase of 48% from the 2016 Operating Budget.

As horticulture assets reach their lifespan, they need to be replaced. In order to replace aging assets, funding should be provided for an annual replacement program of 1 to 3 assets per year, estimated at an additional \$15,000 annually.

Figure 3 describes the requested funding increases for additional staffing, horticulture materials and asset replacement.

**Figure 3 Requested Funding Increases**

Item	Current Funding	Requested Funding
Additional Staffing	-	\$213,000
Materials	\$81,000	\$120,000
Asset Replacement	-	\$15,000

**Action Item # 3** - The City of St. Catharines will provide the necessary funding to meet the goals of the Horticultural Management Plan.



## D. Community Involvement/Public Education

Community involvement in our horticulture assets takes many different forms including passive enjoyment, attendance at community events/educational programs and active volunteering. An engaged community is essential to the culture of the City of St. Catharines. Horticulture spaces provide residents a place to connect with the environment and each other. Volunteering nurtures this social fabric of the community and the City of St. Catharines continues to seek effective ways to attract new volunteers.

In support of the City's compassionate City approach, the horticulture division is expanding its edible and community gardening initiatives. In 2015 and 2016, floral beds at the Centennial Library, Jaycee Gardens and Pearson Park were converted to edible gardens. As a result, 170 kilograms of produce was donated to Community Care of St. Catharines and Thorold in 2016. Expanding on the success of initiatives such as this will become a priority in the future.

The City's floral displays and landscapes provide the perfect backdrop for a wide range of social uses and have hosted various events including garden tours, cultural exhibitions, community events, musical performances and weddings. Our parks also offer an ideal setting for education and have hosted programs including planting classes for primary school children and field work supporting students studying for certificates in conservation and horticulture. PRCS will continue to increase community awareness and involvement in our gardens and parks by promoting the venues for a broad range of community events and general participation.

The HMP recommends:

- Exploring partnerships and investment opportunities to deliver an improved ongoing sustainable operation, ensuring appropriate consultation with the community and the Green Advisory Committee;
- Investigating potential grant and funding opportunities to support the renewal and replacement of critical built assets, and improve accessibility for the aged and mobility impaired visitors;
- Exploring innovative ways to encourage active volunteering in the management of the gardens, such as conservation volunteers and environmental tourism;
- Strengthening partnerships with educational institutions to develop educational programs in line with the essential learning standards and relevant horticultural and environmental studies;
- Encouraging the development of 'Friends of' groups, implementing adopt-a-park programs, and increasing park use in the off-season;





- Promoting participation in community gardens, edible gardens and programs aimed at aiding the disadvantaged to demonstrate, educate and inspire through horticulture and urban agriculture what a “compassionate city” truly is.
- Providing public access to up-to-date information through the use of a City Horticulture web page, garden signage and other various media to promote and encourage public participation in the management plan

**Action Item # 4** - The City of St. Catharines will create community education and stewardship programs to assist with promoting community engagement and participation including; partnership/grant opportunities, public education and horticulture signage.



## E. Measuring Success

The goal of the HMP is to achieve long term sustainability. A sustainable system focuses on maximizing benefits and continuity. Figure 4 describes the key objectives and phases necessary to achieve a sustainable horticulture program.

**Figure 4 Key Performance Indicator Chart**

<i>Item</i>	<b>Key Objective</b>	<b>Low (Current Phase)</b>	<b>Moderate (Phase 1)</b>	<b>Good (Phase 2)</b>	<b>Optimal (Final Phase)</b>
<i>HMP</i>	Develop and implement a management plan for horticulture services	No plan	Existing plan limited in scope and implementation	Management plan accepted and implemented	City-wide plan accepted and implemented
<i>Additional Staffing</i>	Provide adequate staffing to implement and maintain the HMP	No additional staffing	De-commissioning of non-value sites to reduce staffing issues	Staffing and inventory align to meet HMP	Sufficient staffing to achieve targeted service delivery
<i>Additional Funding</i>	Develop and maintain adequate funding to implement city-wide management plan	No additional funding	Funding to support existing programs	Adequate funding to provide for increase in services	Adequate funding to reach target goals and sustain maximum benefits
<i>Community Involvement</i>	The public understand and participates in the HMP	No action	Isolated and/or limited number of active groups	Interaction of community groups and city	Shared vision and goals to develop the HMP



## Conclusion

In the short term, mitigation efforts are recommended to address the current lack of sufficient resources to maintain the entire horticulture inventory. This will include the reduction in size of some features, an increased use of perennials and native plant material in line with xeriscape principles and the removal of approximately 30 planting beds that contain landscape amenities that do not offer acceptable value or are not recognized as a necessary component of a park or site. Within neighbourhood parks specifically, these non-value sites would include landscape beds in low visibility or non-focal areas, beds that do not affect sightlines or privacy issues or beds that do not affect access or transient passage (i.e. walking through private yards). Mitigation efforts will allow PRCS to re-direct maintenance activities to ensure acceptable service levels are achieved throughout the City.

In the long term, new and high priority budget allocations should be considered for the hiring of additional qualified horticultural staff to maintain service levels and to take on new inventory when approved. In the absence of additional staff, the City should avoid additional increases to the inventory or should remove existing low-value inventory when higher-valued new landscapes are added.

The HMP ensures that the Garden City will enjoy the benefits of our green infrastructure. The plan outlines what is needed to manage our inventory and provides the roadmap to reach those goals. In order to realize this potential a list of 'action items' has been created that will act as the building blocks for a diverse and sustainable horticultural program:

**Action Item # 1** - The City of St. Catharines will approve the Horticulture Management Plan methodology to prioritize the horticulture inventory.

**Action Item # 2** - The City of St. Catharines commits to revisit and fund the remaining gap in staff hours as part of the 2018/2019 operating budget process.

**Action Item # 3** - The City of St. Catharines will provide the necessary funding to meet the goals of the Horticultural Management Plan.

**Action Item # 4** - The City of St. Catharines will create community education and stewardship programs to assist with promoting community engagement and participation including; partnership/grant opportunities, public education and horticulture signage.

