



**PUBLIC AGENDA  
STANDING POLICY COMMITTEE  
ON ENVIRONMENT, UTILITIES  
AND CORPORATE SERVICES**

**Tuesday, October 13, 2015, 2:00 p.m.**

**Council Chamber, City Hall**

**Committee Members:**

**Councillor Z. Jeffries, (Chair), Councillor E. Olauson, (Vice-Chair), Councillor A. Iwanchuk, Councillor M. Loewen, Councillor P. Lorje, His Worship Mayor D. Atchison (Ex-Officio)**

**Pages**

- 1. CALL TO ORDER**
- 2. CONFIRMATION OF AGENDA**
- 3. DECLARATION OF PECUNIARY INTEREST**
- 4. ADOPTION OF MINUTES**

**Recommendation**

That the minutes of Regular Meeting of the Standing Policy Committee on Environment, Utilities and Corporate Services held on September 14, 2015 be approved.

- 5. UNFINISHED BUSINESS**
- 6. COMMUNICATIONS (requiring the direction of the Committee)**
  - 6.1 Delegated Authority Matters**
  - 6.2 Matters Requiring Direction**
  - 6.3 Requests to Speak (new matters)**
- 7. REPORTS FROM ADMINISTRATION**
  - 7.1 Delegated Authority Matters**

**7.1.1 Standing Policy Committee on Environment, Utilities and Corporate Services Outstanding (Files CK. 225-79)**

**5 - 6**

### **Recommendation**

That the information be received.

## **7.2 Matters Requiring Direction**

### **7.2.1 2016 Green Cart Program (Files CK. 7830-4-2 and CP. 7832) 7 - 15**

#### **Recommendation**

That the Standing Policy Committee on Environment, Utilities and Corporate Services forward this report to the 2016 Business Plan and Budget Review recommending:

1. That the 2016 Green Cart program allow subscribers to include food waste; and
2. That the fees for this biweekly service be increased from \$55 (\$9.17/month) to \$70 (\$11.67/month) for the season.

### **7.2.2 Environmental Policy (C02-036) Update (Files CK. 7550-1 and CP. 7540) 16 - 25**

#### **Recommendation**

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

That the outlined revisions to the Environmental Policy (C02-036) be approved.

### **7.2.3 Integrated Waste Management Annual Report 2014 (Files CK. 430-78 and CP. 7542) 26 - 56**

#### **Recommendation**

That the report of the General Manager, Corporate Performance Department dated October 13, 2015, be forwarded to City Council for information.

### **7.2.4 2015 Update to Our Environment: The City of Saskatoon's Environmental Leadership Report (Files CK. 7550-1 and CP. 7542) 57 - 72**

#### **Recommendation**

That the report of the General Manager, Corporate Performance Department dated October 13, 2015, be forwarded to City Council for information.

<b>7.2.5</b>	<b>Continuous Improvement Strategy - Internal Process Review Update (Files CK. 116-1 and CP. 100-1)</b>	73 - 81
	<b>Recommendation</b>	
	That the report of the General Manager, Corporate Performance Department dated October 13, 2015, be forwarded to City Council for information.	
<b>7.2.6</b>	<b>Network Connectivity Services - Request for Proposal Award (Files CK. 233-1 and CC. 15-0179)</b>	82 - 84
	<b>Recommendation</b>	
	That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:	
	<ol style="list-style-type: none"> <li>1. That a contract with Shaw Business for the provision of network connectivity services for the civic facilities with the two Active Data Centers DC1 (City Hall) and DC2 (SaskTel) for up to thirty six months at an estimated fee of \$412,065, plus applicable taxes be approved; and</li> <li>2. That Purchasing Services be authorized to issue the necessary Purchase Order.</li> </ol>	
<b>7.2.7</b>	<b>Parks Design, Construction, and Maintenance - Civic Service Review (Files CK. 4205-1, x 116-1 and CP. 0116-003)</b>	85 - 101
	<b>Recommendation</b>	
	That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:	
	<ol style="list-style-type: none"> <li>1. That the improved efficiencies and effectiveness in delivering the service as outlined in this report be received as information;</li> <li>2. That the Service Level for Parks Pathway Snow Clearing be increased to include snow clearing services to 14 kilometres of Naturalized Park pathways;</li> <li>3. That the Service Level for Shelterbelt/Buffer Strip Maintenance be increased so that a proactive service level that includes mowing, trimming and garbage pick-ups within the shelterbelt areas can be established; and</li> <li>4. That the Administration report on a Park Infrastructure Asset Management Plan including a funding strategy to achieve desired service levels.</li> </ol>	
<b>7.2.8</b>	<b>Community Solar Power Co-operative - Memorandum of</b>	102 - 105

**Agreement (Files CK. 2000-5 and WT. 2000-10-9)**

**Recommendation**

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

That the City Solicitor be requested to prepare a Memorandum of Agreement, in accordance with the terms set out in this report with the SES Solar Co-operative Ltd. and that His Worship the Mayor and the City Clerk be authorized to execute the agreement under the Corporate Seal.

**7.2.9 Xylem Water Solutions - Supply of Proprietary Parts - Blanket Purchase Order (Files CK. 1000-3 and WWT. 1000-1) 106 - 111**

**Recommendation**

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the Administration prepare a blanket purchase order with Xylem Water Solutions for the supply of Flygt equipment for up to five years, for a maximum total cost of \$750,000 (including taxes); and
2. That Purchasing Services issue the appropriate blanket purchase order.

**8. MOTIONS (NOTICE PREVIOUSLY GIVEN)**

**9. GIVING NOTICE**

**10. URGENT BUSINESS**

**11. IN CAMERA SESSION (OPTIONAL)**

**12. ADJOURNMENT**

# SPC on ENVIRONMENT, UTILITIES & CORPORATE SERVICES OUTSTANDING

UPDATED OCTOBER 5, 2015

## Corporate Performance

Meeting Date	File No.	Subject	Actions/Status	Due-Date/Follow-Up
Mar. 14, 2011	7900-1	Water Conservation Initiative – Be Water Wise & Response to SEAC Report”  (formerly Water Conservation Policy)	The SEAC report was referred to Admin for review and report to A&F.	March 2016
AF Nov. 14/11	630-1	Fire Hall #8 LEED Standards Report	2) that a report be prepared after one year of utility (water, electricity and heating) data is collected to obtain a more accurate analysis of building energy, water performance and GHG reductions.	Information to be included in report on Monitoring and Verification and EPC scheduled for November 2015
AF June 25/12	373-3	LEED Standards for all New Civic Building Projects	The Committee received a report from SEAC regarding this matter and resolved that the information be received and referred to the Administration for a report back to A&F.	Anticipated March 2016
CC Mar.4/13	7820-3	Wastewater Sewer Use Policy, Bylaw and Regulatory Framework	that the new Sewer Use Bylaw and related permitting policy be postponed beyond the effective date of July 1, 2013 to accommodate education programs with affected businesses.	November 2015
CC Dec.2/13	602-2 x 610- 3	Combined Heat and Power Application – Next Steps	4) that the Administration be requested to report further on the determination of payback thresholds.	December 2015
CC Aug. 21/14	430-78	Education for Sustainable Development 2014	That the Administration report back in one year on the outcomes of the program and efforts to secure funding from other partners prior to determining an appropriate level of funding support for 2015-2016 and 2016-2017 to complete the program pilot.	August 2015

# SPC on ENVIRONMENT, UTILITIES & CORPORATE SERVICES OUTSTANDING

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*UPDATED OCTOBER 5, 2015*

## Transportation & Utilities

<b>Meeting Date</b>	<b>File No.</b>	<b>Subject</b>	<b>Actions/Status</b>	<b>Due-Date/Follow-Up</b>
CC. Jan 26/15	6300-1	<b>Decorative Street Lighting</b>	2. That the Administration, in consultation with the BIDS, explore options for decorative lighting and financial implications and report back to Committee.	December 7, 2015
CC July 17, 2013	7800-1	<b>Wastewater Treatment Plant Long-Term Capital Development and Expansion Plan</b>	4) that the Administration bring forward a report to A&F outlining what a permanent odour monitoring system would entail.	November 9, 2015
CC Apr./15	2300-1	<b>Proposed Hydropower Station at the Saskatoon Weir – Update</b>	That the Administration be directed to report back to the SPC on EU&CS with development options and potential next steps to advance the hydropower initiative.	December 7, 2015

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## 2016 Green Cart Program

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services forward this report to the 2016 Business Planning and Budget deliberations recommending:

1. That the 2016 Green Cart program allow subscribers to include food waste; and
2. That the fees for this biweekly service be increased from \$55 (\$9.17/month) to \$70 (\$11.67/month) for the season.

### Topic and Purpose

This report provides the results of a survey conducted with Green Cart program subscribers and proposes a change to the Green Cart program to include food waste based on these results.

### Report Highlights

1. Subscribers to the current Green Cart program were surveyed in July 2015. The results revealed high satisfaction with the current program with 70% having an interest in including food waste.
2. Survey results also indicated that almost 90% of subscribers are satisfied with the frequency of pick-up (biweekly). Program cost is cited as an important consideration.
3. The Administration recommends that the 2016 Green Cart program continue with biweekly collection from early May to early November, allowing food waste to be included.
4. A rate increase to \$70/subscriber is required to make the Green Cart program cost recovery for 6,000 subscribers.
5. Education on how to minimize odours generated by the Green Cart program will be developed.

### Strategic Goal

The Green Cart program supports the Strategic Goal of Environmental Leadership by responding directly to the four-year priorities to promote and facilitate city-wide composting and recycling to reduce the rate and volume of waste sent to the landfill, and to eliminate the need for a new landfill by diverting waste for re-use. It also supports the 10 year strategies to reduce greenhouse gas (GHG) emissions tied to City operations and address soil-quality issues on City-owned properties.

### Background

At its meeting on March 23, 2015, City Council resolved:

“That consultations with Green Cart program subscribers and the public assess support for changing the level of service provided by the existing seasonal program to include food waste.”

In July 2015, consultations with Green Cart subscribers and the public took place.

## **Report**

### Current Green Cart program Status

The Green Cart program has operated since 2004 as a subscription-based program. It has expanded over the last two years and now services 5,791 households (up from 2,869 in 2013), representing 8.5% of single family households.

In 2014, over 1,500 tonnes of material was collected through the program.

### Proposed program to include food waste

A survey of current subscribers and the public showed a high level of satisfaction with the existing service and that 7 out of 10 subscribers wanted to include food waste for marginally higher prices. Survey results are included in Attachment 1.

The Administration recommends that the 2016 Green Cart program continue with biweekly collection from early May to early November and that food waste now be included.

Biweekly collection of food waste is not typical for municipal food collection programs due to the risk of odours. However, survey results indicated that almost 90% of subscribers are satisfied with the frequency of pick-up (biweekly), while program cost was cited as an important consideration. Odour risks will be mitigated by limiting the type of food allowed (see Attachment 2), recommending the use of paper liners, and clearly communicating the program expectations.

### Future Program Considerations

The Ministry of Environment has no concerns at this time with the composting of food waste at the Highway 7 depot based on current operating practices that involve a compost turner. However, there is a limit to the amount of food waste that can be accepted due to the potential for pollution to occur.

The City's compost operations will need to be evaluated on an ongoing basis to ensure that the ratio of food to yard waste is at an appropriate level whereby the material can be properly and safely composted. Therefore, adding food waste to the existing Green Cart program and City depot is to be considered a temporary solution. Long term solutions will be further investigated as part of the development of Recovery Park.

## **Options to the Recommendation**

City Council may choose to continue the existing program without adding food waste. The current cost to deliver the program is \$70/subscriber (\$11.67/month) and Administration recommends eliminating, or at least reducing, the gap between the fees and costs to deliver the program. City Council may choose that a rate increase to \$60/subscriber (\$10/month) be adopted to bring the program closer to full-cost recovery.

City Council may also choose to change the Green Cart program to weekly service through the season. This change would not be available until 2017 as it would require

two additional trucks and operators that would not be ready for service when the program starts in May. The costs associated with this change also require a rate increase to \$105 (\$17.50/month).

### **Public and/or Stakeholder Involvement**

Consultations with existing Green Cart subscribers (958 responses) and the public (138 responses) were conducted in July 2015. Surveys were used to assess satisfaction with the current Green Cart program and resident interest to include food waste in the Green Cart program. Survey results are included in Attachment 1.

### **Communication Plan**

If changes to the Green Cart program are approved, a communications plan would be created to build awareness, generate enthusiasm, and ensure that participants have the information they need to confidently and correctly participate in the program.

Communications tools may include social media, website content, information flyer and letter, community association newsletter articles, news media, use of the Rolling Education Unit, and City Council updates. The customer experience and program satisfaction could be gauged through an online feedback tool.

### **Financial Implications**

Cost-recovery rates for the Green Cart program are challenging to set, as increases in the number of subscribers do not align with the necessary investments in trucks and staff. For example, each truck and driver can service 3,000 subscribers. If the program has 4,000 subscribers it increases the cost per subscriber to deliver the program due to the inefficient deployment of 2 trucks. Current subscription fees do not fully cover the costs to deliver the program, despite efforts to make the program fully cost recovered. The current cost to deliver the program is \$70/subscriber (\$11.67/month). The current rate is \$55/subscriber (\$9.17/month).

The addition of food waste to the subscription-based Green Cart program is not expected to generate significant additional operating costs at this time. Close attention to the composting operations at the depot will, however, be required. The additional costs required to promote changes to the Green Cart program would be covered from the operating budget.

### **Environmental Implications**

The 2015 Green Cart program will divert approximately 2,250 tonnes of yard waste from the landfill this year, contributing to a reduction of 525 tonnes of greenhouse gas (GHG).

If food waste is added in 2016, the potential to reduce GHGs is expected to be even higher, with an estimated reduction of approximately 1,000 tonnes.

### **Other Considerations/Implications**

There are no policy, privacy or CPTED considerations at this time.

**Due Date for Follow-up and/or Project Completion**

The performance of the Green Cart program will be reported annually as part of the Integrated Waste Management Annual Report.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Attachments**

1. Survey Results
2. Proposed Acceptable Items

**Report Approval**

Written by: Shannon Dyck, Environmental Coordinator  
Joshua Quintal, Project Engineer

Reviewed by: Amber Jones, Education and Environmental Performance Manager  
Michelle Jelinski, Environmental Operations Manager, Public Works  
Brenda Wallace, Director of Environmental and Corporate Initiatives

Approved by: Catherine Gryba, General Manager, Corporate Performance Department

Administrative Report – 2016 Green Cart Program.docx

## Survey Results

The City contracted Inshgtrix Research Inc. to conduct a quantitative study to understand attitudes, usage, and satisfaction with the Green Cart program and to gauge reactions to potential changes to the program. A total of 958 subscribers participated in the survey between June 22 and July 7, 2015 (803 online and 155 telephone).

A shortened version of this survey was available on ShapingSaskatoon.ca to enable the general public to provide their input on the Green Cart program. A total of 138 respondents completed this survey between June 22 and July 8, 2015.

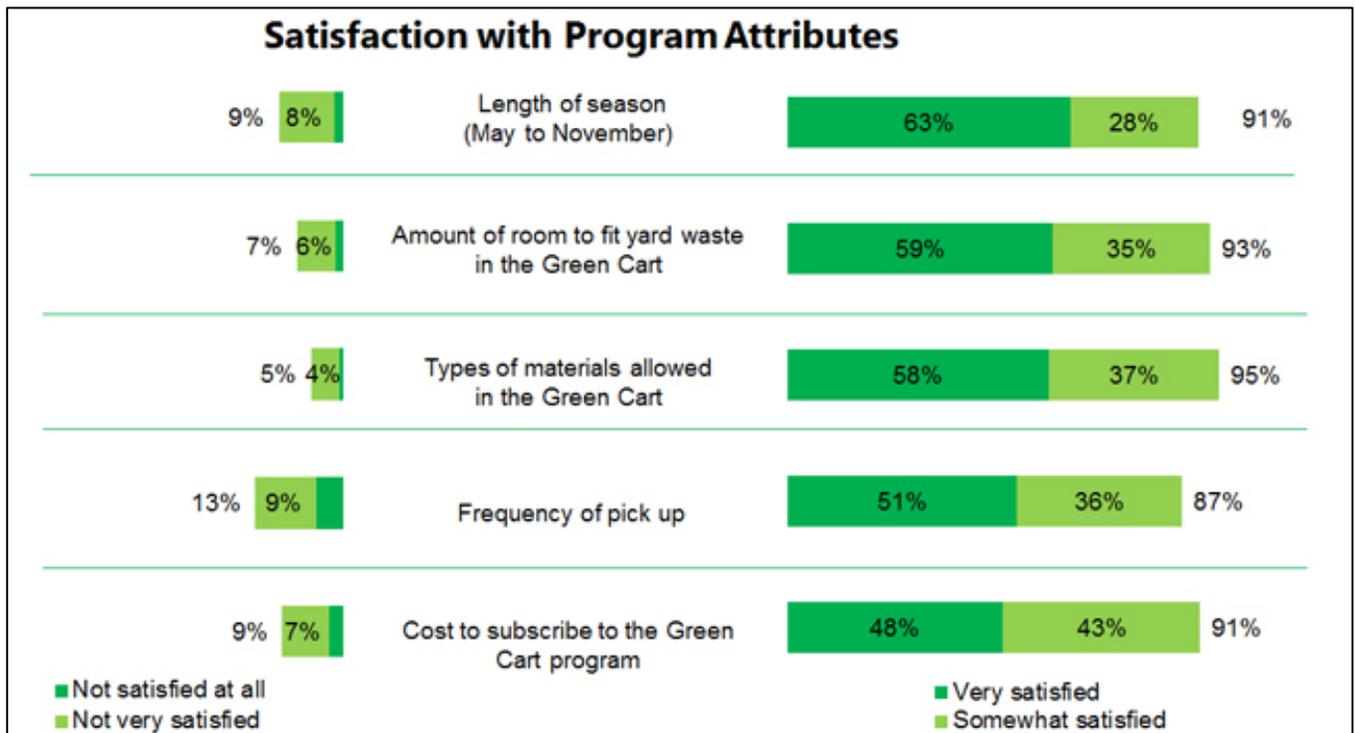
### Key Findings

The top reasons subscribers participate in the program include:

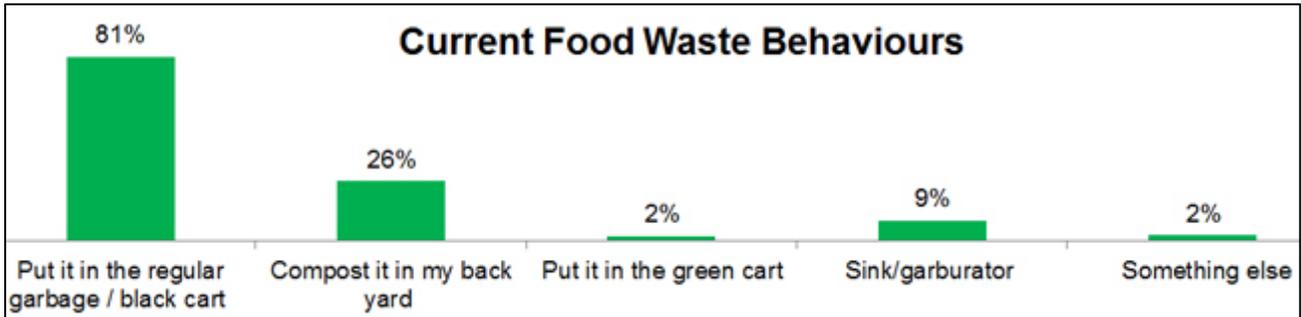
- “Divert waste from the landfill” (71%)
- “It’s good for the environment” (70%)
- “It’s more convenient than driving to a compost depot” (58%)

Adding the option to dispose of food waste through the Green Cart program links directly with the subscribers’ values of waste diversion and environmental stewardship.

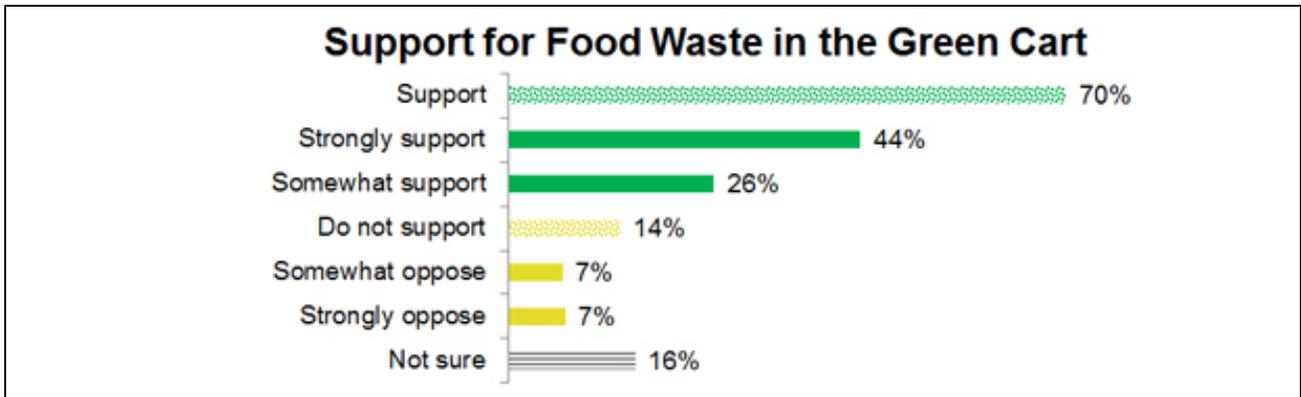
Satisfaction with the program among subscribers is high. A large majority are pleased with the season length, cart size, types of materials allowed in the cart, frequency of service, and cost.



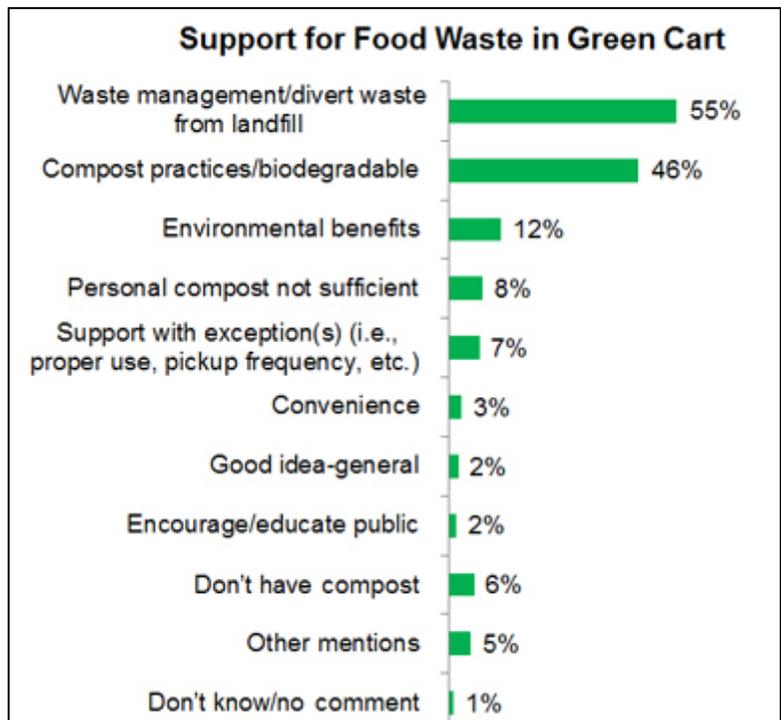
81% of subscribers admit to disposing of their food waste in their Black Carts, meaning there is a large diversion potential if food waste was accepted through the program.



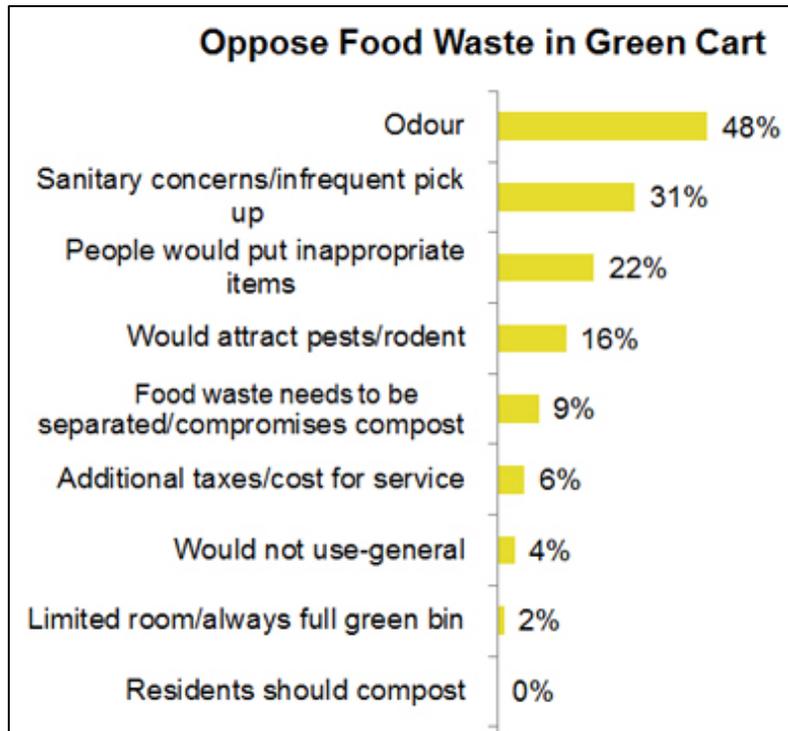
Seven in ten subscribers support the idea of extending the Green Cart program to include food waste. The highest level of support comes from younger subscribers.



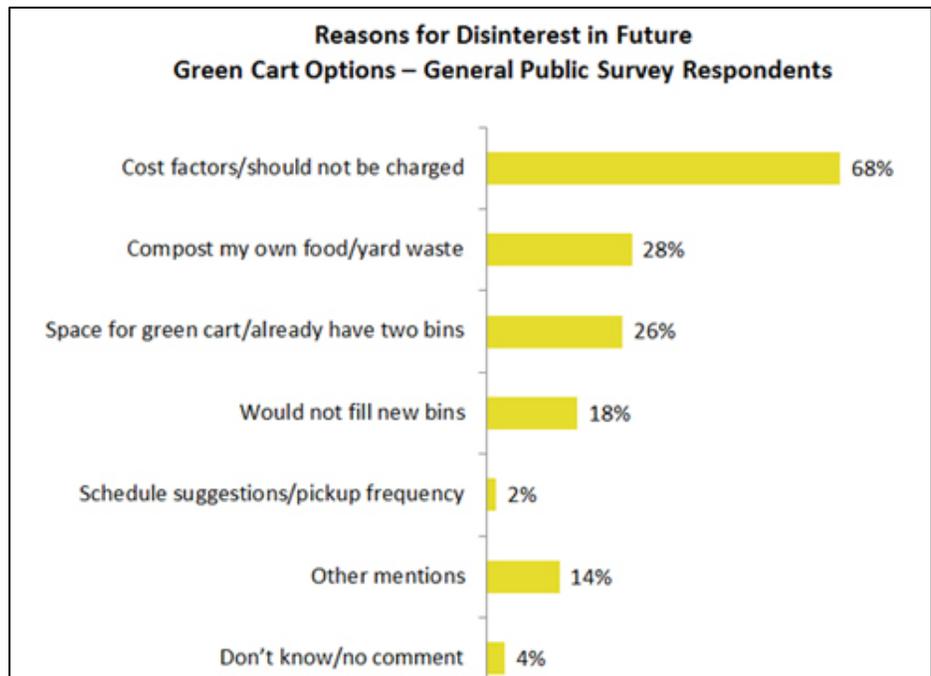
Common reasons for supporting the inclusion of food waste in the Green Cart program is to divert further waste from the landfill and to practice composting habits.



The primary reasons some subscribers oppose the inclusion of food waste include odour, sanitary and pest concerns, and the feeling that people would put inappropriate items into their carts. Therefore, adequate communications and education will be required to explain what materials are and are not accepted, as well as tips to reduce odours.



Among public survey respondents, interest in subscribing to a Green Cart program that includes food waste is moderately low at 37% (20% extremely likely and 17% somewhat likely). Primary reasons for disinterest in subscribing were due to price (68%) and current backyard composting activities (28%).



## In Summary

- Satisfaction with the Green Cart program among current subscribers is high. A large majority are somewhat to very satisfied with the season length (91%), cart size (93%), types of materials allowed in the cart (95%), frequency of service (87%), and cost (91%).
- Seven in ten subscribers support the idea of extending the Green Cart program to include food waste. The highest level of support comes from the younger subscribers.
- The primary reasons for opposing the inclusion of food waste included odour, sanitary and pest concerns, and the feeling that people would put inappropriate items into their carts.
- Among public survey respondents, interest in subscribing to a Green Cart program that includes food waste was 37% (20% extremely likely and 17% somewhat likely). Primary reasons for disinterest in subscribing were due to price (68%) and current backyard composting activities (28%).
- The top reasons subscribers participate in the Green Cart program include: to “Divert waste from the landfill” (71%), because “It’s good for the environment” (70%), and because “It’s more convenient than driving to a compost depot” (58%). Given their reasons for participation, adding the option to dispose of food waste through the Green Cart program links directly with the values of waste diversion and environmental stewardship.
- 81% of Green Cart subscribers admit to disposing of their food waste in their Black Carts, meaning there is a large diversion potential if food waste was accepted through the Green Cart program.

**Proposed Acceptable Items**

<b>Green Cart Food and Yard Waste Collection</b>	
Y	Fruit / Vegetables
N	Dairy
N	Fats, Oil, Grease
Y	Bread / Grains
Y	Coffee
Y	Paper Teabags / Coffee Filters
Y	Eggshell
Y	Paper Napkins
Y	Paper Plates (unwaxed)
N	Food Soiled Containers
Y	Leaves / Grass
Y	Small Branches*
Y	Weeds
Y	Soft Garden Refuse**
Y	Stiff Garden Refuse***
N	Meat / Bones
N	Table scraps
N	Waxed Paper
N	Liquids
Y	Newspaper / Paper Bags (as bin liners)
Y	Wood Stir Stix / Chop Stix
N	Compostable Plastic
N	Plastic
N	Glass
N	Metal

- \* Branches no larger than a finger (in diameter)
- \*\* For example, vegetables, flowers, plant clippings
- \*\*\* For example, raspberry canes, corn, sunflower stalks

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## Environmental Policy (C02-036) Update

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

That the outlined revisions to the Environmental Policy (C02-036) be approved.

### Topic and Purpose

This report recommends revisions to the City of Saskatoon's Environmental Policy (Policy) (C02-036).

### Report Highlights

1. A meaningful Environmental Policy is expected to strengthen the City of Saskatoon's (City) ability to achieve its goal of Environmental Leadership by providing a framework for the work of employees and contractors across the corporation.
2. The City's Environmental Policy was compared to policies from other cities to identify deficiencies in themes and language. This comparison guided the changes suggested in the amended policy.
3. The revised policy better reflects the City as a member of the community in Saskatoon that all share responsibility for environmental sustainability.

### Strategic Goals

Improvement of our Environmental Policy strengthens the City's commitment to many of the priorities and strategies set out in the Strategic Goals of Continuous Improvement, Environmental Leadership, Sustainable Growth, Moving Around, and Asset and Financial Management.

### Background

Environmental Policy (C02-036) has existed since December 18, 2006 without edit or review. The policy states that it should be reviewed and approved by City Council annually.

### Report

#### Importance of an Up-to-Date Policy

A meaningful Environmental Policy aims to provide a framework for developing and providing not only environmental programs and services, but also to facilitate responsible investments in services and infrastructure. The proposed amendments to the Policy will strengthen the City's commitments to the citizens of today and tomorrow, employees, and the natural environment.

The recommended updates consider environmental trends, regulatory requirements, the needs of the City's programs and services, and a comparison with other cities. A summary of the revisions is available in Attachment 1.

#### Updating Themes to Align with Other Cities

Eight themes were identified in many of the environmental policies or similar documents for cities across the country (Attachment 2). The City's overarching goal of becoming environmentally sustainable aligns with best practises. However, deficiencies exist in the following areas and amendments to the Policy have been suggested to improve this:

- shared responsibility
- protection and/or enhancement of natural areas and resources
- biodiversity

#### Clarifications and Language Improvements

Comparisons also looked at the language used in environmental objectives, the level of detail in documents, and the overall intention. In general, the City's Policy performed well in the comparison but identified the following suggested improvements:

- use of specific language reflecting current global trends in environmental leadership and management, and
- broadening of our policy objectives to satisfy thematic deficiencies.

Language in the Policy has been updated to reflect this. The amended Policy is shown as Attachment 3.

#### **Options to the Recommendation**

City Council may choose to reject the proposed amendments to the Environmental Policy.

#### **Communication Plan**

The Environmental Policy is available to the general public on the City's website. Amendments, if approved, will be communicated to civic employees through emails, meetings, and information sessions.

#### **Policy Implications**

This report proposes revisions to the Environmental Policy (C02-036).

#### **Other Considerations/Implications**

There are no immediate financial, environmental, stakeholder, privacy or CPTED implications to report.

#### **Due Date for Follow-up and/or Project Completion**

The Environmental Policy will be reviewed again in 2016. If amendments are warranted, a report will be submitted to City Council by September.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Attachments**

1. Summary of Revisions
2. Comparison with other cities
3. Revised Environmental Policy

**Report Approval**

Written by: Kristin Bruce, Policy Intern, Environmental and Corporate Initiatives

Reviewed by: Amber Jones, Manager, Education and Environmental Performance

Approved by: Brenda Wallace, Director, Environmental and Corporate Initiatives  
Catherine Gryba, General Manager, Corporate Performance Department

Administrative Report – Environmental Policy (C02-036) Update.docx

## Summary of Revisions

### Purpose

The purpose statement was revised to clarify that it “*serves as a statement of intentions and objectives in relation to the desired overall performance of the City of Saskatoon towards community sustainability*” and not just for individual staff members contributions as stated in 2006.

### Definitions

Policy definitions were updated, added and deleted to better reflect current understanding of sustainability, incorporate themes from other Municipal policies, to strengthen the ability of the policy to be used as a framework for decision making, and to expand the intention of the policy to include civic government within the context of the community of Saskatoon.

### Important Additions:

*Sustainability - Systems thinking is ingrained such that each employee recognizes the connections between actions and the resulting impacts, considering a four pillars framework. This framework focuses on ecologic (the natural environment), social (society and justice), cultural (values and perspectives), and economic factors, today and into the long-term future.*

*Sustainable Community – Thriving in harmony with nature, in that citizen quality of life today does not negatively affect the ability of future generations to live by those same or improved standards.*

*Biodiversity - The variety of life in the Saskatoon region, particularly species, habitats and ecosystems typical to the Canadian prairie.*

### Policy and Objectives

Policy and objectives were updated to establish shared responsibility, meaningful engagement, accountability, and environmentally responsible behaviour for both the community and the City including civic staff, City Council Members, stakeholders, business owners, partners, and citizens of Saskatoon. The policy was updated to read:

#### 3.1 GENERAL

*The City of Saskatoon is committed to becoming an environmentally sustainable community. As a result, the organization encourages and expects environmentally responsible behaviour from all employees and contractors working at civic facilities and grounds. Achieving the ultimate goal involves shared responsibility between the community at large and our organization. As such the City of Saskatoon has a responsibility to facilitate and provide programs and services that move toward sustainability.*

The Objectives in the policy were updated to read:

### 3.1 OBJECTIVES

- 3.2.1 *To promote and engage in the protection, enhancement, and responsible use of natural areas and resources; through attention to: biodiversity, protection of soils as a valued resource, climate change, water and air quality, land use, transportation patterns, and civic development.*
- 3.2.2 *To ensure asset and financial sustainability through life cycle accountability, risk management, and responsible environmental management.*
- 3.2.3 *To continually improve overall environmental performance through ongoing research and appropriate revision to objectives and targets, as well as transparent plain language reporting.*
- 3.2.4 *To seek the commitment of all internal staff, management, council members, businesses, and citizens to environmental stewardship and safety by building relationships and understanding through communication, education, training, and support.*
- 3.2.5 *To design, construct, retrofit, and operate new and existing City facilities so that reduced environmental impacts are considered through all phases of life by incorporating: energy efficiency, water conservation, waste minimization, energy generation that reduces greenhouse gas emissions, pollution prevention, and investments in indoor environmental quality.*
- 3.2.6 *To meet or exceed environmental requirements and other performance targets the City has committed to meet.*
- 3.2.7 *To create meaningful stakeholder partnerships and civic collaboration through consultation and integration with programs and initiatives.*

### Reporting and Responsibilities

Responsibilities were updated to align with the City's current structure. A section on reporting was added to strengthen accountability for environmental objectives by requiring annual reporting on performance, and to formalize the requirement for reporting on all topics to consider environmental implications.

Comparison with other Canadian Cities

Saskatoon's Environmental Policy was compared against 26 other Canadian Cities' with environmental plans and policies to identify common themes and language used in these key documents, the results are shown in the table below. A '1' indicates the theme or language was used in the reviewed document and '0' implies the opposite.

Municipality	Document for Analysis	Waste Reduction/Prevention	Environmental Stewardship	Overall Sustainability Goal	Continuous Policy or Environmental Performance Improvement	Shared Responsibility in Environmental Improvement and Protection	Lower and/or Prevent Pollution	Protect and/or Enhance Natural Areas and Resources	Bio-diversity
Vancouver	Planning Document	1	0	1	1	1	1	1	1
Brampton	Planning Document	1	1	1	1	1	1	1	0
Hamilton	Environmental Policy	0	0	1	1	1	1	1	0
Surrey	Planning Document	1	1	1	1	1	1	1	1
Burnaby	Environmental Policy	0	1	1	1	0	0	1	0
Saskatoon	Environmental Policy	1	1	1	1	0	1	0	0
Windsor	Planning Document	0	0	1	1	1	1	1	0
Winnipeg	Environmental Policy	0	0	1	0	1	0	0	0
Edmonton	Environmental Policy	0	1	1	1	1	0	1	1
Calgary	Environmental Policy	1	0	1	1	1	1	1	0
Toronto	Planning Document	1	0	1	0	1	1	1	1
Ottawa	Planning Document	1	0	1	0	1	1	1	0
Mississauga	Planning Document	1	0	1	0	1	1	1	0
Laval	Planning Document	1	0	1	0	1	0	1	1
Halifax	Planning Document	1	0	1	1	1	1	1	0
London	Planning Document	1	1	1	0	0	1	1	1
Markham	Environmental Policy	0	1	1	0	1	1	1	1
Longueuil	Planning Document	1	0	1	0	1	1	1	0
Kitchener	Planning Document	1	1	1	1	1	1	1	0
Richmond	Planning Document	1	1	1	0	0	1	1	1
Richmond Hill	Environmental Policy	0	0	1	1	1	1	1	0
Greater Sudbury	Planning Document	1	1	1	0	1	1	1	1
Oakville	Environmental Policy	1	1	1	0	1	1	1	0
Burlington	Planning Document	1	0	1	0	1	1	1	0
Gatineau	Environmental Policy	1	0	1	0	1	1	1	1
Vaughan	Planning Document	1	0	1	0	1	1	1	0
<b>TOTAL</b>		<b>19</b>	<b>11</b>	<b>26</b>	<b>12</b>	<b>22</b>	<b>22</b>	<b>24</b>	<b>10</b>

Results suggest the City of Saskatoon's overarching goal of becoming environmentally sustainable is similar to other Canadian cities. However, deficiencies exist in the following areas:

- shared responsibility,
- protection and/or enhancement of natural areas and resources, and
- biodiversity.

Edits to the current policy have been suggested based on the results above. Although biodiversity is included in less than half of other municipal policies/plans, the updated version of the environmental management standard (ISO 14001) suggests an increased focus on biodiversity justifying its inclusion in the Saskatoon Environmental Policy.

No formal environmental policy or planning documents could be found for Regina, Montreal, Quebec City, or Sherbrooke. As such these municipalities were not used in the comparison.

# CITY OF SASKATOON COUNCIL POLICY

<b>NUMBER</b>
<i>C02-036</i>

<b>POLICY TITLE</b> <i>Environmental Policy (REVISED)</i>	<b>ADOPTED BY:</b> <i>City Council</i>	<b>EFFECTIVE DATE</b> <i>Month, Day, Year</i>
<b>ORIGIN/AUTHORITY</b> <i>Clause 8, Report No. 17-2006 of the Administration and Finance Committee</i>	<b>CITY FILE NO.</b> <i>CK. 375-1</i>	<b>PAGE NUMBER</b> <i>1 of 4</i>

1. PURPOSE

This document serves as a statement of intentions and objectives in relation to the desired overall performance of the City of Saskatoon towards community sustainability.

2. DEFINITIONS

2.1 Biodiversity

The variety of life in the Saskatoon region, particularly species, habitats and ecosystems typical to the Canadian prairie.

2.2 Environment

The surroundings in which a community is located and an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelations. The environment in this context extends from within the community of Saskatoon to the prairie region and the broader global system.

2.3 Environmental Management

Those elements of the overall planning and management function of the City of Saskatoon that develop, implement, and maintain its environmental policy and objectives.

2.4 Environmental Requirements

2.4.1 Regulatory Requirements - The collection of laws such as: Acts, Regulations, Guidelines, Standards, Permits to Operate, and Bylaws, as enacted by any federal, provincial, municipal, territorial or Aboriginal governments that specifically apply to the plans,

# CITY OF SASKATOON COUNCIL POLICY

NUMBER  
C02-036

POLICY TITLE	EFFECTIVE DATE:	PAGE NUMBER
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constructed works, operations, maintenance, and services of the City of Saskatoon that pertain to the environment;

2.4.2 Non-regulatory Requirements - The collection of non-regulatory items such as: industry codes of practice, agreements with public authorities, internal Council or Administrative policies or requirements or any other non-regulatory guideline pertaining to the environment to which the organization subscribes to.

## 2.5 Environmental Sustainability

Maintaining qualities that are valued in the natural environment by living within the Earth's limits through:

- Energy efficiency and reliance on renewable energy sources;
- Preventing waste;
- Transportation and land-use patterns that protect the environment;
- Maintaining the capacity of the environment to sustain living conditions for people and other species.

## 2.6 Sustainability

Employee recognition of the connections between actions and the resulting impacts, considering a four pillars framework. This framework focuses on ecologic (the natural environment), social (society and justice), cultural (values and perspectives), and economic factors, today and into the long-term future.

## 2.7 Sustainable Community

Thriving in harmony with nature to ensure that citizen quality of life today does not negatively affect the ability of future generations to live by the same or improved standards.

## 3. POLICY

### 3.1 General

The City of Saskatoon is committed to becoming an environmentally sustainable community. As a result, the organization encourages and

# CITY OF SASKATOON COUNCIL POLICY

NUMBER  
C02-036

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expects environmentally responsible behaviour from all employees and contractors working at civic facilities and grounds. Achieving the ultimate goal involves shared responsibility between the community at large and our organization. As such the City of Saskatoon has a responsibility to facilitate and provide programs and services that move toward sustainability.

### 3.2. Objectives

The following environmental performance objectives guide the development and implementation of programs, initiatives, and services.

- 3.2.1 To promote and engage in the protection, enhancement, and responsible use of natural areas and resources; through attention to: biodiversity, protection of soils as a valued resource, climate change, water and air quality, land use, transportation patterns, and civic development.
- 3.2.2 To ensure asset and financial sustainability through life cycle accountability, risk management, and responsible environmental management.
- 3.2.3 To continually improve overall environmental performance through ongoing research and appropriate revision to objectives and targets, as well as transparent plain language reporting.
- 3.2.4 To seek the commitment of all internal staff, management, council members, businesses, and citizens to environmental stewardship and safety by building relationships and understanding through communication, education, training, and support.
- 3.2.5 To design, construct, retrofit, and operate new and existing City facilities so that reduced environmental impacts are considered through all phases of life by incorporating: energy efficiency, water conservation, waste minimization, energy generation that reduces greenhouse gas emissions, pollution prevention, and investments in indoor environmental quality.

# CITY OF SASKATOON COUNCIL POLICY

NUMBER  
C02-036

POLICY TITLE	EFFECTIVE DATE:	PAGE NUMBER
<i>Environmental Policy (REVISED)</i>	<i>Month, Day, 2015</i>	<i>4 of 4</i>

3.2.6 To comply with environmental requirements and meet or exceed other performance targets the City has committed to meet.

3.2.7 To create meaningful stakeholder partnerships and civic collaboration through consultation and integration with programs and initiatives.

#### 4. RESPONSIBILITIES

4.1 General Manager, Corporate Performance - is responsible for administering this policy and recommending updates to this policy.

4.2 City Council - is responsible for reviewing this policy and any recommended changes on an annual basis, as well as final approval.

#### 4.3 Reporting

4.3.1 Environmental and Corporate Initiatives – is responsible for annual reporting on environmental performance objectives. Reports are to be made available internally for City Council and Administration as well as externally to the general public.

4.3.2 All City of Saskatoon Employees – are responsible for including Environmental Implications in all reports being put forward to Committees and City Council.

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## Integrated Waste Management Annual Report 2014

### Recommendation

That the report of the General Manager, Corporate Performance Department dated October 13, 2015, be forwarded to City Council for information.

### Topic and Purpose

The performance of civic waste handling and reduction programs are reported in the Integrated Waste Management Annual Report for 2014.

### Report Highlights

1. Saskatonians continue to dispose less waste than the national average, but at a rate higher than most Canadian cities at 249 kilograms per person.
2. A Waste Diversion Rate of 70% by 2023 has been established as a Performance Target. The 2014 rate is 22.5%, below the national average (2012) of 33.7%.
3. The compost program contributes 13% toward the waste diversion rate of 22.5%. The next biggest contributor to waste diversion is the curbside recycling program at 7% followed by recycling depots at 2%.
4. A new education blitz at the landfill reminded 600 customers about covering or tarping loads; residents were provided information about alternative disposal options for compostable materials, paint, tires and household hazardous waste.
5. More than 86,000 vehicles delivered loads to the landfill. Total material deposited in 2014 was 125,238 tonnes.
6. 2.8 million garbage carts are emptied each year with a reliability rate of 99.9%. In 2014, City staff responded to 2,400 calls about missed garbage collections.
7. 1.1 million blue recycling carts were tipped in 2014 with 1,110 occurrences of incorrectly placed or overfilled carts (for a non-compliance rate of 0.1%).

### Strategic Goal

The information in this report supports the four-year priorities to promote and facilitate city-wide composting and recycling and implement energy-efficient practices in City operations, along with the long-term strategy to eliminate the need for a new landfill under the Strategic Goal of Environmental Leadership.

### Background

City Council received an Integrated Waste Management Annual Report for 2013, prepared by Environmental and Corporate Initiatives Division in 2014.

### Report

Attachment 1 is the *Integrated Waste Management Annual Report* for 2014. The report provides a description of the waste handling, waste reduction, and waste diversion programs and services provided by the City of Saskatoon (City). These include curbside garbage and recycling collections for all single-family households; a regional

landfill; optional leaves and grass curbside collections; 2 compost depots; 4 recycling depots; household hazardous waste drop-off events; garbage collection for many multi-unit and commercial customers (other buildings and businesses contract to private haulers), and multi-unit recycling collection. Other waste diversion programs include home composting education, curbside swap, and integrated waste education.

The report highlights changes measurable outcomes achieved, and describes the responsibilities of Environmental & Corporate Initiatives and Public Works. Highlights from the report are outlined above. Now that the City has adopted a Waste Diversion target of 70% by 2023, this report and future Integrated Waste Management Annual Reports will serve as a progress report toward this ambitious target.

### **Communication Plan**

The 2014 *Integrated Waste Management Annual Report* will be available for viewing on the City's website. A Public Service Announcement and social media posts will be distributed.

### **Environmental Implications**

Greenhouse gas (GHG) emissions implications and other environmental protection measures are included in the annual report.

### **Other Considerations/Implications**

There are no public and/or stakeholder involvement, policy, financial, privacy or CPTED implications or considerations.

### **Due Date for Follow-up and/or Project Completion**

An Integrated Waste Management Annual Report will continue to be produced each year. The next report will be prepared for the 2015 year, submitted to the Standing Policy Committee on Environment, Utilities and Corporate Services in April 2016.

### **Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

### **Attachment**

1. Integrated Waste Management Annual Report 2014

### **Report Approval**

Written by: Amber Jones, Education and Environmental Performance Manager  
Reviewed by: Brenda Wallace, Director of Environmental and Corporate Initiatives  
Michelle Jelinski, Environmental Operations Manager  
Pat Hyde, Director of Public Works  
Approved by: Catherine Gryba, General Manager, Corporate Performance Department

# 2014 Integrated Waste Management Annual Report

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## **Introduction – What is Integrated Waste Management**

Integrated Waste Management is a systems approach to waste handling that focuses on reducing waste where possible, re-using whatever can be given a new purpose, recycling and recovering resources to minimize demand for raw materials, and conscientiously managing what remains to ensure the safety of people and the environment.

The City's core services include:

- curbside garbage and recycling collections for all single-family households;
- a regional landfill;
- optional leaves and grass curbside collections;
- 2 compost depots;
- 4 recycling depots;
- household hazardous waste drop-off events;
- garbage collection for many multi-unit and commercial customers (other buildings and businesses contract to private haulers); and
- multi-unit recycling collection

Other waste diversion programs include home composting education, curbside swap, and integrated waste education.

## **Reducing Waste – Targets**

The City of Saskatoon has adopted a 10-year target to divert 70% of waste from the Saskatoon landfill with a longer term vision of achieving Zero Waste. This ambitious target shows a commitment by the City of Saskatoon (City) to establish new options for waste reduction in recycling, reusing, and composting as well as continuously improving our existing programs. Joining the National Zero Waste Council (NZWC) in 2014 sets a clear visionary direction for reducing waste to the highest degree possible. This global movement towards eliminating waste includes not only recycling, reusing, and composting of produced waste but also requires a philosophical shift towards reducing the waste in the first place through design and planning decisions.

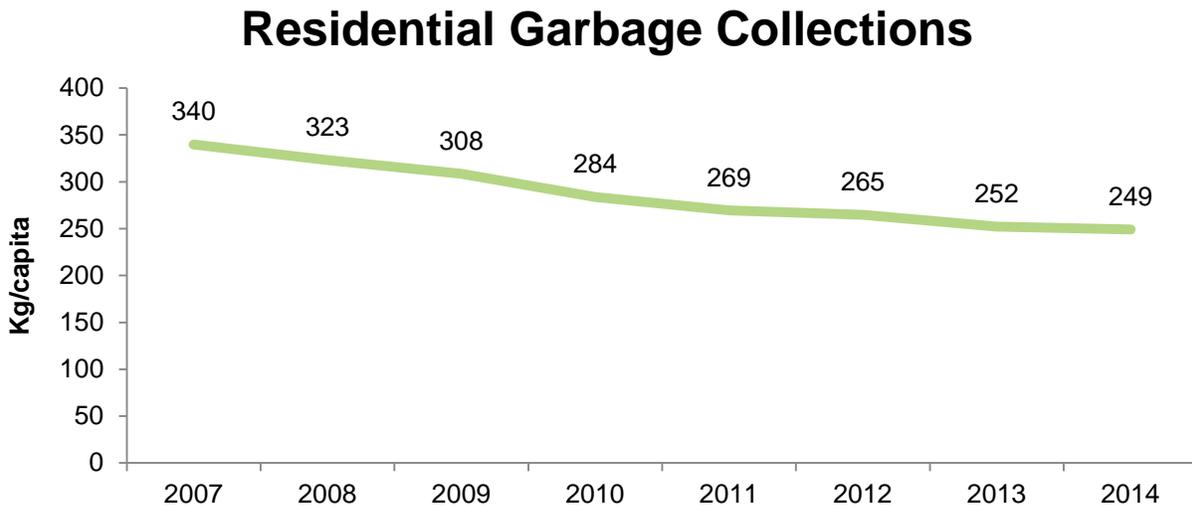
The City's Waste Diversion Rate, at 22.5%, has been relatively stable over the last two years. For this reason the progress toward the target of 70% has been identified as needing improvement.

## Saskatoon's Waste Disposal

The amount of garbage collected is reducing every year. In 2014:

- 125,238 tonnes of garbage was disposed of at the City landfill from all sources
- Residential collections by the City accounted for 64,091 tonnes (53,000 tonnes from black carts, the rest from multi-units)
- 249 kg of garbage was disposed per person.

As shown in the figure below, the rate of garbage disposal per person has been declining over time.



Saskatoon's disposal was compared to the national and provincial averages as shown in the table below and compares favorably to both the national and provincial averages.

Region	Year	Total Waste Disposed (tonnes)	Total Waste Rate (kg/capita)	Residential Component (tonnes)	Residential Rate (kg/capita)
<b>Saskatoon</b>	2012	117,660	486	64,363	265
<b>Saskatoon</b>	2014	125,238	484	64,091	249
<b>Saskatchewan</b>	2012	957,669	881	315,987	290
<b>Canada</b>	2012	25,013,204	720	9,586,511	276

Source: Stats Canada

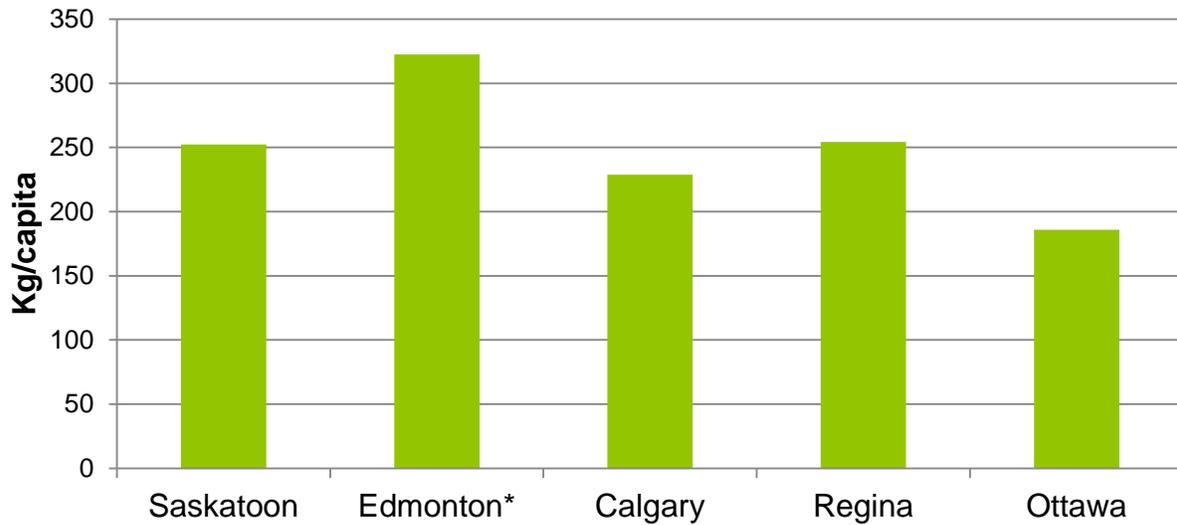
Saskatoon's Residential Waste Disposal Rate was also compared to other cities in Canada using data from the National Solid Waste Benchmarking Initiative<sup>1</sup> (NSWBI).

As shown in the table below, residents in Saskatoon dispose of a similar amount of waste to residents in Regina, but more waste than three other comparable cities in

<sup>1</sup> National Solid Waste Benchmarking Initiative collects data on waste management in select cities, in 2013 twelve (12) cities participated

2013. NSWBI also reported that on average 0.60 tonnes of waste is collected per single family household, while Saskatoon's average is approximately 0.79 tonnes per household.

## 2013 Residential Garbage Collection



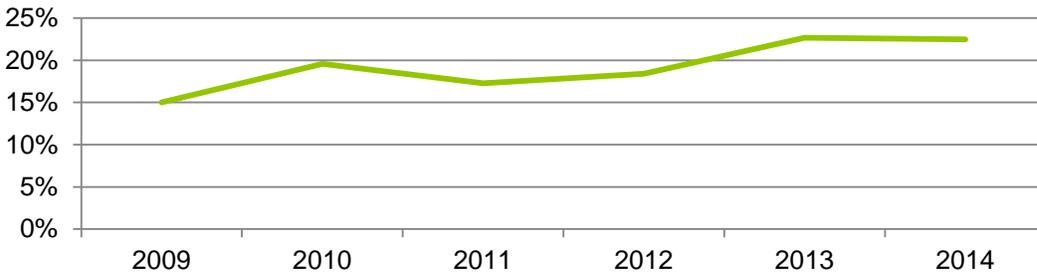
Source: National Solid Waste Benchmarking Initiative 2014

\* Edmonton collects organics and garbage in a single-stream. An estimated 37% of the organics is diverted from the collected waste.

## Saskatoon's Waste Diversion

Saskatoon's Waste Diversion rate remained stable since last year and is below the national average. On average in 2012 (Stats Canada), Canadians diverted 243 tonnes of waste per capita resulting in an overall diversion rate of 33.7% (almost 8.5 million tonnes) while in Saskatchewan, approximately 143 tonnes per capita was diverted resulting in a diversion rate of 16.3%. Saskatoon's diversion rate in 2012 was well below the national average at 18.4%, it increased to 22.7% in 2013, and remained relatively stable at 22.5% in 2014.

### Saskatoon's Waste Diversion Rate



Saskatoon's 2014 diversion rate was also benchmarked against other Canadian Cities, as shown in the table below. Saskatoon's diversion rate is second last amongst compared Cities.

City	2014 Diversion Rate
Halifax	61%
Toronto	53%
Ottawa	52%
Edmonton	51%
Calgary	34%
Saskatoon	23%
Regina	19%

## City of Saskatoon Waste Service Delivery

Integrated Waste Management falls within the **Environmental Health** Business Line which is jointly managed by Public Works (Waste Handling Service Line) and Environmental & Corporate Initiatives (Waste Reduction & Resource Recovery Service Line). The goal of the Waste Handling Service Line is to provide efficient, effective, and customer-oriented waste management services. Waste Handling includes:

- solid waste collections;
- the management of City-owned garbage carts; and
- operating the landfill to optimize available space and comply with environmental requirements.

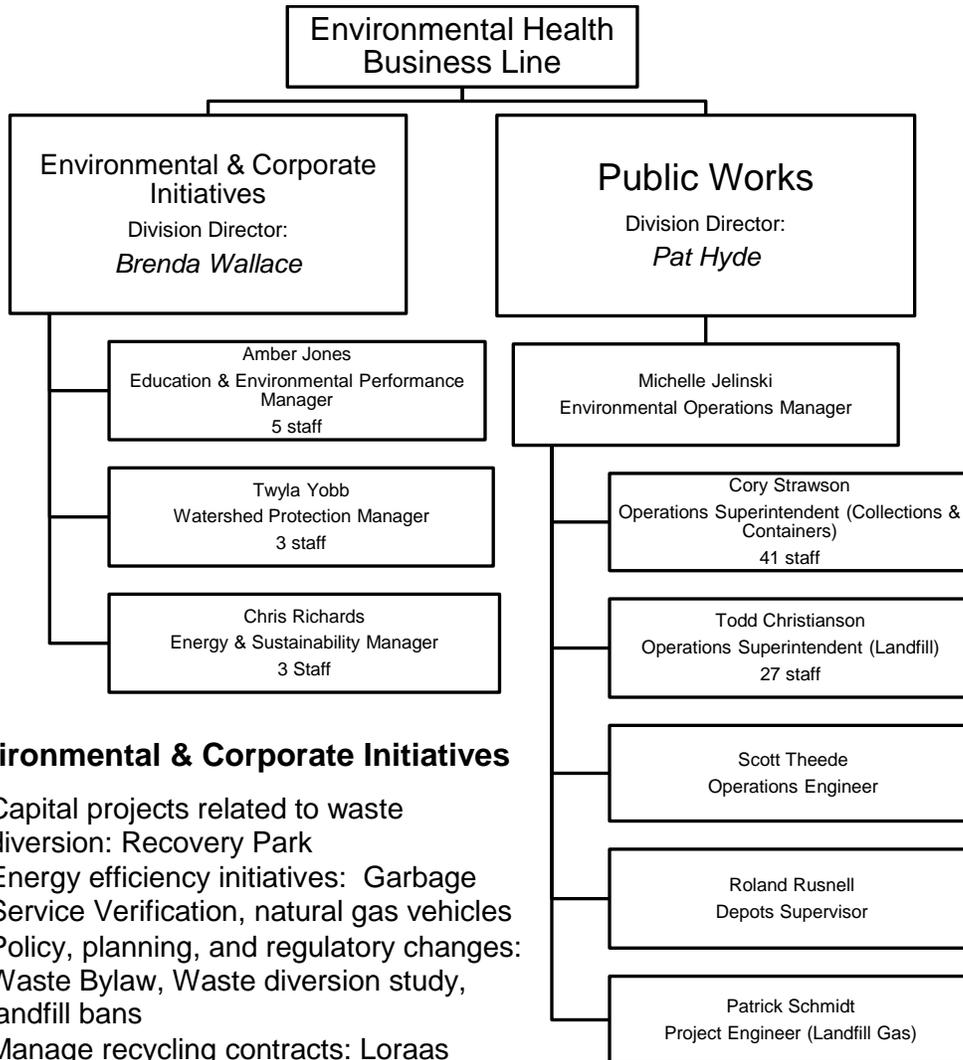


The goal of Waste Reduction is to provide a focus on reducing, reusing, recycling, and recapturing resources while seeking operational efficiencies. Initiatives under this program include:

- recycling contracts for curbside and multi-unit dwellings;
- support for recycling depots located across the community;
- composting of yard waste at drop-off depots; and
- residential subscription yard waste collection initiative.

## Role of Public Works and Environmental & Corporate Initiatives

Integrated Waste Management is delivered by Public Works and Environmental & Corporate Initiatives under the **Environmental Health Business Line**.



### Environmental & Corporate Initiatives

- Capital projects related to waste diversion: Recovery Park
- Energy efficiency initiatives: Garbage Service Verification, natural gas vehicles
- Policy, planning, and regulatory changes: Waste Bylaw, Waste diversion study, landfill bans
- Manage recycling contracts: Loraas Recycle, Cosmopolitan Industries Ltd.
- Coordinate Household Hazardous Waste Days
- Waste diversion programs and initiatives: Saskatoon Curbside Swap, public space recycling, festival and event sustainability, civic recycling
- Education, outreach and communications pertaining to waste reduction and diversion programs and future diversion initiatives

### Public Works

- Garbage containers and garbage collection services
- Manage the Saskatoon Regional Waste Management Facility (Landfill)
- Operate compost and recycling depots
- Leaves & Grass collections including providing green carts
- Deliver recyclable materials from depots to Cosmo
- Communications pertaining specifically to waste management operations

## **Garbage Handling Service – Keeping Saskatoon Safe and Clean**

### **Containers**

Providing waste carts to new homes and repairing carts when they are damaged.

### **Containers Provided to Residential (Curbside) Properties**

The City of Saskatoon owns and maintains the black roll-out carts provided to street-oriented residential properties. In 2014:

- 1,300 new carts were delivered to new homes
- 6,100 carts were repaired or replaced (430 of these were stolen and could not be recovered)
- Current cart failure rate has been reduced to 0.55% due to improvements in purchasing specifications made in late 2012. In neighbourhoods with carts purchased under old specifications, failure rates can be as high as 15% (i.e. Caswell Hill, College Park, Confederation Park)

Carts are replaced because they reached the end of their useful life or because they were not performing in the field.

### **Multi-Unit Residential Containers**

The City of Saskatoon does not provide garbage containers for multi-unit dwellings and instead offers a Multi-Unit Dwelling Waste Bin Grant to offset the cost borne by condominium associations and property managers for the purchase and maintenance of metal waste bins.

The grant provides \$8 per year per residential unit. \$265,764 was paid to 740 buildings as part of this program in 2014.

### **Resources**

The containers crew is comprised of 3 permanent staff plus 1 additional seasonal staff in the summer. These employees deliver new garbage containers to new homes, as well as repair or replace damaged containers in the field. They also deliver and retrieve the larger 300 gallon garbage containers for Taste of Saskatchewan, the Fringe Festival, Rib Fest, and other special events.

The containers crew, rear loader crew and a customer service representative are overseen by the Utility Customer Service Supervisor (Debbie Donahue).

## Garbage Collections

Collecting garbage from black carts and steel bins across the city.



### **Garbage Collection from Residential (Curbside) Properties**

Garbage collection services are provided to 67,000 single-family homes by a fleet of 21 garbage trucks.

In Saskatoon, the average weight of the contents of each cart on collection day ('tip') is 18 kilograms (40 lbs). The national average was 14 kilograms (31 lbs) according to national benchmarking.

Scheduled garbage collections occur from Monday to Friday, including Stat holidays, except for Christmas Day and New Year's Day. In 2014, weekly collections were conducted from April to October inclusive, with the remainder of the year on a bi-weekly collection schedule. Additional garbage collections were also provided during the Christmas holiday season.

### **Garbage Collection from Multi-Unit Residential Properties**

The City of Saskatoon provides one collection per week for each multi-unit residential property as part of the regular service supported by property taxes. Additional levels of

service may be contracted with the City or through a private waste management company.

The City operates 2 fork-lift trucks in the provision of metal bin garbage collection services to multi-unit residential properties and commercial contracts. Approximately 64% of multi-unit residential properties use the services provided by the City of Saskatoon. The remaining 36% of property managers and condominium associations choose to contract services through private options.

## Resources

The Collections group in Public Works is comprised of 17 permanent Utility Collections Operators plus an additional 6 seasonal Utility Collections Operators during weekly collections in the summer.

Operators drive specialty equipment called sideloaders for residential collections and commercial collections of 300 gallon poly containers. Fork truck operators drive large waste trucks outfitted with fork-lift arms to collect waste from metal bins located at multi-unit dwellings and from the commercial sector. They also operate the fork trucks to collect recycling materials from the City-owned recycling depots and deliver this material to Cosmopolitan Industries.



A rear loader crew, consisting of two operators and two labourers, conduct special garbage collection services for elderly or disabled residents. These 4 employees also service the recycling depots by collecting illegally dumped and overflowing materials from in and around the bins. The rear loader crews provide some back lane collection of

illegally dumped materials in the public right of way if the identity of the individual or property from which the material originated cannot be identified.

The Collections crew is overseen by a Supervisor VI (Jose Juarez) and a Supervisor II (Debbie Kautzman).

### **Commercial Collections**

618 commercial customers used the services of the City of Saskatoon in 2014. Rates were last set in 2011 and have remained unchanged. The number of commercial customers has remained relatively stable.

### **Efficient Waste System**

Improving the waste collection system to save fuel, operator time, and improve overall service for residents.

Installation of the Efficient Waste System began in 2014 with the application of barcode tags to carts throughout the city. This initiative was part of a larger project that utilized an internally-provided \$1.2 million productivity improvement loan.

The project components include outfitting trucks with GPS, wireless communications, on-board computers, cameras, and barcode readers and a new software tool to achieve the following benefits:



- Efficient routing for Garbage and Green Cart collections services
- Real-time information about the status of collections activities for improved customer service
- More accurate billing for contracted collections services
- Improved drive logs that include photos of collection issues encountered in the field
- Improved tracking of garbage, recycling, and green carts
- An effective and reliable database that merges cart, collection and customer service requests
- Support tools for Environmental Protection Officers
- Enhanced analysis and reporting capabilities to ensure efficient and effective management of waste services

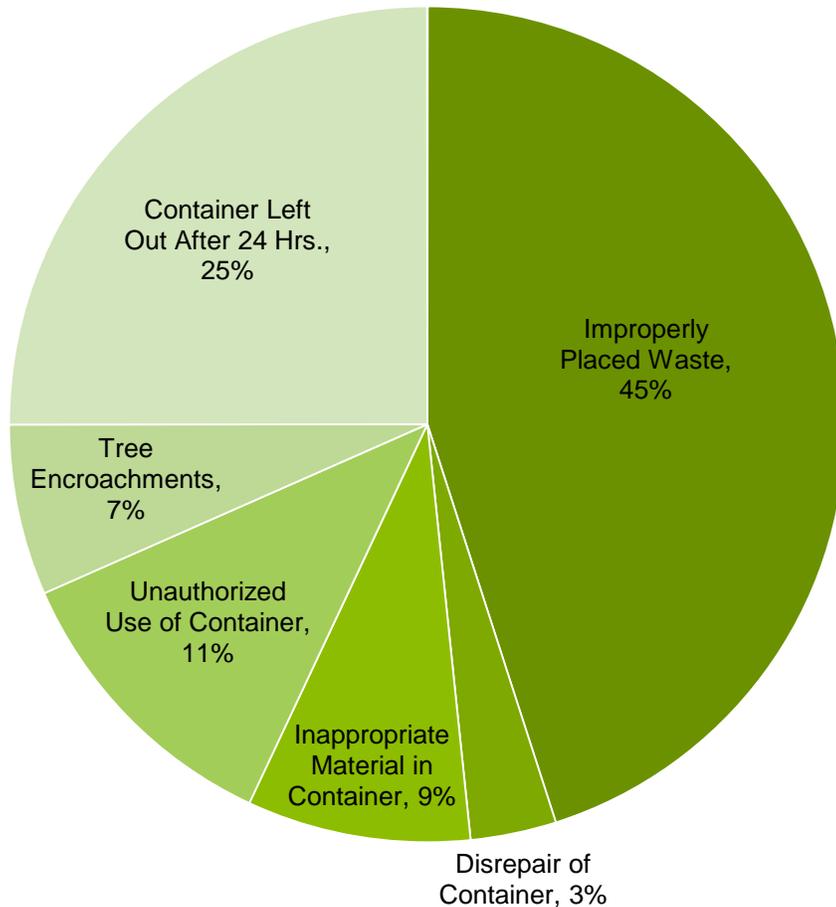
The project also includes improvements to the '306-975-2486' customer service line people call for waste-related matters. System commissioning will be complete in 2015 and new, efficient collection routes will be launched in January 2016.

## Waste Bylaw Enforcement

Providing education and enforcement to ensure garbage and recycling are managed by the community in a way that is safe for people and the environment.

Two Environmental Protection Officers (EPO's) focus on issues in the community related to the Waste Bylaw 2004 (Bylaw No. 9071). In addition to enforcing the Waste Bylaw, EPOs are primarily responsible for responding to hydraulic spills, illegal dumping and waste & recycling cart complaints as well as conducting bylaw related education initiatives for the general public.

In 2014, the EPO's addressed more than 486 individual complaints. A breakdown of the types of complaints received is identified below.



New in 2014, the EPOs and landfill staff conducted load inspection blitzes at the landfill during three different summer weekends. These blitzes were intended to educate residential customers on the Waste Bylaw requirements for covering/tarping loads as well as to clarify what materials are accepted or not accepted at the landfill. Nearly 600 individual loads were inspected and customers were provided information on:

- appropriate disposal options for compostable materials;
- paint;
- tires; and
- household hazardous waste.

No tickets were issued during these blitzes as they were conducted as an educational public outreach initiative.

Also new in 2014, was the implementation of neighbourhood blitzes for cart placement requirements under the Waste Bylaw. This education campaign was developed in response to numerous complaints about:

- unsightliness;
- congestion;
- scavenging; and
- theft and damage to waste and recycling carts left in back lanes after collection day.

Back lane inspections were carried out by the EPOs in the Buena Vista, North Park and Caswell Hill neighbourhoods since these neighbourhoods generated the most complaints and operational challenges for back lane garbage and recycling collection.

The EPOs delivered education letters to residents whose black or blue carts were left out for more than 24 hours (contravention of the Waste Bylaw) followed by a warning letter and ultimately a notice of violation (\$100 ticket) if subsequent inspections showed that compliance was not achieved. Initial inspections showed that up to 35% of homes in certain areas were in non-compliance resulting in more than 1,400 education and warning letters being issued to residents. Following the distribution of education and warning letters to these homes, only 7% of homes were still found to be in non-compliance and a total of 68 tickets were issued in 2014. Cart placement education blitzes have continued in different neighbourhoods in 2015.

## Saskatoon Regional Waste Management Centre (Landfill)

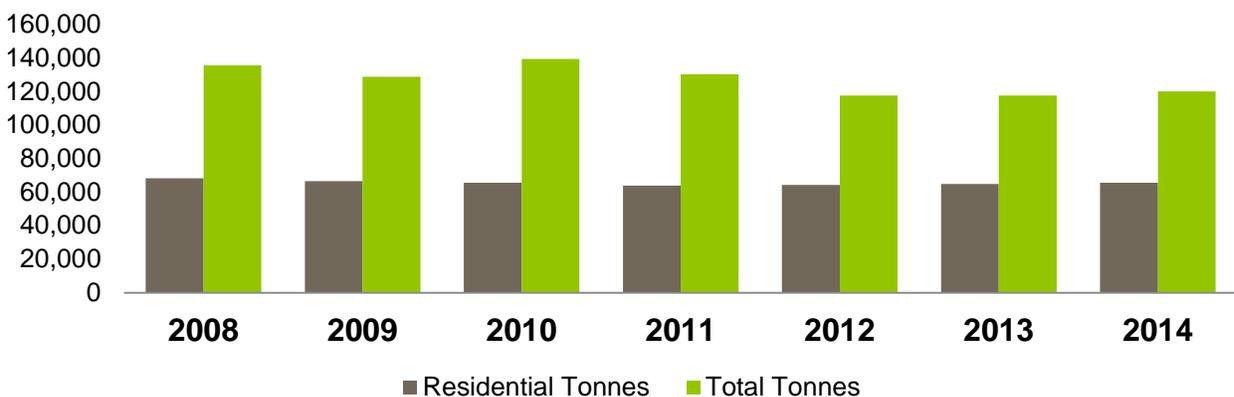
A sophisticated facility that is designed and operated to maximize available space and ensure solid waste is managed in a safe and environmentally sound manner.



The Saskatoon Regional Waste Management Centre (landfill) has been in operation since 1955. The Saskatchewan Ministry of Environment currently regulates the operations of the Facility under a Permit to Operate a Waste Disposal Ground.

In 2014, approximately 168,300 tonnes of material was accepted at the landfill, 125,238 tonnes of garbage requiring burial and 43,400 tonnes of clean earth fill used for construction purposes or landfill cover. Over 800 tonnes of metals, white goods, propane tanks, batteries and 49,000 litres of used oil were removed from the site for recycling or disposal as hazardous waste.

### Tonnes of Garbage Received at Landfill



The landfill is open to the public every day of the year except for Christmas Day and New Year's Day. The site is a secure compound with fencing and security checks after-hours. Six transfer bins are located on site for public waste disposal. In addition, several public drop-off areas are provided for metals, white goods, batteries, propane tanks, used oil, oil containers, filters and used antifreeze.

## **Resources**

Costs incurred at the Landfill for each tonne of material disposed has increased significantly over the past 10 years, due in large part to significant investment in capital improvements during this period, and increased operating costs to meet regulatory requirements and service levels. Also of significance is the fact that annual tonnages are trending downward, resulting in fixed costs being spread over fewer tonnes. A Continuous Improvement initiative is now underway and cost mitigation strategies are being implemented, including reducing overtime, reducing fleet downtime impacts, and general operating improvements.

The landfill experiences a lot of equipment downtime due to the age of equipment (older than industry averages) and the number of pieces of equipment (fewer than industry averages). A significant proportion of the cost escalation is also attributable to the capital improvement program required to ensure the landfill achieves its full lifespan and complies with current environmental regulations. 41% of 2014 expenditures at the landfill were put toward capital projects.

Landfill attendants carry out various duties including:

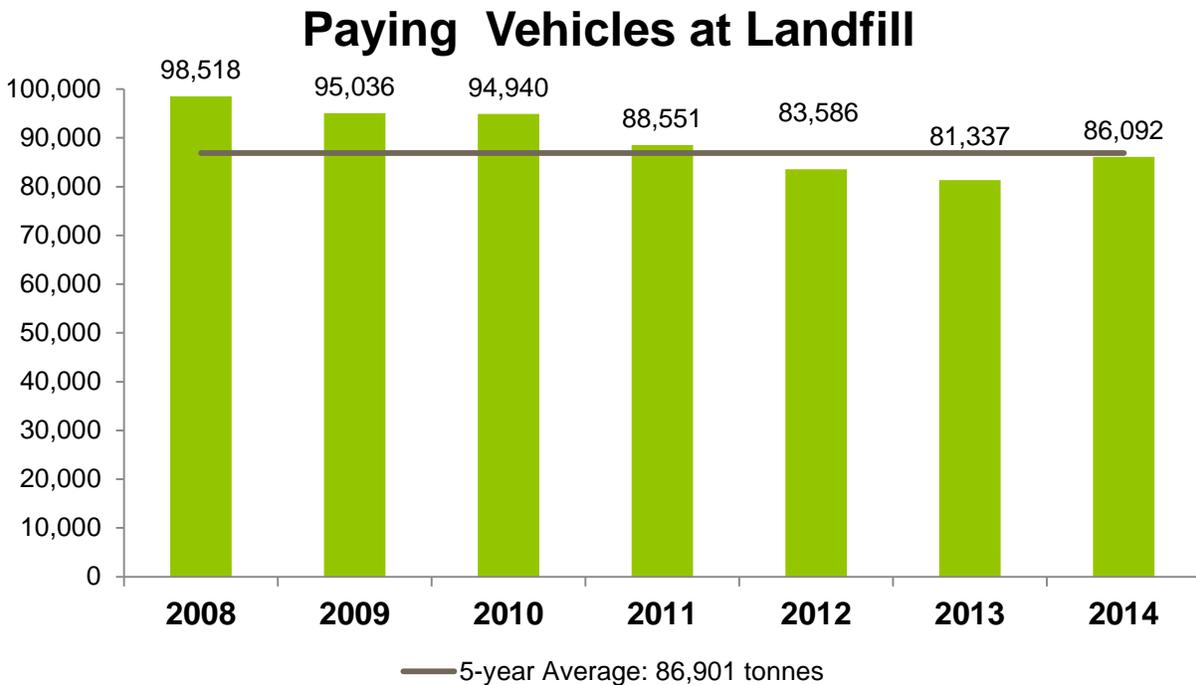
- operation of the landfill scales
- traffic control and load inspection duties at the blue transfer bins and at the active face
- operation of roll-off trucks to haul waste from the public transfer station to the active face
- operation of water trucks for dust control and fire suppression
- operation of equipment for snow removal, sanding
- grading and road maintenance or repairs
- safe operation of the used oil facility and other recycling areas on site

Labourers are primarily responsible for litter management and other site maintenance requirements. Equipment operators ensure that all waste delivered to the active face is compacted and buried in a safe and environmentally acceptable manner.

The landfill employs 5 heavy equipment operators, 12 permanent landfill attendants, 4 seasonal landfill attendants, and labourers. Landfill operations are overseen by two Supervisor VI's and two Supervisor II's who report to the Landfill Superintendent, Todd Christianson.

## Landfill Customers

Paying customers at the landfill increased slightly in 2014 over 2013 with a total of 86,092 visitors. While more customers used the landfill in 2014 than 2013, the number of commercial haulers has decreased while residential and other subsidized haulers have increased. Some of the decline in commercial visitors may be a result of competition from the Northern Landfill operated by Loraas Disposal and more recently, competition from Green Prairie Environmental, the new owner and operator of the former South Corman Park Landfill.



Saskatoon has one of the highest rates of residential garbage self-hauled to the Landfill in Canada. The average size of chargeable loads delivered to the Facility has been shrinking and was approximately 0.6 tonnes in 2014. A review of rates and subsidies in 2012 led to changes to the schedule of fees. As of January 1, 2013, all subsidies previously available to customers at the Landfill were removed with the exception of a 75% subsidy which is applied to very small loads weighing less than 250 kilograms. The rationale for this subsidy is to offer options to residents in the absence of a curbside service for the handling of bulky items that may not fit in City-provided roll-out garbage carts. This subsidy, however, is contributing to the shrinking sizes of average loads at the landfill. This, in turn, increases demands for traffic management and can increase wait-times for customers.

According to nation-wide benchmarking for 2014, the range of fees for tipping waste among 31 municipal landfills across Canada is \$36.15 to \$140 per tonne. Saskatoon's fees, at \$95 in 2014, fall in the middle of this range.

## **Environmental Protection**

A number of environmental protection measures are part of the regular operations of the landfill.

**Surface water management** ensures that any storm water that may have come in contact with garbage does not flow off-site. Storm water management infrastructure also helps minimize the creation of leachate ('garbage juice') and protects roadways and other customer-serving assets of the site. Improvements to storm water infrastructure are integrated into the capital improvement plan for the site.

**Ground water monitoring** results are reviewed by an independent party each year to ensure the landfill is not impacting the environment beyond its site. In 2014, there were 43 monitoring locations analyzed. Additional leachate collection system development is planned on the basis of monitoring results. 27 hectares of the waste footprint at the Landfill Facility is unlined and leachate interception is therefore an important environmental protection measure.

**Fire prevention and suppression** is critical. Materials within the mound have the potential to burn for prolonged periods and to release toxins into the atmosphere. Landfill staff are trained in fire prevention and suppression and operate a water truck on-site to respond to incidents in a timely manner. A strong relationship with Saskatoon Fire and Protective Services has also been developed as landfill fires pose a unique challenge.

**Landfill gas management** began in 2012 with the completion of the clay cap on the north mound of the site. Since then, 29 vertical gas collection wells have been drilled into the waste, the Landfill Gas Collection and Power Generation Facilities were completed and the system was fully commissioned in late 2013. In 2014, the landfill gas system collected and combusted over 190,000,000 cubic feet of landfill gas, reducing the greenhouse gas emissions from the landfill by more than 49,000 tonnes of CO<sub>2</sub>e or the equivalent of removing 10,200 vehicles off Saskatoon roads.

**Greenhouse gas emissions reduction** efforts occur at two levels at the landfill. The destruction of landfill gases (which have greenhouse gas concentrations up to 21 times stronger than carbon dioxide) is addressed through landfill gas management. As equipment is replaced, Tier IV emissions-compliant equipment is being selected to significantly reduce this impact.

## **Customer Service for Garbage Handling Services**

Over 10,000 phone calls and voicemail messages are received on an annual basis regarding containers, missed collections, and other inquiries. In addition, the [garbage@saskatoon.ca](mailto:garbage@saskatoon.ca) webmail address received more than 2,600 emails which were all responded to in a timely manner.

In 2014, collections staff responded to over 2,400 calls about missed garbage collections. With over 2.8 million cart collections conducted on an annual basis, this equates to a 99.9% garbage collection reliability. Approximately 75% of the recorded missed collection calls originated from collections operators themselves when they were unable to collect carts for various reasons such as carts placed too close to fences/power poles/parked vehicles, carts on wrong side of the lane, overfilled carts, inappropriate materials identified in carts (i.e. propane tanks), or other issues.

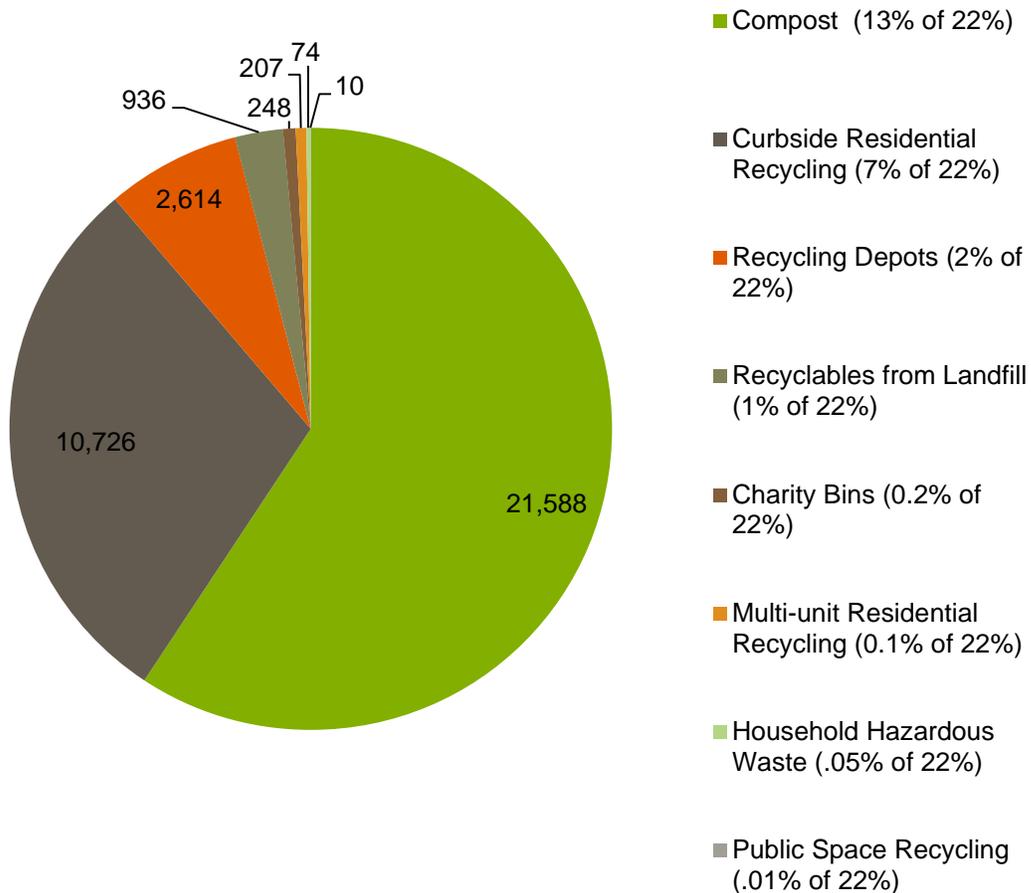
One customer service representative responds to phone calls received at the 306-975-2486 Waste Stream Management Customer Service Line.

## Towards a Waste Diversion Target of 70%

### Waste Diversion

Waste is diverted from going to the landfill through a variety of programs and initiatives including recycling, composting, and hazardous waste collection. Additional outreach and education programs include the Saskatoon Curbside Swap, charity bin program, and home composting education that contribute to waste reduction and raise awareness. The figure below shows the tonnes of recyclables diverted from each program (total of 36,338 tonnes), and how each contributed to the diversion rate of 22.5% in 2014.

### Tonnes of Diverted Materials



## Recycling

Providing convenient programs for all residents to recycle their paper and packaging.

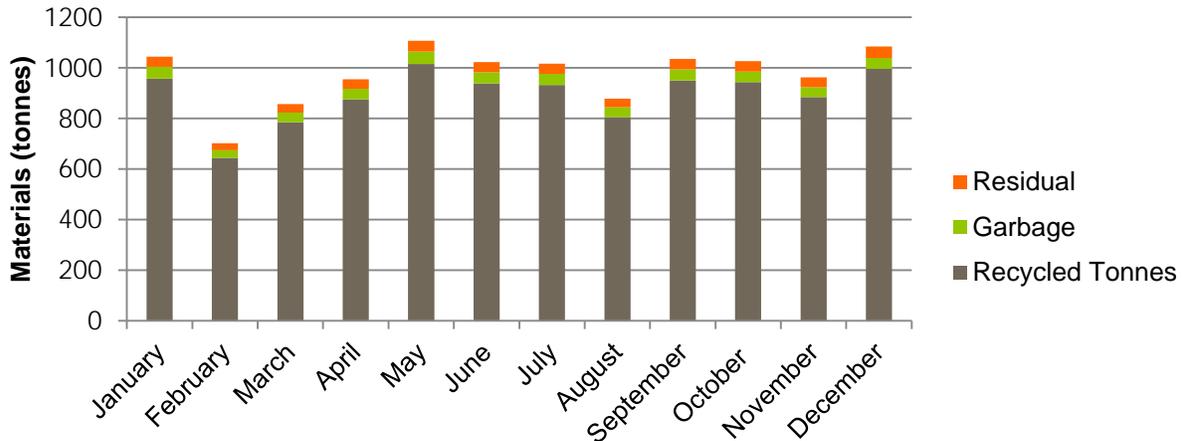
### **Collections Provided to Residential (Curbside) Properties**

Loraas Recycle has been providing curbside recycling service to single family households in Saskatoon since 2013. Each of the 66,793 households participating in the City's curbside program is provided with a blue cart that is collected from their curb every second week based on a published schedule.

- 10,724 tonnes of recyclable materials were recycled, contributing 7% toward the City's waste diversion rate
- 11,104 tonnes of material were collected
- 4% contamination (materials placed in the cart that are not recyclable) and 4% residual (materials that are technically recyclable but could not be recovered usually because of their small size).
- A net reduction in greenhouse gas of 29,027 tonnes can be attributed to the recycling program (includes the 387 tonnes from diesel fuel used in recycling trucks)



## Materials collected through the Curbside Residential Recycling Program



The set out rate (or proportion of carts placed at the curb on collection day) averaged 67% for the program in 2014. This does not indicate how many people use their blue carts since many do not necessarily put them out each collection. The participation rate (or proportion of residents using their recycling carts) will be calculated annually starting in 2016 as part of a waste characterization study.

Carts not being collected due to incorrectly placed or overfilled carts continue to occur; there were 1,110 occurrences in 2014. To put this in context, there were over 1.1 million blue carts tipped in 2014, a non-compliance rate of 0.1%. Other ongoing concerns include carts left out in back lanes for more than 24 hours and scavenging of high value materials. These issues are addressed through communications and through warnings and tickets issued by the Environmental Protection Officers (EPO's).

### Multi-Unit Residential Properties

The Multi-Unit Residential Recycling (MURR) program was launched on October 6, 2014; approximately 207 tonnes of material was collected through the program in 2014, a greenhouse gas reduction of 448 tonnes over landfilling the same amount of material.

Program deployment went well and residents seem generally pleased to have the service in place. A challenge with the program is the high volume of garbage being found in the recycling containers. Cosmo's initial characterization established that approximately 18% of the materials being collected are non-recyclable. A multi-unit recycling program could be expected to have higher rates of garbage than curbside programs due to the use of large bins placed in publicly-accessible areas.

### Customer Service for Recycling Programs

Resident inquiries on curbside and multi-unit recycling programs are responded to by the service providers, Loraas and Cosmo. Inquiries regarding the curbside residential recycling program continue to be low at an average of 0.6% or 368 inquiries per month.

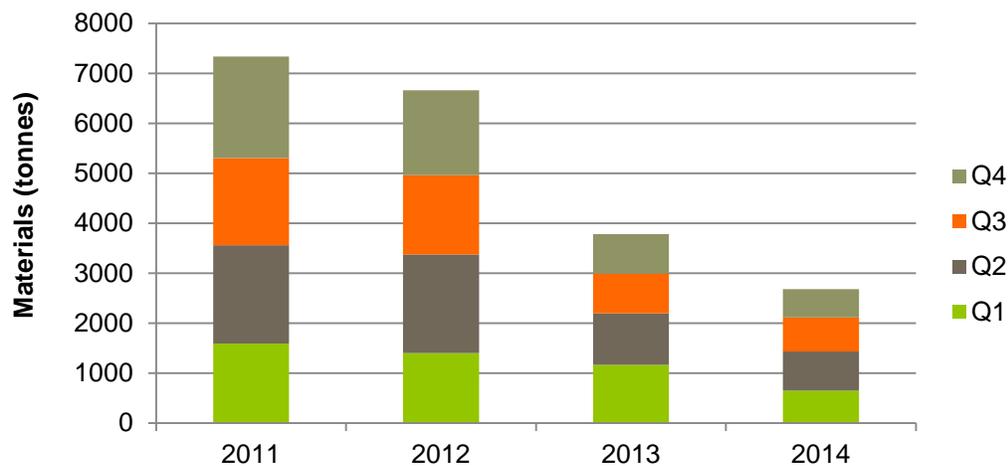
Inquiries were fairly high for the MURR program in the first month at 276, mostly regarding container information. These inquiries decreased to 138 in December.

### Recycling Depots

In 2014, 2,679 tonnes of material were collected at the depots contributing 2% to the City’s diversion rate, a monthly average of 223 tonnes. Changes were made to the depots program including the closure of the Edmonton Avenue depot and depots on private land. These closures were in response to the decrease in material being received at the depots as shown in the figure below.

In 2014, the Edmonton Avenue depot was closed and the City ceased collections from any depots on private land. These closures were in response to the decrease in material being received at the depots as shown in the figure below. The four remaining depots now accept the same materials accepted in the MURR and curbside programs in a single stream with no sorting, as does all recycling at Civic facilities (started at the end of 2014). The bins at the depots remain the property of Cosmopolitan Industries Ltd. and all materials are collected by the City and processed at Cosmo’s Material Recovery Facility. New signage and bin decals have been updated to communicate the change.

### Materials Collected at City Depots



Materials from the recycling depots are collected and delivered to Cosmopolitan Industries by Civic staff Monday, Wednesday, Friday, and Saturday; and clean-up crews visit the depots Monday, Wednesday, and Friday.

## Education and Engagement

*Making sure Saskatoon residents know how to Put Waste in the Right Place.*

Information about the City's waste and recycling programs are available online, through Facebook, Twitter, and at festivals and events.

Visitors to the City's website (Saskatoon.ca) and the SaskatoonRecycles.ca microsite access up-to-date information on anything they need to know to manage their waste including:

- collection schedules;
- how to use their blue, black, and green carts;
- landfill rates and hours; and
- other tips on reducing or diverting waste.

There were 164,809 page views on SaskatoonRecycles.ca.



Each household received a personalized print calendar with the garbage, recycling, leaves and grass, and household hazardous waste schedules. Residents can also:

- view their calendar online;
- download a PDF calendar from the website;
- sign up for collection reminders by e-mail, phone, or twitter; or
- add their schedule to their own online calendar.

Personalized online collection calendars were viewed by 24,589 unique households, 5,455 calendar PDF downloads, and 4,418 residents were receiving collection reminders.

The public can also find out about other local recycling opportunities through the Saskatchewan Waste Reduction Council's province-wide online database of information on where to recycle a variety of materials. The City of Saskatoon partners with the Council in promoting this online tool: <http://www.saskwastereduction.ca/>



Citizens were engaged at events using the “Spin and Sort” and “Yep, Nope” sorting game. Summer staff attended 12 events in 2014, where they encouraged children and adults to learn about waste management through interactive activities. Other communications occurred through the “Put Waste in the Right Place” campaign on radio, newspaper, social media, and online advertising.

## Saskatoon Curbside Swap

Building community while keeping reusable items from ending up in the landfill.

Curbside Swaps are fun and environmentally friendly ways for residents to get rid of unwanted items that are still in good condition, as well as “hunt” for new treasures. In 2014, four curbside swaps were held in College Park, City Park, Buena Vista, and Meadowgreen. The City supported the community association to organize and promote the swap in their neighbourhood. The swaps were well attended as long as the weather held and feedback through a survey of participants showed that survey respondents wanted an event to occur the next year.

### Want free, useable stuff? Come to a Curbside Swap!

#### What is a Curbside Swap?

When a neighbourhood has a Curbside Swap date, participating households mark items as “FREE” and set them on their curb for others to collect. This keeps reusable items out of our landfill and reduces our community’s environmental footprint!

#### What will I find at a Curbside Swap?

- appliances
- books
- electronics
- bicycles
- yard equipment
- furniture

#### Where can I find more info?

Simply visit [Saskatoon.ca](http://Saskatoon.ca) and click on “C” for Curbside Swap.

SASKATOON  
**CURBSIDE  
SWAP**

Check out Curbside Swaps in these neighbourhoods:

Sept 6 in College Park

Sept 13 in City Park

Sept 14 in Buena Vista

Sept 20 in Meadowgreen

9 a.m. to 6 p.m.

Watch for the signs!



## Composting Programs

Services such as voluntary curbside collection, drop-off depots, and education programs help residents divert organic waste from the landfill.

The Leaves and Grass Subscription Program served 3,900 households in 2014. Leaves, grass, and non-woody yard waste is collected at the curb from May to November on a bi-weekly basis. Materials are composted at the City's Highway 7 compost depot along with materials from public and commercial customers.

Two compost depots, one on McOrmond Drive and the other on Highway 7, provided residents the opportunity to drop off yard waste at no charge. These temporary locations accept leaves, grass, non-elm tree and shrub branches, as well as garden waste that would otherwise end up in the landfill.



More than 51,000 vehicle visits were made to the depots in 2014, including 40,000 visits made by residents, 9,400 visits from commercial haulers and 2,000 visits from City departments. An estimated 22,000 tonnes of compostable material was managed at the depots in 2014, resulting in the avoidance of approximately 5,000 tonnes CO<sub>2</sub>e.



Approximately 150 commercial companies purchased \$200 permits which provided unlimited access to the depots for the season. Commercial haulers brought in approximately 28% of the materials delivered to the depots.

The depot on McOrmond Drive closed at the end of the 2014 season. A new compost depot transfer station opened on Highway 5 in 2015.

Compost depot operations are overseen by the Depots Supervisor (Roland Rusnell).

## Compost Education

The City provides composting education through a partnership with the Saskatchewan Waste Reduction Council (SWRC). The SWRC has been running composting education programs since 1993; and in partnership with the City since 1995. New Master Composters are trained each year (there is now over 200) and in turn engage the community through volunteer work providing education at events, presentations, workshops, and home visits. Home visits were a new initiative in 2014 that was expanded in 2015. Master Composters visit a new composter at their home to help them set up a composting system or troubleshoot an existing one.

In 2014, 16 new Master Composters were trained and they along with existing Master Composter volunteers attended 13 events and made 10 home visits.

Compost bin rebates of \$20 were also offered to residents in 2014 (an increase from \$10 in previous years). 60 compost bin rebates were administered.

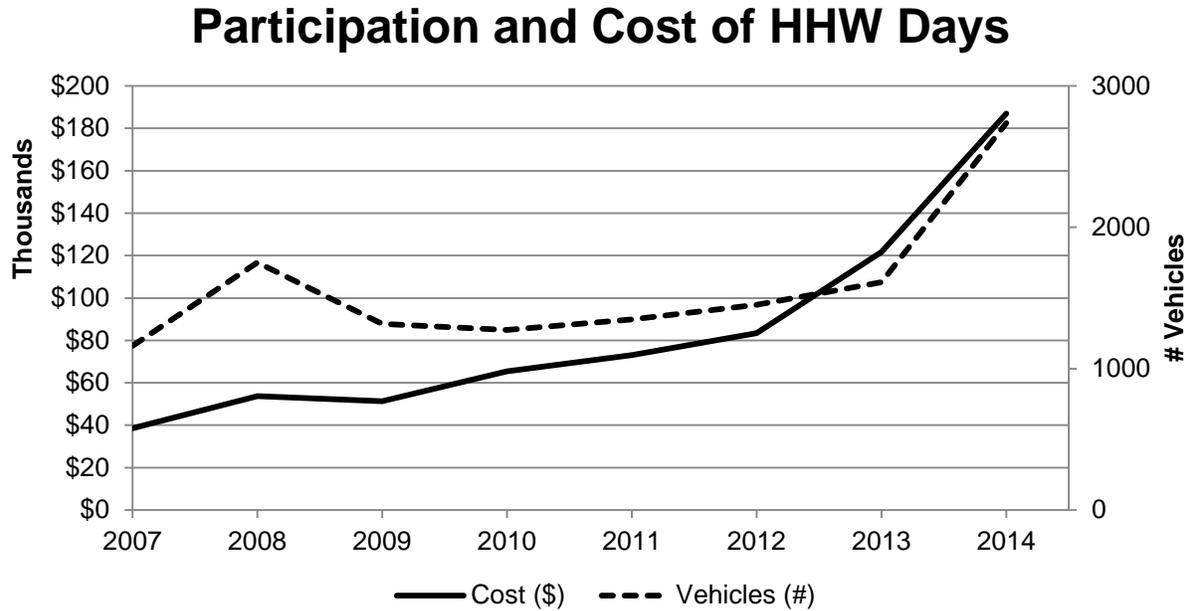
Composting, and the use of compost, will also be encouraged through the Healthy Yards program started in 2015; a partnership with the University of Saskatchewan Master Gardeners and the Food Bank and Learning Centre.



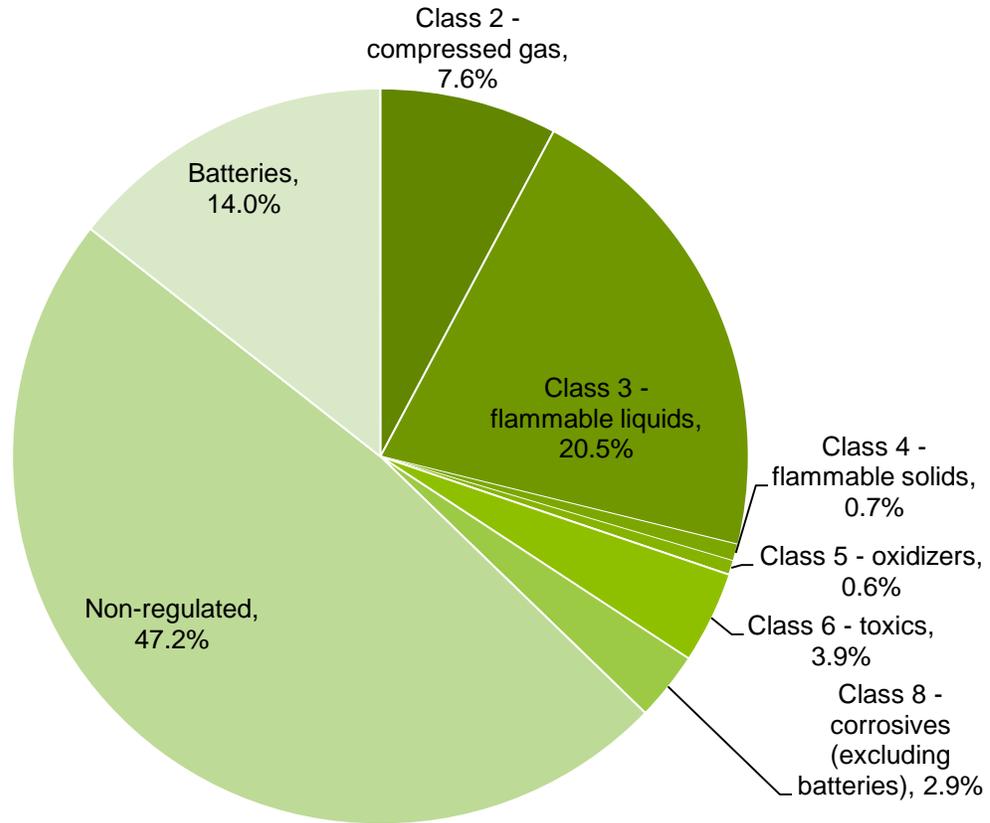
## Hazardous Waste

Keeping hazardous waste out of the landfill, waterways, and environment.

In 2014, 12 Household Hazardous Waste Collection Days collected 72,126 kilograms (an increase over 2013 of 40%) of hazardous materials from 2,737 customers. The number of vehicles, the amount of hazardous materials collected, and the cost of the program have all risen since 2013.



# Hazardous Materials Collected through HHW Days in 2014



- Class 2 (compressed gas): aerosols, propane tanks, inhalers, fire extinguishers
- Class 3 (flammable liquids): flammable liquids, paint and paint-related materials, adhesives, printing ink
- Class 4 (flammable solids): flammable solids
- Class 5 (oxidizers): oxidizing solids and liquids, organic peroxide
- Class 6 (toxics): toxic liquids, pesticides, pharmaceuticals
- Class 8 (corrosives): corrosive liquids and solids, mercury, ammonia solution
- Batteries: alkaline, lead-acid, lithium
- Non-regulated: oil, oil filters, oil containers, antifreeze, fertilizers, liquid cleaners, non-PCB light ballasts, fluorescent tubes, CFL bulbs, ink cartridges, lighters, treated railway ties
- Other/miscellaneous: PCB light ballasts, sharps, smoke detectors, e-waste, test samples (unknowns)

Household hazardous waste materials are also responsibly managed at the landfill. An Eco-Centre for the recovery of oil, oil containers, and oil filters has been established in partnership with Saskatchewan Association for Resource Recovery Corporation (SARRC). The Eco-Centre (one of 36 across Saskatchewan) captures in excess of 20,000 litres of used oil, over 1,000 used oil filters, and more than 1,200 kilograms of oil containers each year. These materials are reused and recycled, saving approximately 53 tonnes of CO<sub>2</sub>e each year.

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# 2015 Update to Our Environment: The City of Saskatoon's Environmental Leadership Report

## Recommendation

That the report of the General Manager, Corporate Performance Department dated October 13, 2015, be forwarded to City Council for information.

## Topic and Purpose

The purpose of this report is to provide the 2015 update to the City of Saskatoon's Our Environment Report.

## Report Highlights

1. The 2015 update to the City of Saskatoon's 'Our Environment' Report is provided in the form of an online reporting tool highlighting the status of 12 selected indicators representing the key components of the state of Saskatoon's environmental health – air, land, water and waste.
2. Key findings include:
  - The waste diversion rate for 2014 of 22.5% was relatively unchanged from the 2013 rate of 22.7% and needs improvement to meet the target of 70%.
  - The amount of landfilled residential waste per capita is down to 249 kilograms per capita in 2014 from 340 kilograms per capita in 2007.
  - The percentage of residents choosing to walk, cycle or take transit to work has been relatively stable between 11.5% and 14.4 % for the past two decades and needs improvement to meet the target of 20%.
  - Saskatoon's air quality has been showing a slow downward trend over the past decade, with the average Air Quality Index ranking as 'Good' over the past 5 years, down from the ranking of 'Excellent' that it has for the previous 5 years.
  - The water quality both upstream and downstream of Saskatoon has consistently ranked as Good in the Water Quality Index since 2005.
  - The amount and distribution of new development investment has been added as a baseline indicator and illustrates that investment in development activities are balanced across the city.

## Strategic Goals

The 2015 update addresses the Strategic Goal of Environmental Leadership. It includes the following success indicators from the Strategic Plan: waste diversion, water consumption, corporate greenhouse gas (GHG) emissions, the ecological footprint of Saskatoon, and community gardens. It further addresses the vision, priorities and strategies of the Strategic Plan in the areas of sustainable growth and transportation, protected lands, water quality, and reducing landfilled waste.

## Background

On August 19, 2014 the Standing Policy Committee on Environment, Utilities & Corporate Services received Our Environment: The City of Saskatoon's 2014 Environmental Leadership Report.

## Report

The first Our Environment report was released in 2014 based on the City of Saskatoon's (City) Strategic Plan Goals and success indicators. The report established baseline data for 44 environmental indicators in Saskatoon.

In 2015, the first online update has been created to update 12 selected indicators, represent key components of environmental health where data is available and highlight recently set Corporate Targets. The update builds on the baseline data in the 2014 Our Environment report. Additional indicators will be added in future online updates and new data posted when it is made available. The update can be found at [saskatoon.ca/ourenvironment](http://saskatoon.ca/ourenvironment).

The "Where are we now?" section includes maps and charts to visually display the data in an easy to read and web-friendly format. The update compares the most recent data with the baselines published in the 2014 report and, when applicable, the targets adopted by the City. Graphics are used to indicate the trend shown by the data:

- An upward trending arrow for "improving"
- A horizontal arrow for "stable"
- A downward trending arrow for "needs improvement"

The "What are we doing?" section shows how the City is taking action to maintain or improve the environment. The section highlights three initiatives, provides a brief summary and provides a link to where more information can be found.

The "What can you do?" section is newly added as part of the update. It provides residents with opportunities to take action and get involved, highlighting simple things people can do in their homes, schools and workplaces, and ways to participate in city led initiatives.

The 12 selected indicators and their trends (Attachment 1) are:

Ecological Footprint	Needs Improvement
New Development Investment	Baseline
Protected Lands	Stable
Community Gardens	Improving
Corporate Greenhouse Gas Emissions	Needs Improvement
Community Greenhouse Gas Emissions	Needs Improvement
Transportation Choices	Needs Improvement
Air Quality	Needs Improvement
Water Quality	Stable
Water Consumption	Stable
Landfilled Waste	Improving
Waste Diversion	Stable

### **Communication Plan**

Communications include the news media and the City's social media accounts along with the City's website, which has been updated to reflect the performance of key indicators for the Our Environment report.

### **Environmental Implications**

As a report focused on environmental health, Our Environment provides an overview of key performance indicators relating directly to the City's Strategic Goal of Environmental Leadership. Where applicable, the implications associated with the indicators have been identified in the report.

### **Other Considerations/Implications**

There are no policy, financial, privacy, or CPTED implications or considerations.

### **Due Date for Follow-up and/or Project Completion**

The full Our Environment report is anticipated to be updated and published every 3 years, with the next full report in 2017. Updates on specific indicators are anticipated to be communicated through the City's website annually.

### **Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

### **Attachment**

1. Summary of Updated Indicators

### **Report Approval**

Written by: Katie Burns, Environmental Coordinator

Reviewed by: Amber Jones, Manager of Education and Environmental Performance

Brenda Wallace, Director of Environmental & Corporate Initiatives

Approved by: Catherine Gryba, General Manager, Corporate Performance Department

## SUMMARY OF UPDATED INDICATORS

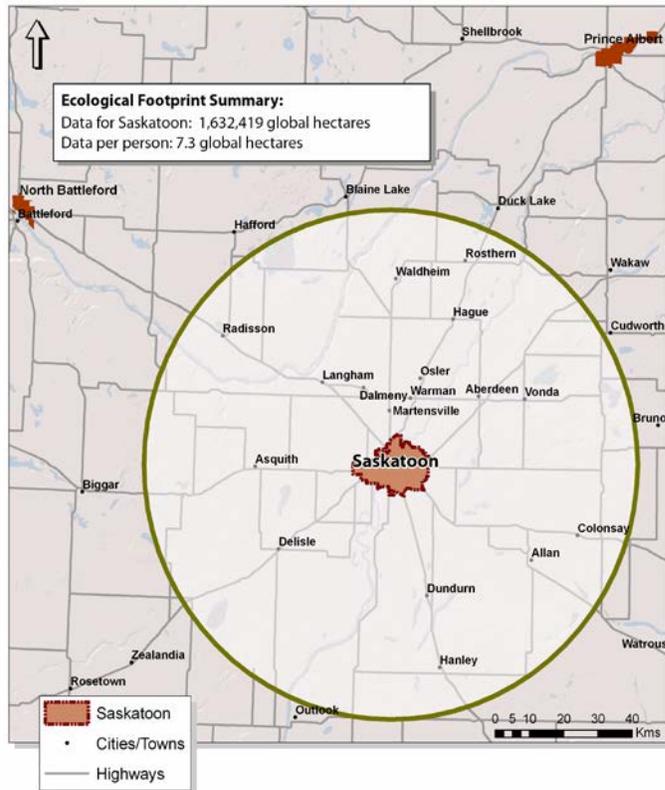
### Ecological Footprint (needs improvement)

The Ecological Footprint is a tool that compares the total resources consumed by a community, to the amount of land it would take to support that consumption. The ecological footprint is a success indicator in the City's Strategic Plan.

#### Where are we now?

In 2010, Saskatoon's Ecological Footprint was 75 times larger than the city's total land area. The average ecological footprint per resident was 7.3 global hectares which was 4% higher than the national average in Canada. A new Ecological Footprint report for Saskatoon will be released at the end of 2015.

#### City of Saskatoon's Ecological Footprint



Source: City of Saskatoon Ecological Footprint Analysis, 2011

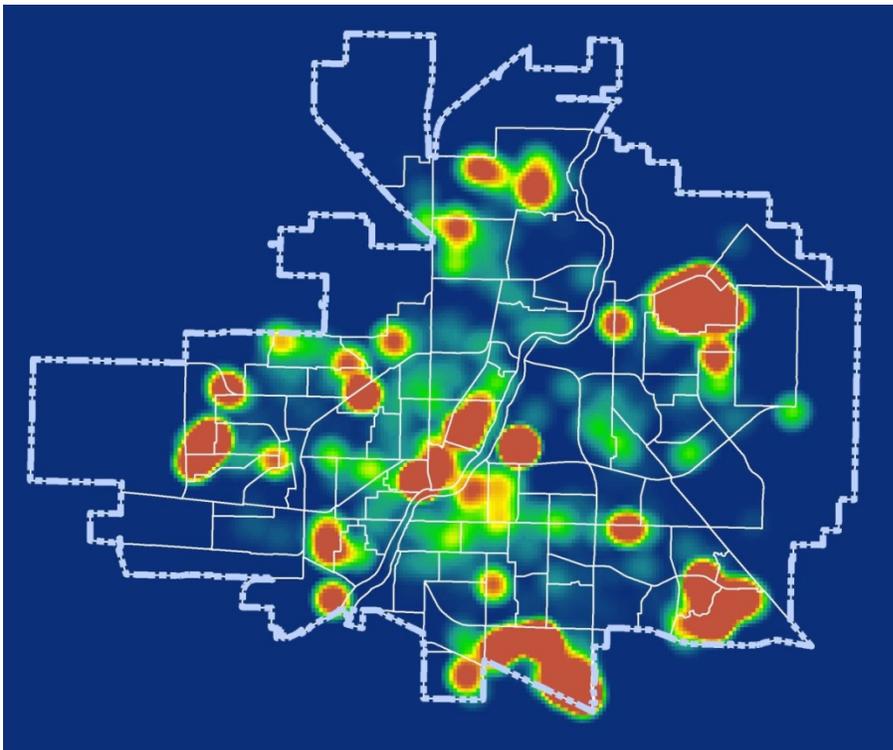
## New Development Investment (baseline)

Saskatoon is growing. The location of new development and the amount that is being invested shows how the City's policies on the built environment are being put into action.

The City's Strategic Goal of Environmental Leadership and the success drivers of energy efficiency and responsible land use impact how we grow. A balance between investing in the downtown core, established neighbourhoods and new neighbourhoods with more sustainable design, will help conserve natural and agricultural lands, conserve water and energy, and reduce the cost of building new infrastructure like roads, water and sewer lines.

### Where are we now?

Investment in new developments is spread throughout the city, with the greatest concentrations in the downtown and new Greenfield communities. In 2014, there were 4,968 building permits with a total value of \$871,254,000. \$2,112,000 of this value was for demolition permits. The total value of permits is higher in the red areas and the dark blue area has no values.



Source: City of Saskatoon – Planning & Development

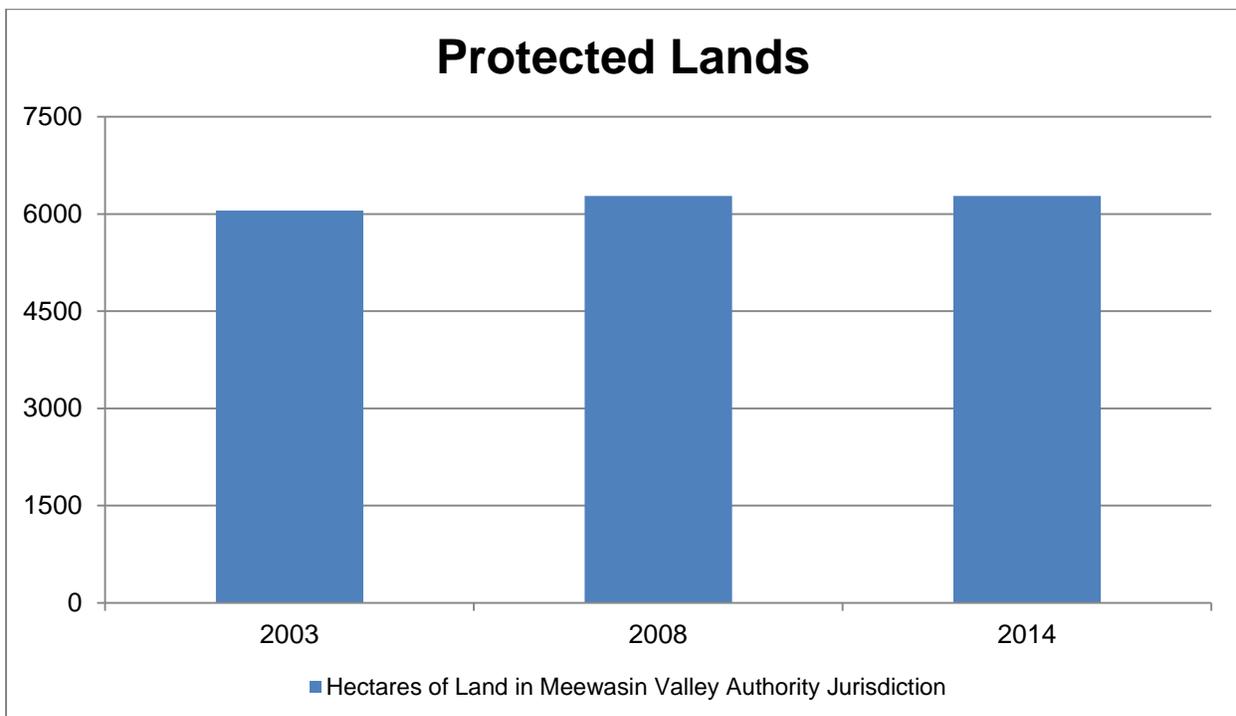
## Protected Lands (stable)

The natural, undeveloped areas within our city support a diversity of plants and wildlife, perform “ecological functions” such as reducing and filtering storm water, storing greenhouse gases, removing harmful pollutants from the air, and contribute to our overall well-being and health.

Protected lands are an important part of our natural areas network and help meet the long-term Environmental Leadership strategy in the Strategic Plan to improve access to ecological systems.

### Where are we now?

The amount of protected lands in the Meewasin Valley Authority jurisdiction has remained unchanged between 2008 and 2014.



Source: Meewasin Valley Authority

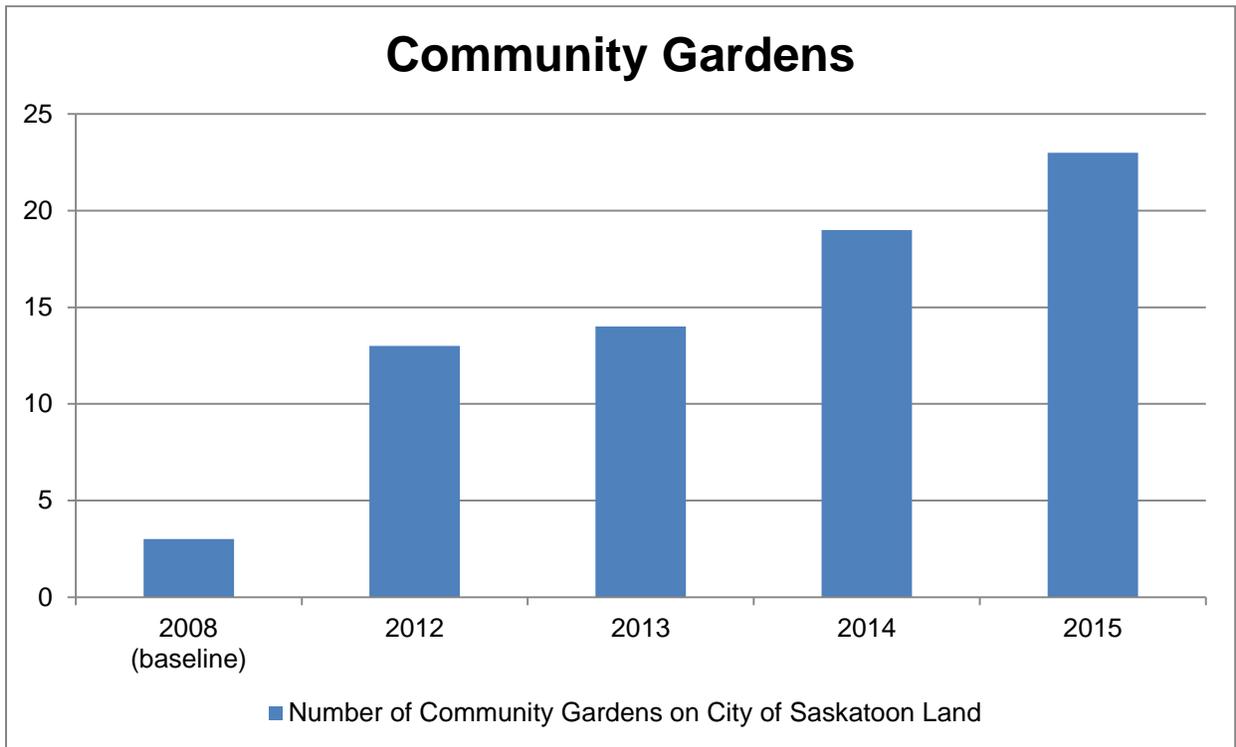
## Community Gardens (improving)

Growing food in our neighbourhoods provides fresh, healthy food that has a lower environmental impact. Community gardens on public land provide opportunities to grow food for residents that do not otherwise have access to land suitable for gardening.

The number of community gardens is one of the success indicators in the Strategic Plan.

### Where are we now?

The number of community gardens on city-owned land is increasing.



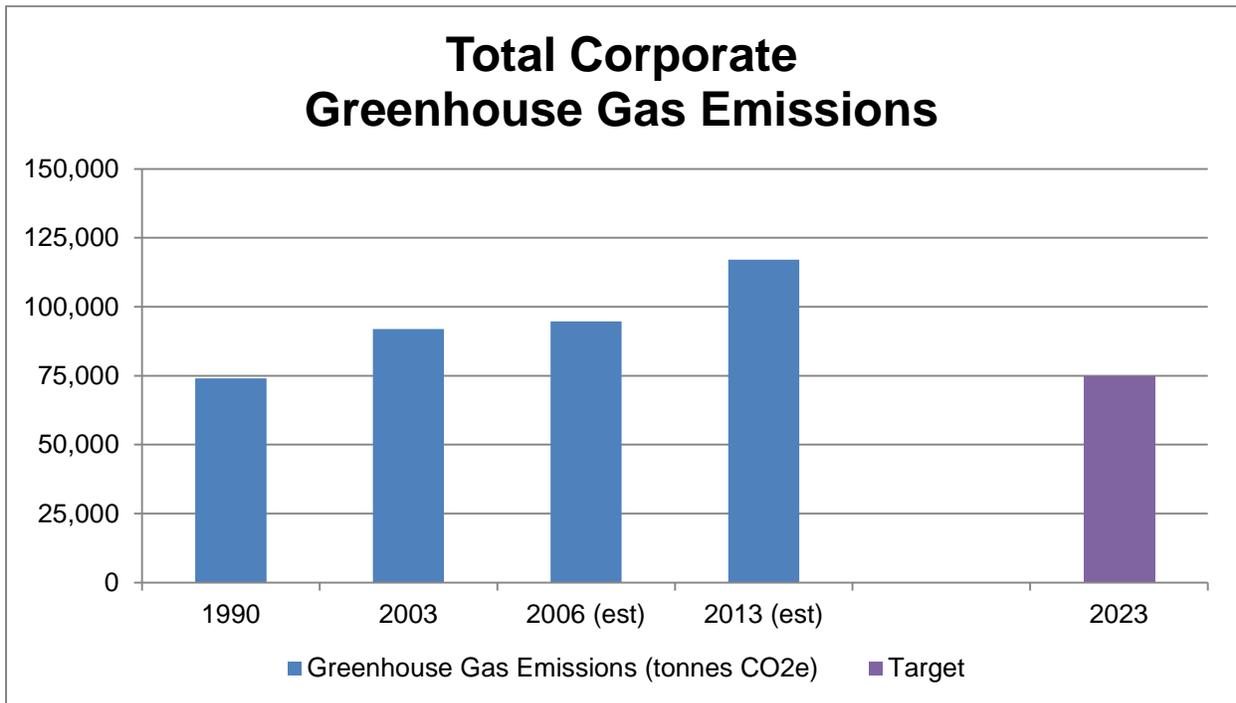
Source: City of Saskatoon – Community Development

## Corporate Greenhouse Gas Emissions (needs improvement)

Greenhouse Gases (GHGs) are linked to climate change which is predicted to increase the frequency, and intensity of extreme weather events such as droughts, floods and storms. The City of Saskatoon has a role to play in reducing GHGs from its own operations and showing leadership in our community. The City of Saskatoon has adopted the target of 75,000 tonnes of CO<sub>2</sub>e by 2023.

### Where are we now?

The City of Saskatoon's corporate GHG emissions have increased since 2003. A new inventory is being compiled for 2014 emissions.



Source: ICLEI Energy Services, 2005; City of Saskatoon Environmental & Corporate Initiatives

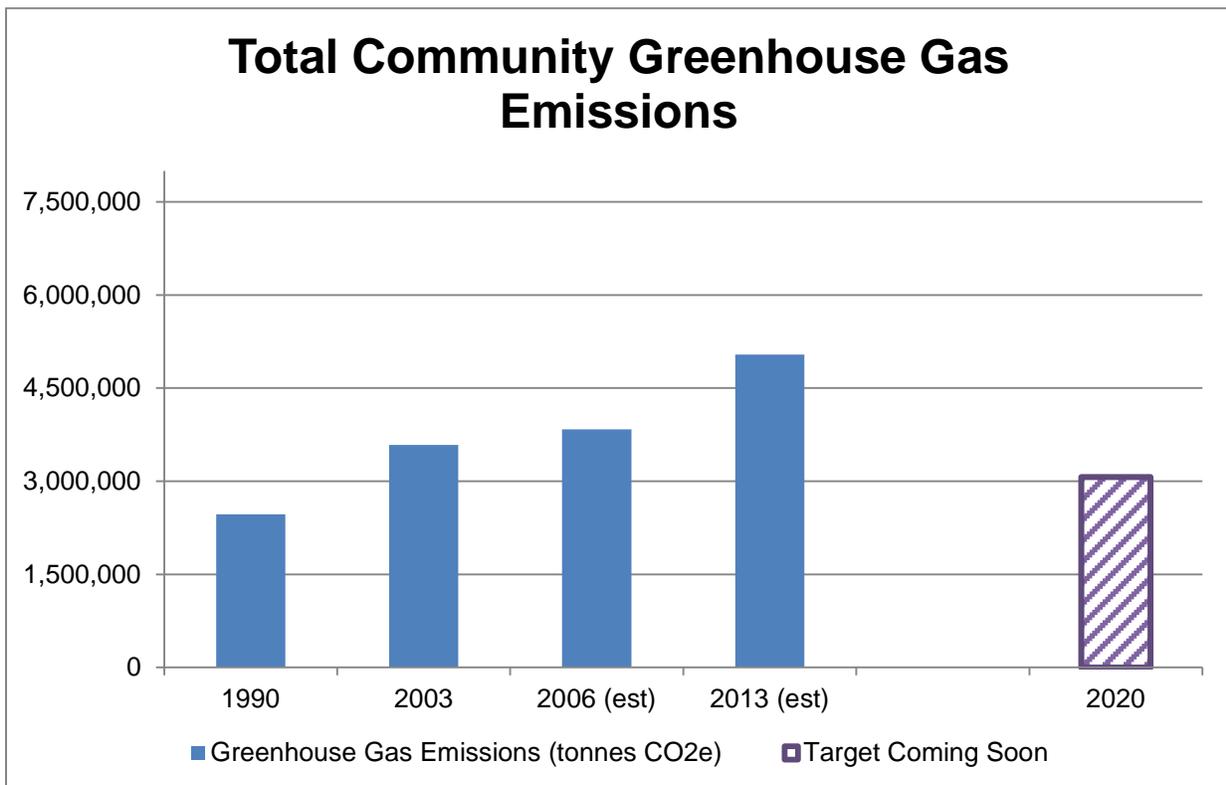
## Community Greenhouse Gas Emissions (needs improvement)

The emissions from the community as a whole show the combined impact of businesses, institutions and residents.

The City of Saskatoon is in the process of adopting a target for community GHG emissions.

### Where are we now?

The community's GHGs have increased since 2003. A new inventory is being compiled and the Saskatoon Environmental Advisory Committee is selecting a reduction target.



Source: ICLEI Energy Services, 2005; City of Saskatoon Environmental & Corporate Initiatives

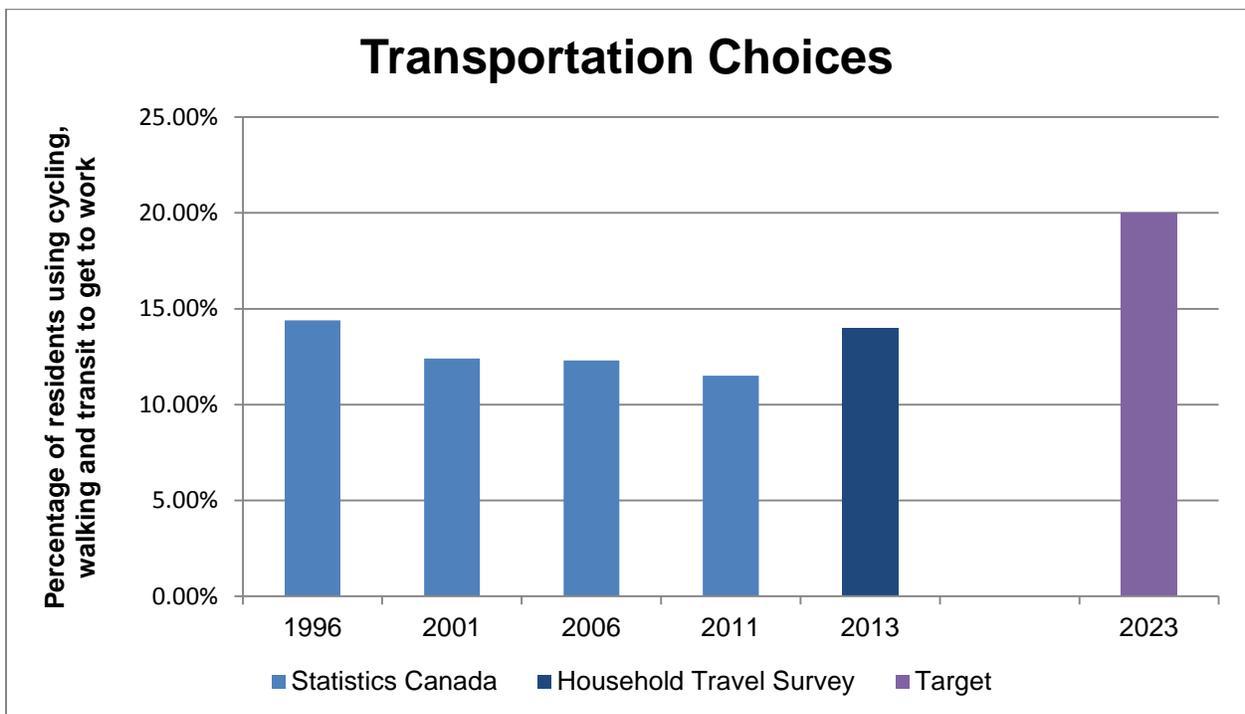
## Transportation Modes (needs improvement)

Transportation impacts the environment, with vehicles generating more GHG emissions and requiring more land for road infrastructure than public transportation, cycling and walking.

The City of Saskatoon has adopted the target of 20% of residents using cycling, walking or transit to get to work by 2023, and is in the process of developing new targets for 2045 as part of the Growing Forward Growth Plan.

### Where are we now?

The percentage of residents using cycling, walking or transit to get to work has been relatively stable since 2001, and needs improvement to meet the 2023 target adopted by City Council.



Source: Statistics Canada

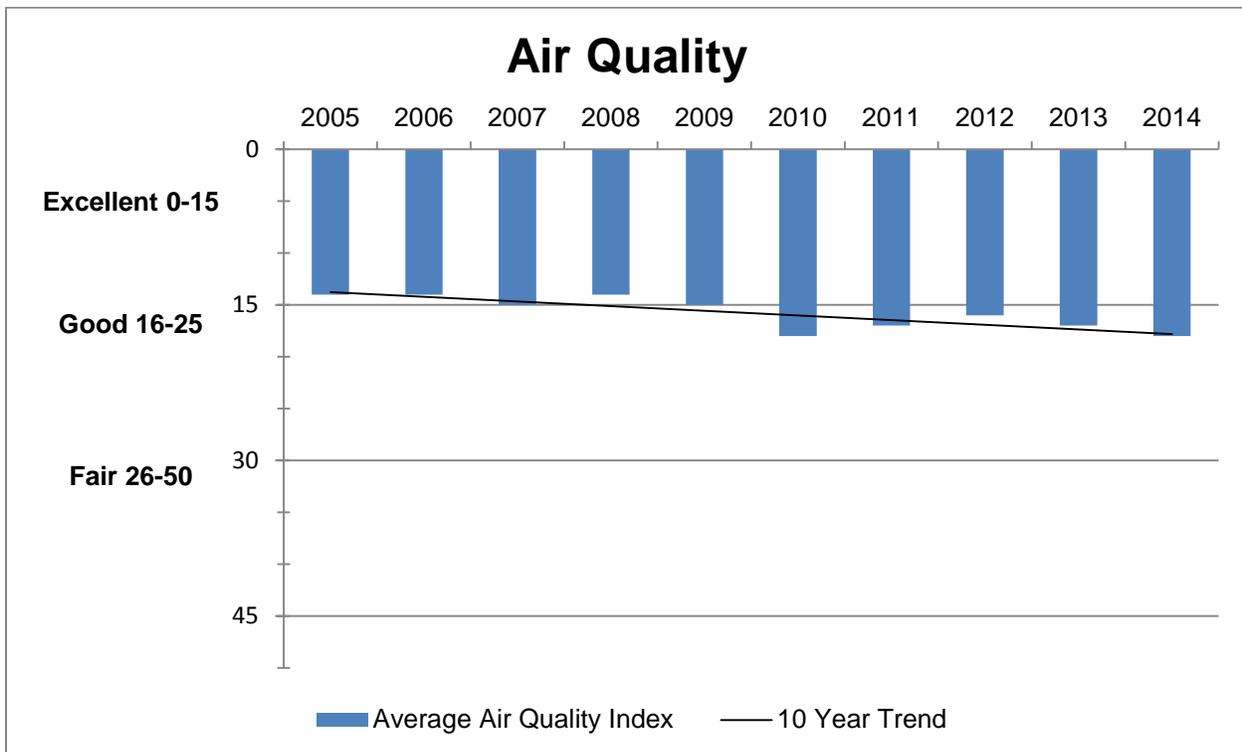
## Air Quality (needs improvement)

Good air quality is important to our health and the environment. While Saskatoon has many favourable features for good air quality, sources of pollution make ongoing monitoring important.

The Strategic Plan vision statement for Environmental Leadership includes clean air.

### Where are we now?

Saskatoon's average air quality was ranked as 'Good' by the Air Quality Index in 2014, and has been showing a slow downward trend over the past decade. This means that on average residents with severe respiratory ailments now may notice minor effects, when prior to 2009 the air quality was ranked 'Excellent' and there were no known health impacts.



Excellent	0-15	No known harmful effects to soil, water, vegetation, animals, materials, visibility or human health.
Good	16-25	No known harmful effects to soil, water, vegetation, animals, materials, visibility or human health. Persons with severe respiratory ailments sensitive to air pollution may notice some minor effects.
Fair	26-50	Adequate protection against harmful effects to soil, water, vegetation, animals, materials, visibility and human health. Persons with severe respiratory ailments sensitive to air pollution may need to modify their usual outdoor activities if experiencing effects.

Poor	51-100	Not all aspects of the environment and human health are adequately protected from possible adverse effects. The general population should consider reducing or rescheduling strenuous outdoor activities and higher-risk populations should reduce or reschedule outdoor activities.
Very Poor	>100	Continued air quality in this range could pose high risk to environment and public health.

Source: Government of Saskatchewan: 2015 State of the Environment Report

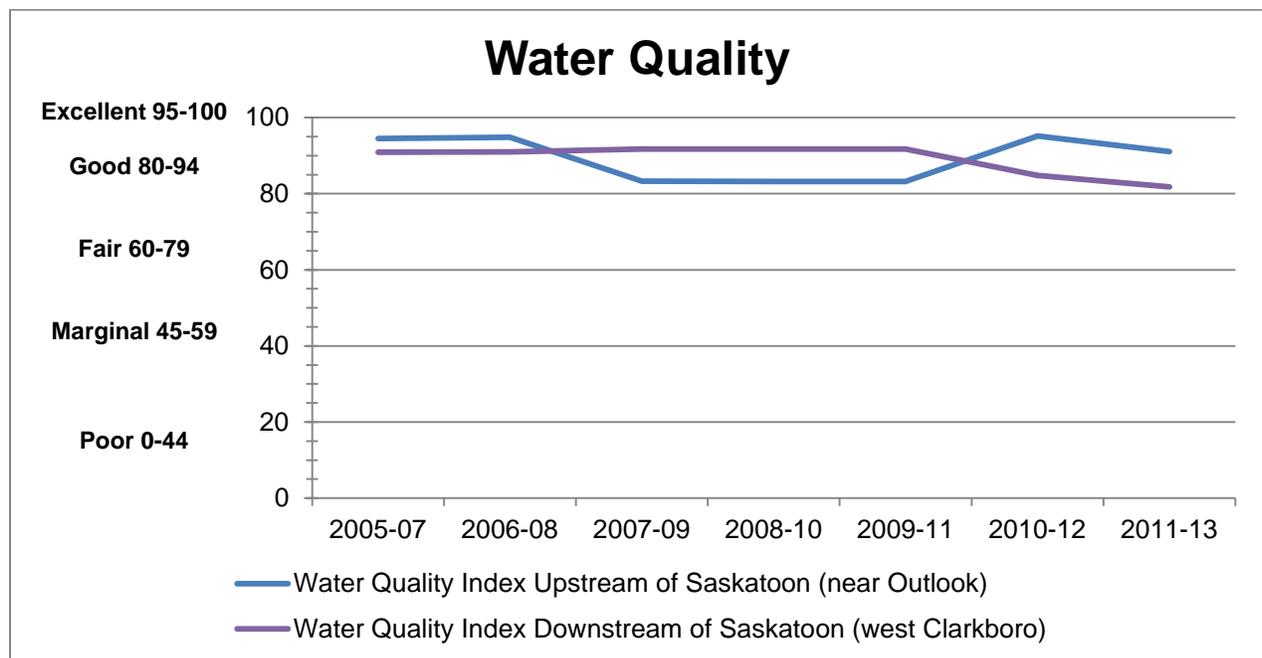
## Water Quality Index (stable)

Water is essential for our health and for our community to prosper. As water passes through our community, the impact can be determined through comparing upstream and downstream water quality.

The Strategic Plan has the long term strategy to reduce the impact of storm water runoff that is going into the river.

### Where are we now?

The South Saskatchewan River, upstream and downstream of Saskatoon, has consistently averaged 'Good' water quality.



Rating	Value	Description
Excellent	95-100	Water quality is protected with a virtual absence of threat or impairment; conditions very close to desirable levels. These index values can only be obtained if all measurements are within objectives virtually all of the time.
Good	80-94	Water quality is protected with only a minor degree of threat or impairment; conditions rarely depart from desirable levels.
Fair	60-79	Water quality is usually protected, but occasionally threatened or impaired; conditions sometimes depart from desirable levels.
Marginal	45-59	Water quality is frequently threatened or impaired; conditions often depart from desirable levels.
Poor	0-44	Water quality is almost always threatened or impaired; conditions usually depart from desirable levels.

Source: Government of Saskatchewan, Water Security Agency, Annual Report for 2014-15 State of Drinking Water Quality in Saskatchewan

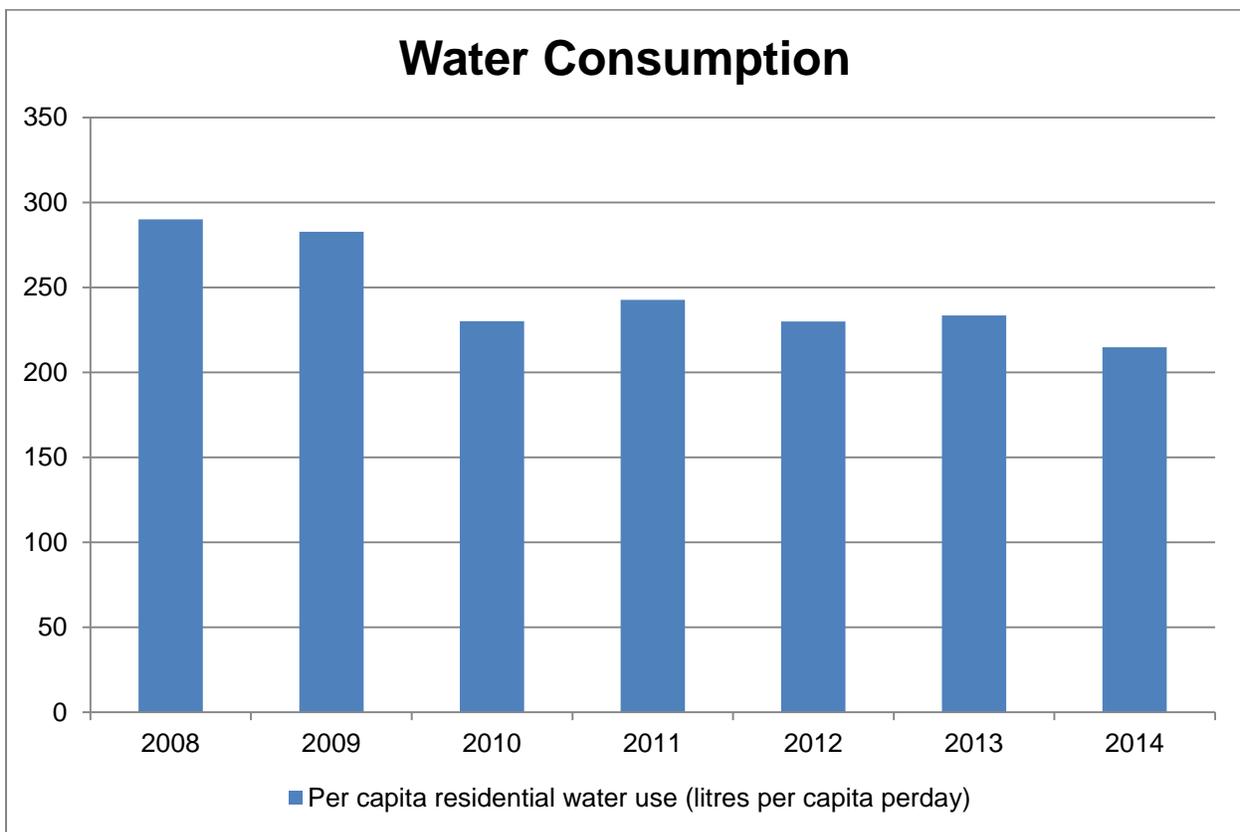
## Water Consumption (stable)

Saskatoon benefits from an abundance of water from the South Saskatchewan River. The treatment of water and waste water; however, use significant energy and chemical inputs, generating environmental and financial concerns as the city grows.

Measuring the per capita water consumption is a success indicator in the Strategic Plan.

### Where are we now?

Per capita residential use improved when new conservation-based water rates were introduced in 2010, and have remained fairly stable over the past 5 years.



Source: City of Saskatoon – Saskatoon Water

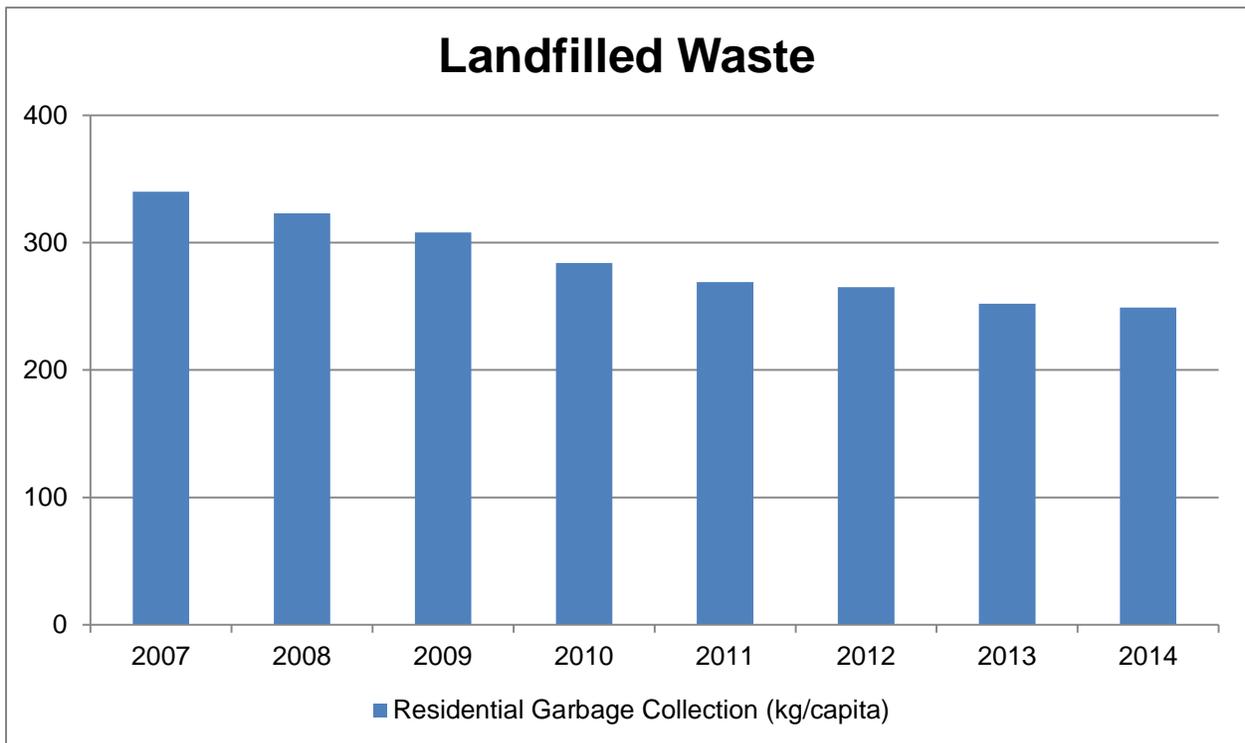
## Landfilled Waste (improving)

As our population grows the amount of waste we are generating increases and changes. The current landfill has a lifespan of 40 years and the construction of a new landfill would be costly.

Reducing the waste that is landfilled is a priority in the Strategic Plan.

### Where are we now?

The amount of waste each resident sends to the landfill is decreasing.



Source: City of Saskatoon – Environmental & Corporate Initiatives and Public Works

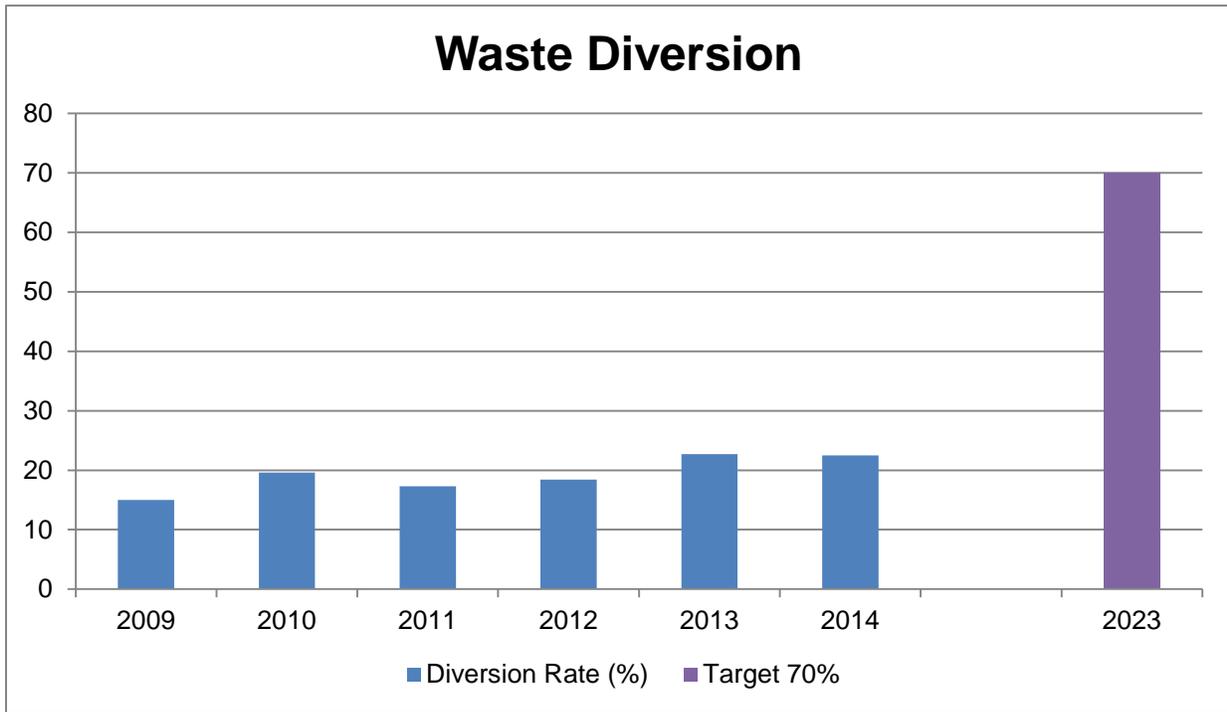
## Waste Diversion (needs improvement)

The amount of material diverted from the landfill can reduce environmental impacts and extend the operating life of the current landfill.

The diversion rate is a success indicator in the Strategic Plan.

### Where are we now?

The percentage of waste being diverted from the landfill has remained stable over the past year; however, improvement is needed to meet City Council's 2023 target of 70%.



Source: City of Saskatoon – Environmental & Corporate Initiatives and Public Works

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## Continuous Improvement Strategy – Internal Process Review Update

### Recommendation

That the report of the General Manager, Corporate Performance Department dated October 13, 2015, be forwarded to City Council for information.

### Topic and Purpose

The purpose of this report is to provide an update on the Internal Process Reviews (IPR) undertaken across the organization to date.

### Report Highlights

1. Internal Process Reviews focus on identifying and removing redundancies and waste within existing processes to increase efficiencies in civic operations.
2. They also build capacity in the corporation through innovation coaches and empowering employees.
3. IPRs are bringing teams together and increase efficiencies.
4. IPRs focus on:
  - streamlining the process for citizens;
  - ensuring consistency in the service provided to citizens;
  - reduction of manual processes and increase in digital first approach; and
  - review of tax-supported and user-pay models to cover the cost to deliver the service.
5. Employees find solutions for better service based on their experience and knowledge of the operational realities and finding savings as a result.

### Strategic Goal

This report supports the long-term strategy to focus on continuous improvement and use innovative and creative means to provide the best possible services under the Strategic Goal of A Culture of Continuous Improvement.

### Background

The Continuous Improvement (CI) Strategy was launched in 2013 as a corporate-wide approach to ensuring effectiveness and improving efficiencies in municipal services and operations. An ongoing approach including regular service level reviews encourages the Administration to go beyond conventional needs to provide high-quality service to the citizens of Saskatoon using innovative and creative means.

Internal Process Reviews (IPRs) are a component of the CI Strategy and are designed to improve effectiveness and efficiency of the operations through identification of waste and redundancy in internal processes. The approach to an IPR will depend on the size and scope of the project.

- Innovation Teams will be encouraged for projects with a larger scope or multi-departmental impact.

- Smaller review teams will be encouraged to establish quick wins in a section, division or department.

In the 2015 Corporate Business Plan and Budget, each business line identified continuous improvement initiatives for 2015, many of which will be addressed through an IPR. Additionally, on an ongoing basis each division is identifying opportunities to increase efficiency and improve on effectiveness. These initiatives are tracked and reported out annually in the *Report on Service, Savings and Sustainability: How the City of Saskatoon is Improving Productivity*.

## **Report**

### Focus on Identifying and Removing Redundancies and Waste within Existing Processes

In an organization the size of the City of Saskatoon, it is not uncommon that there is duplication of some processes and functions. For example, one division may be responsible for graffiti removal on a park bench and yet another is responsible for removal if the graffiti is found on a power pole; creating opportunity for inconsistency in service provided to citizens as well as potential for duplication of time spent investigating the issue.

The IPRs formalize the opportunity for teams from multiple divisions to come together and understand services delivered by each divisions and/or section, how each division addresses issues and concerns as they arise and identify areas of duplication. The reviews examine all aspects of a process, identifying steps that are redundant or no longer necessary and seeks opportunities to automate processes, reducing manual entry, paper use and staff time required to locate missing information and/or correct errors.

### Building Capacity for Innovation in the Organization

An Innovation Practitioner Training (boot camp) in 2014 brought 30 employees from a variety of divisions together with a purpose of fostering innovation and creativity within all levels of the organization. Through the use of tools the process is designed to take an opportunity from idea to implementation, teams are building capacity within each department to assist in driving change.

The Innovation League, as the group is called, meets once per month to share information on how they have used the tools with their team in meetings and discussions. The tools that the Innovation League members have been trained on through the Innovation Boot Camp are an excellent resource that teams will utilize to complete many of the CI initiatives outlined in the 2015 Corporate Business Plan and Budget.

### IPRs are Bringing Divisions Together and Increasing Efficiencies

Collaboration across divisions is a key component to ensuring we are providing quality service to citizens and good value for tax payer's dollars. IPRs bring a team together, formally or informally, to address a challenge or opportunity. Attachment 1 provides highlights for some of the IPRs underway in 2015: Customer Service at Public Works, Streamlining of Graffiti Reduction, and a review of the Special Events process.

Employees have found solutions for better service and savings of approximately \$200,000 to date.

The focus of the IPRs is on:

- streamlining the process for citizens;
- ensuring consistency in the service provided to citizens;
- reduction of manual processes and increase in digital first approach;
- review of tax –supported and user pay models to cover the cost to deliver the service; and
- creating a repeatable process allowing teams the opportunity to jump into the next issue or challenge.

### Employees Finding Solutions for Better Service and Savings

Feedback from the teams participating in the IPRs has been excellent. Meetings have been described as productive, informative, and fun. The interactive process helps a team set a common goal and achieve clarity on objectives and outcomes, creating an environment where everyone can have a voice and is able to contribute to the conversation.

Front-line employees have commented that they are happy to be involved in the process as a member of the team and to be part of the change within their workgroup. They are often the closest to our citizens and bring great insight regarding feedback from citizens as well as the challenges and opportunities they face daily with work they are doing. They also bring some of the most innovative ideas to the table and are instrumental in helping achieve change within their work groups.

Improved collaboration fosters team building and employee engagement; employees can more easily understand the downstream impact of their work, which enables them to provide a better experience for citizens.

### **Communication Plan**

Saskatoon's Performance Improvement Plan, "Making Strides", a communication strategy focusing on continuous improvement and performance targets was launched at the end of April. The goal of this strategy is to increase internal and external awareness for the City's success in achieving savings through efficiency, improving service and progress towards strategic goals.

Results from the Internal Process Reviews will be communicated on the City's website in the 'Latest Strides' and/or 'City Spotlight' sections of the *Our Performance* page at [www.saskatoon.ca/strides](http://www.saskatoon.ca/strides).

### **Financial Implications**

The financial implications related to efficiency gains continue to be quantified with the focus of reallocating to other strategic and operational priorities and/or may contribute to a reduction in the base budget. The annual budget will be prepared to reflect the approved service levels.

**Other Considerations/Implications**

There are no policy, environmental, Privacy, or CPTED implications or considerations.

**Due Date for Follow-up and/or Project Completion**

Reports related to key findings of the Internal Process Reviews will be brought forward to the Standing Policy Committee on Environment, Utilities and Corporate Services as they reach completion. Action plans and recommendations will be incorporated into the annual business planning and budgeting process for the respective divisions.

A report on the Continuous Improvement initiatives identified within each business line in the 2015 Corporate Business Plan and Budget will be brought forward as part of the 2016 Corporate Business Plan and Budget deliberations.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Attachments**

1. Highlights from the Internal Process Reviews

**Report Approval**

Written by: Kim Matheson, Director, Strategic and Business Planning

Reviewed and

Approved by: Catherine Gryba, General Manager, Corporate Performance Department

## Highlights from the Internal Process Reviews

### Customer Service at Public Works

#### Description of the Process Under Review

- The review group brings together front line staff and management from Public Works (PW), Information Technology (IT), and Strategic and Business Planning (SBP) to begin the process of transitioning Public Works Customer Service to Service Saskatoon's Customer Relationship Management System/311. Public Works has over 200 services that result in inquiries and complaints from citizens, councillors and other civic divisions. As a starting point, the team began the review by documenting six current state water and sewer trouble processes.
- The team also discussed the opportunity to improve service to citizens by creating one point of contact for citizens which ensures they receive consistent, accurate, and relevant information, tracking and follow up. This was further defined as:
  - Informed customer service representatives able to answer a variety of questions quickly and completely in one call
  - Fast and effective service responses to emergency situations
  - Understand the levels of service provided by the City so they know what to expect
  - Options for inquiries (email, phone, web, social media, etc.)
- To date all six processes have been mapped and are undergoing revisions where 'quick wins' are possible to improve customer service.
- Moving forward, recommendation and action plan investigations focus on:
  - Developing a 311-like experience for the six processes with the support of IT, enabling gains in the digital first approach and consistent service for citizens.
  - Developing scripts for customer service representatives that outline consistent customer levels of service for these six processes. Information here highlights standards already in place at PW.
  - Review of tax costing – outlining customer levels of service supported by PW (emergency service) and user pay models (non-emergent service, for example – a curb box location request from a resident looking to pave a driveway).
  - Digital consolidation options for database/email information often searched by customer service representatives – enabling more efficient service (quicker calls and calls that answer questions without a call back to the citizen).

#### Anticipated Efficiencies and Service Enhancements Resulting From the Review

While the team is still working through the current processes and identifying opportunities for improvement it is expected that the revised process will result in the following opportunities that will be quantified in future reports to Committee:

- Streamlining of IT systems for the Public Works Call Centre will reduce the amount of time staff spend searching for information, improving the response time to citizens and allowing staff to address a greater number of inquiries or complaints within the same timeframe.
  - The length of time Call Centre staff currently spends on a call varies with the nature and complexity of the call. Calls can take anywhere from 1.5 minutes

- for a simple inquiry to several minutes (or longer if the information isn't available) on a complex inquiry or complaint.
  - On average staff spend 2.5 minutes per call searching for information. Each staff member takes approximately 83 calls per day which translates into 3.47 hours searching for information.
  - The staff time has a value of approximately \$164,000 per year.
- Moving from manual to online management of work orders in the field will improve the accuracy in reporting delays and/or work completion and eliminate the need for staff to manually enter work order information in the system. The future state will also allow citizens to be able to track their inquiry or complaint in real-time with an online tracking system, reducing the number of calls the customer service staff receive.
- Improved communication between the Public Works Call Centre and field crews will improve response time and accuracy of issue and location.

## **Streamlining Graffiti Reduction**

### Description of the Process Under Review:

- Traditionally, the City of Saskatoon department responsible for removal was determined by the location of the graffiti. For example, if the graffiti was on a park bench, the Parks division would coordinate its removal. As a result, citizens were always left to guess who to report the graffiti to, and would have to call multiple people before getting to the appropriate division.
- The longer graffiti remains, the more likely other people will add to it (also known as "tagging"). Therefore, it was identified that a much more efficient process for dealing with graffiti was needed.
- The review brought staff together from, among others, Community Development, Parks, Fire Department, Police Services, and Recreation and Sport. The team has been integrating innovation tools into their meetings, providing a more structured focus and encouraging them to look at the problem in a more comprehensive way; working together toward a citizen-centric solution.
- The team examined what success would look like from the citizen's perspective. This was defined as a seamless, coordinated approach which provides a single point of contact for reporting graffiti, as well as prompt, consistent response and time to remedy.
- The team is now also beginning to think not just about removal, but how to proactively prevent graffiti from happening. For example, group members have begun to look at the issue from a construction perspective, considering building materials that could be cleaned instead of having to be repainted; and identifying building locations less likely to be spray-painted throughout the city.

### Anticipated Efficiencies and Service Enhancements Resulting From the Review:

While the team is still working through the current processes and identifying opportunities for improvement, it is expected that the revised process will result in the following opportunities that will be quantified in future reports:

- Streamlining of the graffiti reporting process through an app will improve the quality of information received, and reduce staff time currently spent figuring out the issue and location of the graffiti.
  - The length of time spent investigating a graffiti inquiry or complaint varies with the nature and complexity of the issue. On average staff spend 2-4 hours per inquiry searching for information and determining responsibility for remediation based on location, type of property, etc.
  - There are approximately 250 external inquiries/complaints per year with approximately 20% (50 inquiries/complaints per year) requiring detailed investigation and follow up.
  - At an average of 3 hours per investigation by a manager, the value of staff time is potentially between \$6,000 - \$10,000 per year.
  - Staff addressing these inquiries/complaints would be able to reallocate this time to other duties.
- The focus on preventing graffiti from happening will result in savings associated with equipment, materials and time required to remove the graffiti as well as time spent addressing reports of graffiti.
- Currently, several divisions incur costs related to removal of graffiti depending on where it is located and costs are tracked individually within divisions and/or sections. In order to provide potential efficiency gains in this area, information is being gathered from each of these divisions as part of the review to gain an understanding of the current cost of graffiti removal. The estimated annual cost for removal of graffiti across all divisions is approximately \$250,000 per year. Reducing the amount of graffiti through prevention efforts by 10% would result in an annual savings of equipment, materials and time of approximately \$25,000.

## Special Events

### Description of the Process Under Review:

- The review group brings together 9 of the 14 divisions currently involved in the special events process.
- Meetings to date have focused on understanding the current state of the special events process through process mapping, brainstorming activities including defining success from the stakeholders perspective and the collection of costing and stakeholder feedback data.
- There are many stakeholders involved in the special events process, each with their own definition of success. That being said, some of the common opportunities include:
  - An application process that is streamlined and reflective of the proposed event (simple application for small, low risk events versus detailed application for larger, higher risk events and/or those requiring civic services)
  - A single point of contact at the City regardless of the number of divisions or departments their event needs may touch
  - Responsive service in processing of applications and answering questions
  - Special events to occur in Saskatoon with minimal disruption to the daily lives of citizens

- Moving forward, recommendation and action plan investigations focus on:
  - Streamlining the process for citizens in two ways
    1. Customizing the application process, ensuring small low risk events have a concise application free from questions that are not applicable. This action stems from the recent customer feedback survey and supports a recommendation in the 2014 Special Events Report by Recreation & Sport that events be categorized by attendance and risk.
    2. The single point of contact model, ensuring citizens get efficient and consistent service regardless of how many divisions/departments are involved.
  - Streamlining the process for internal stakeholders involved with the creation of a SharePoint site to host all information relevant to the process. (complete)
  - Ensuring consistency in decisions made about event approvals and support through research and discussion around special events policy and procedure creation and documentation.
  - Creating online application processes to support the digital first strategy and the reduction of manual processes.
  - Reviewing the current payment model and discussing options that move toward a combination of supported events and user-pay events.

Anticipated Efficiencies and Service Enhancements Resulting From the Review:

The team is still working through the current processes and identifying opportunities for improvement. They are also currently quantifying costs associated with special events as there are many divisions that incur costs that are not currently recovered. A future report will outline these costs, options for application and event fees, cost recovery, and will provide a recommendation to the Committee.

It is expected that the revised process will result in the following opportunities that will be quantified in future reports:

- Streamlining the application process will eliminate the requirement of each division to receive an application from the event organizer. A significant amount of time is currently spent following up on incorrect or missing information by each division. Reduction in time spent following up on information has a value of approximately \$5,000 which would help reduce budgetary over-expenditures.
- Providing a single point of contact before, during and following an event, is expected to reduce complaints as presumably they will be addressed in a more timely fashion and reduce the number of phone calls and emails to City Councillors and the Administration regarding an event. Reduced complaints and inquiries would result in an increase in staff time of approximately 25 hours per event season that would be reallocated to other priorities.
- The team is also investigating options related to application and event fees, staff time and cost recovery for labour and equipment required for events as well as damage resulting from an event; particularly in civic parks.

**Next Steps**

It is expected that each of the reviews highlighted in this attachment will result in efficiencies such as staff time through automation of processes and reduction in duplication of effort across multiple divisions. Service enhancements are also expected that will reduce the time required to respond to citizen and Councillor inquiries and complaints as well as improving the ability for the information to be located online and/or through an app on a smart phone. Recommendations and action plans will be brought forward to Committee as the opportunities are investigated and savings quantified.

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## Network Connectivity Services – Request for Proposal Award

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That a contract with Shaw Business for the provision of network connectivity services for the civic facilities with the two Active Data Centers DC1 (City Hall) and DC2 (SaskTel) for up to thirty six months at an estimated fee of \$412,065, plus applicable taxes be approved; and
2. That Purchasing Services be authorized to issue the necessary Purchase Order.

### Topic and Purpose

The purpose of this report is to request approval to proceed with a contract with Shaw Business for the supply of network connectivity services for up to a thirty six (36) month period.

### Report Highlights

1. Network connectivity infrastructure connects the civic facilities around the City of Saskatoon (City) to the two active Data Centers.
2. On August 6, 2015, the City issued a Request for Proposal (RFP) for a Metropolitan Area Network (RFP #15-0719) to provide this service.
3. The recommendation is that Shaw Business, the Preferred Proponent, be awarded the contract for the supply of these network services.

### Strategic Goal

This report supports the long term strategies of Continuous Improvement by improving the City's network connectivity services and reducing the operational costs from a Network Service Provider.

### Background

The City's Civic Facilities are interconnected using both private and internet based networking services with the two Active Data Centers. This network (Metropolitan Area Network) design allows our staff to connect with the applications and systems anywhere in the corporation. This also gives staff access to websites and services outside our corporate network. At the time of the previous contract, there was only one vendor with the capabilities to provide the City of Saskatoon with these services.

### Report

At present, the network consists of both private and internet based services from a single vendor. The Saskatchewan technology market is changing and there is more than one vendor with the infrastructure to provide these services. The goals of this RFP were to secure networking services that would at a minimum meet or exceed the current

## Network Connectivity Services – Request for Proposal Award

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service levels, provide a clear roadmap to increase capacities as the corporate requirements increase, and realize operational savings.

Work to be completed under the scope of this contract will include:

- provide network services to the civic facilities identified in this proposal,
- connect these services at each of the facilities and at both the Active Data Centres,
- provide the appropriate network interfaces to the City's internal network equipment, and;
- provide test data indicating the appropriate network capacity is fully operational and available at each of the civic facilities.

### RFP for Metropolitan Area Network

An RFP for a Metropolitan Area Network was issued on August 6, 2015, with a closing date of September 8, 2015.

Responses were received from:

- Shaw Business
- SaskTel Business Solutions
- WiBand Communications Corp.

The RFP Review Team is composed of the Manager, IT Operations, IT Consultants from the Systems and Networks teams, and Procurement Specialist. The team evaluated the proposals based on the following criteria detailed in the RFP.

<b>Category</b>	<b>Points</b>
Private Service vs. Internet Based	15
Performance and Service Description	25
Service Termination Costs	5
Availability (Up-Time)	10
Cost of Additional Bandwidth	5
Three Year (36 month) Cost	40
<b>TOTAL</b>	<b>100</b>

### Preferred Proponent

Upon completion of the evaluation, the RFP Review Team determined that the proposal submitted by Shaw Business achieved the highest score and met the requirements of the RFP; therefore the recommendation is to award the RFP to Shaw Business as detailed below:

For up to 36 month supply of network connectivity infrastructure for the civic facilities as indicated in the RFP proposal review for an estimated fee of \$412,065, plus applicable taxes.

**Financial Implications**

The total cost of \$412,065 (plus taxes) will be allocated over 36 months starting January 1, 2016. The first year costs will be managed within the proposed 2016 Operating Budget for the IT Division. The second and third year costs will be part of the 2017 and 2018 proposed operating budgets. This proposal will realize \$117,585 in operational cost savings over the 36 month contract based on estimates from this proposal against our current contract in service.

**Other Considerations/Implications**

There are no policy, environmental, Privacy, or CPTED implications or considerations.

**Due Date for Follow-up and/or Project Completion**

This project will be completed in three major phases. The first phase will be to complete installation work for eight of the sites starting in December 2015 for a January 2016 implementation, Phase 2 installation work of twelve sites will start as soon as the 2016 spring construction season begins with a May 2016 implementation, and finally, Phase 3 will be the remaining 9 sites that are under contract with the incumbent service provider until November, 2016.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Report Approval**

Written by: Robert Moncur, Manager, IT Operations  
Reviewed by: Paul Ottmann, Director, Information Technology  
Catherine Gryba, General Manager, Corporate Performance  
Department  
Approved by: Murray Totland, City Manager

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## Parks Design, Construction, and Maintenance - Civic Service Review

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the improved efficiencies and effectiveness in delivering the service as outlined in this report be received as information;
2. That the Service Level for Parks Pathway Snow Clearing be increased to include snow clearing services to 14 kilometres of Naturalized Park pathways;
3. That the Service Level for Shelterbelt/Buffer Strip Maintenance be increased so that a proactive service level that includes mowing, trimming and garbage pick-ups within the shelterbelt areas can be established; and
4. That the Administration report on a Park Infrastructure Asset Management Plan including a funding strategy to achieve desired service levels.

### Topic and Purpose

The purpose of this report is to provide an overview of the Parks Division Civic Service Review.

This review explored opportunities for improvement within the design, construction, and maintenance of civic parks and open spaces. Implementation of these findings will improve service to citizens, increase the efficiency of park design, construction and maintenance, and improve accuracy in budgeting for the Parks Division.

Additionally, this report recommends Service Levels for Parks Pathway Snow Clearing and Shelterbelt/Buffer Strip Maintenance.

### Report Highlights

1. There are two key components of the Civic Service Review (CSR) Process; efficiencies identified by employees delivering the service, and where warranted, recommending new service levels for activities where public expectations are not being met.
2. The efficiencies include improved coordination of park design/development and coordinated maintenance to reduce costs, improved customer service to avoid duplication of efforts, and the implementation of new satellite maintenance facilities. Cost savings are estimated in the range of 10% or \$1,500/ha in new park development areas.
3. The recommended Service Level for Parks Pathway Snow Clearing would include snow clearing services to 14 kilometres of Naturalized Park pathways.
4. The recommended Service Level for Shelterbelt/Buffer Strip Maintenance would be increased to increase mowing, trimming and garbage pick-ups within the shelterbelt areas.

5. The CSR identified the need for an asset management approach for key park “hard” assets, like pathways and irrigation systems.

### **Strategic Goal**

This report supports the Strategic Goal of a Culture of Continuous Improvement. Process improvements focus on identification of root cause issues and innovative and creative solutions that will provide optimal service improvements.

### **Background**

City Council, at its meeting held on December 3 and 4, 2013, approved the Continuous Improvement Strategy which includes the following three components:

- Annual Civic Service Reviews - an operational review process to find ways to control expenditures and to seek efficiencies in the delivery of municipal programs and services.
- Internal Process Reviews - focus on identifying and removing redundancies and waste within existing processes to increase efficiencies in civic operations.
- Building capacity in the corporation through innovation coaches and empowering employees.

See Attachment 1 for the Continuous Improvement Strategy Overview.

### **Report**

The impact on citizens is a key consideration during the planning, design, construction, and maintenance of civic parks and open spaces. Citizens expect parks to be clean, green and safe; effective planning, communication and budgeting in future parks design and construction will have a positive impact on citizen satisfaction and ensure they are receiving good value for their tax dollars.

There are two aspects to this report. The first highlights key findings from the CSR on improving efficiencies and effectiveness in aligning our services to citizen expectations. The second aspect is a review of Services Levels for Parks Pathway Snow Clearing and Shelterbelt/Buffer Strip Maintenance; two areas where current service levels appear to not meet citizen expectations.

### Review for Efficient and Effective Service

Employees involved in the design of parks, and the construction and the maintenance of parks were all involved to bring forward perspectives on how to provide safe, green and clean parks to our citizens.

Processes were reviewed so there was clarity of how we are currently delivering our services. This was followed by identifying what our citizens expect, and how can we change our work so that we are as efficient as possible, and we are effective in delivering what citizens want.

The following issues were addressed in the CSR:

- Park Design, Development and Maintenance Standards
- Drainage Issues

- Customer Service
- Reducing Downtime and Improving Productivity
- Staffing and Scheduling of Work
- Special Events

Attachment 2 is an overview of the CSR. The following provides some highlights of changes being implemented:

- Optimization Teams established to ensure the impact of design on long term maintenance is considered at the planning stage for new developments and reflected in the operating budget.
- Improved customer service with one point of contact to reduce duplication of effort.
- In 2015, two crews piloted a model where horticultural and turf maintenance staff formed one crew that works together to maintain an entire park as opposed to each arriving in the park on varying days or at varying times as per previous maintenance schedules. This initiative is estimated to save 5% (\$750/ha) in labour costs due to reduced travel time.
- Beginning in 2016, new satellite maintenance facilities will be established in appropriate locations in new development areas to reduce travel times and improve safety. This initiative is also estimated to save up to 5% in labour costs (\$750/ha), due to reduced travel.

#### Service Level Review

By approving the Service Level, citizens will know what they can expect for this service, and the Administration will allocate resources accordingly – this may require a phased approach.

The Service Levels identify the following for Park Pathway Snow Clearing and Shelterbelt and Buffer Strip Maintenance:

- Total inventory on Municipal Property
- Total inventory being maintained
- Current Service Level
- Total Annual Cost
- Annual Budget Allocation

Each service has an accompanying set of options that describes increased service levels, the related costs, and the funding gap.

- The Administration is recommending that the Service Level for Parks Pathway Snow Clearing be increased to include snow clearing services to 14 kilometres of Naturalized Park pathways (Attachment 3).
- The Administration is recommending that the Service Level for Shelterbelt/Buffer Strip Maintenance be increased so that a proactive service level that includes mowing, trimming and garbage pick-ups within the shelterbelt areas can be established (Attachment 4).

### **Communication Plan**

The CSRs provide an opportunity for the public to learn more about the City's operations, the costs to deliver the services, and to provide feedback and input into how the City can deliver any of its services more efficiently. The approved Levels will be communicated through 311/Service Saskatoon so citizens know what services they can expect. Citizens will have the opportunity to provide input into levels of service as well as the budget using the Shaping our Financial Future budget tools.

Results from the Civic Service Reviews will be communicated on the City's website in the 'Latest Strides' and/or 'City Spotlight' sections of the *Our Performance* page at [www.saskatoon.ca/strides](http://www.saskatoon.ca/strides).

### **Financial Implications**

As part of the Parks CSR, a review of the operating budget estimates was completed and estimates were adjusted to more accurately reflect the operating unit cost per hectare of park space, as well as the number of staff required per hectare. Unit cost will be utilized in the definition of maintenance service levels to ensure the Parks Division budget is an accurate reflection of the total costs required to maintain the current inventory at the approved service level. Additionally, this information will provide accurate information for future operating budget requests to maintain additional parks coming online as Saskatoon continues to grow.

The Administration will provide a future report on Park Infrastructure Asset Management Plan including a funding strategy to achieve desired service levels.

Operating and capital cost impacts are currently under review and will be brought forward in future reports to Committee and/or Council. The financial implications related to efficiency gains will be quantified and will be reallocated to fund other strategic and operational priorities and/or may contribute to a reduction in the base budget.

The 2016 Business Plan and Budget proposed funding of \$30,000 to partially implement the new Service Levels recommended in this report. This would include snow clearing on 14 km of additional park pathways and improved shelter belt maintenance.

### **Other Considerations/Implications**

There are no policy, environmental, privacy, or CPTED implications or considerations.

### **Due Date for Follow-up**

Further reports will review additional Parks-related service levels and continue to refine the savings outlined in this report.

Reports related to key findings of this report (i.e. asset and maintenance service levels) will be brought forward to the SPC on Planning, Development and Community Services Committee for approval. Action plans and recommendations will be incorporated into the annual business planning and budgeting process for the Parks Division.

The CSR identified the need for an asset management approach for the key “hard” assets within civic parks and open spaces, including: pathways, irrigation systems, lighting, maintenance buildings, play structures, park furniture, and other similar assets. A further report on an overall asset management approach for Parks facilities will be forthcoming later in 2015.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Attachments**

1. Continuous Improvement Strategy Overview
2. Executive Summary – Parks Efficiencies and Effective Service Delivery
3. Service Levels – Park Pathway Snow Clearing
4. Service Levels – Shelterbelt and Buffer Strip Maintenance

**Report Approval**

Written by: Kim Matheson, Director, Strategic and Business Planning  
Reviewed by: Darren Crilly, Director, Parks  
Randy Grauer, General Manager, Community Services Department  
Approved by: Catherine Gryba, General Manager, Corporate Performance Department

Administrative Report - Parks Civic Service Review.docx

## **Continuous Improvement Strategy Overview**

In 2014, the Administration began our Civic Service Reviews. We have made good progress, and have learned much. One of our learnings has been that there are several components to a complete Service Review process. To try and bring some clarity, we are recommending a framework to the overall program.

### **Framework for Civic Service Reviews:**

#### 1. Service Level

##### a. Asset Service Level

How the assets and services are preserved, renewed, and funded to ensure the quality of life for citizens is sustained or improved, and include:

- Inventory of Asset(s)
- Condition of Asset(s)
- Costs to Preserve Asset(s)
- Gap in Funding
- Funding Plan/Investment Strategy

##### b. Maintenance Service Level

The maximum interval between tasks or activities required to maintain the defined level of service are referred to as Maintenance Service Levels, and include:

- Description of Service
- Definition of Service Level
- Cost to Maintain Asset
- Timelines to achieve Service Level
- Service Level Approval

#### 2. Efficiency

##### a. Operational Efficiency

A review of current processes identifies opportunities to improve efficiency and increase the effectiveness of the service and /or program. Savings resulting from the improvements will be quantified and reported as part of the overall Civic Service Review.

### **Knowledge Base for Service Saskatoon**

All of this information can be used to prepare our knowledge base for Service Saskatoon and the 311 Call Centre.

### **Communication Plan**

The CSRs provide an opportunity for the public to learn more about the City's operations, the costs to deliver the services, and to provide feedback and input into how the City can deliver any of its services more efficiently. Citizens will have the opportunity to provide input into levels of service as well as the budget using the Shaping our Financial Future budget tools.

Results from the Civic Service Reviews will be communicated on the City's website in the 'Latest Strides' and/or 'City Spotlight' sections of the *Our Performance* page at

[www.saskatoon.ca/strides](http://www.saskatoon.ca/strides).

## **Executive Summary - Parks Efficiencies and Effective Service Delivery**

The Parks Division is responsible for the maintenance and preservation of more than 1,500 hectares of City of Saskatoon parks and civic open spaces. In total, the City controls and maintains over 2,600 hectares of green space (includes parks, cemeteries, green spaces inside and outside city limits, as well as open spaces around civic facilities). As an example, Parks maintains about 930 ha of neighbourhood parks, at an average annual cost of \$15,000/ha for irrigated areas and about half that for non-irrigated areas. In some new neighbourhood parks, the annual maintenance cost is approaching \$20,000/ha.

### **Introduction**

The Executive Committee approved the recommendation that the Parks Division undergo an Civic Service Review (CSR) in 2014. Two main issues were explored during the review: opportunities for operational efficiencies, and the definition of service levels including cost to deliver the service and options for alternate service levels.

During the CSR, the team reviewed the current state of parks design, construction and maintenance. They examined what success would look like from the citizen's perspective and finally examined what the process for design, construction and maintenance of civic parks should be. The team analyzed the data available and determined what key information should be tracked in the future.

This report identifies the key findings and recommendations from the Parks Division CSR and also outlines current and optional service levels, including the cost to deliver the service at each level, for Pathway Snow Clearing, and Shelterbelt/Buffer Strip Maintenance. Future reports will address other Parks-related service levels.

### **Report**

As Saskatoon continues to grow, so do expectations and demand related to the use of parks and open spaces. As an example, the number of special events held in parks and open spaces has increased 84% over the past five years. Parks and open spaces are of interest to a wide variety of stakeholders, including: homeowners, land developers, sports organizations, other civic divisions, utility companies, business owners, tourists, etc. Regardless of the increased usage and variety of stakeholders, citizens expect that parks are:

- Clean, green and safe,
- Accessible and provide a wide variety of activities, and
- Contain some naturalized elements, with appropriate preservation and renewal plans.

During the Civic Service Review, the following challenges were identified with Parks Design, Construction and Maintenance:

1. Impact of growth and development requires increased consideration during the planning, design, construction and maintenance of civic parks and open spaces.

- Horticulture and turf maintenance staff should be included in the early stages of park design, in order to effectively communicate the potential impacts of a design on the maintenance operations and also to increase the effectiveness of the budget process as it would allow them to plan effectively for maintenance of future hectares of parks coming into inventory.
2. A review of the operating budget estimates confirmed that adjustments were needed to more accurately reflect the operating cost per unit to deliver Parks services and that the approved service level needs to be clearly defined.
  3. As Saskatoon continues to grow and the footprint of the city expands, crews are travelling greater distances to complete their daily maintenance schedules. Increased travel has resulted in an increase of downtime and safety concerns as staff are traveling on major roadways with equipment and increasing wear and tear on equipment originally meant for use in parks and open spaces, not roadways. Existing Parks maintenance yards are also filled to capacity.
  4. Current parks scheduling potentially means that several City crews could be in the same park at different times on any given day, leaving a perception of inefficiency with residents in the area and a lack of ownership amongst Parks employees.
  5. There has been an 84% increase in the number of special events held in parks and/or open spaces over the past five years. This increase in events has resulted in increased damage to the parks and at times does not allow time for revitalization of the park/open space before the next event is scheduled. Parks is incurring increased costs due to the maintenance required following a major event.
  6. Parks and Facilities Divisions are under consistent pressure to maintain “hard” assets such as asphalt pathways, irrigation systems, and playground equipment. Sustainable funding through an appropriate asset management approach is recommended.

## **Opportunities to improve efficiency/effectiveness and Address Challenges:**

### **Park Design, Development and Maintenance Standards**

#### Current Process and Procedure

- Park designs have become more elaborate and complex. A complete review of the standards for park design, landscape design and maintenance is needed to ensure we are not over-designing our parks, leading to extensive and excessive maintenance. All relevant stakeholders must be involved in the review.
- Our timing of new park development needs to be coordinated with residential construction to reduce or eliminate irrigation, turf, etc. being damaged once installed. Coordinating park development with residential construction will reduce these costs and allow for staff time to be reallocated to other maintenance activities.
- New staff and developers should be provided all relevant standards and guidelines to increase understanding of costs associated with complex and/or detailed parks designs and allow for value-based decision making if a design exceeds the standards.

### Changes for More Efficient and Effective Service

- Detailed and elaborate park designs result in increased maintenance costs.
- Optimization Teams established on new developments will ensure the impact of design on long term maintenance is considered at the planning stage and reflected in the operating budget. Subject to stakeholder review, the implementation of a parks design process that approximately recognizes maintenance cost, could reasonably reduce future costs by 5% or \$750/ha, on a current base cost of \$15,000/ha.
- Since the service review, the process for allowing residents, contractors, and utility agencies to enter developed parks has been enhanced. This has resulted in reduced park damage and improved cost recovery, estimated at \$50,000 per year.

### **Drainage Issues**

#### Current Process and Procedure

- Residents with houses backing parks and open spaces often drain sump pumps directly into the park or open space increasing drainage issues and negatively impacting ability of Parks to maintain the area.
- Increased drainage results in areas that must be maintained manually by hand mowers and line trimmers as opposed to the more efficient mowing equipment.

### Changes for More Efficient and Effective Service

- The Community Standards Division will be engaged to discuss enforcement options for issues related to bylaws; specifically Bylaws 8175 and 8379.
- An improved contingency process needs to be included in park development projects in order to re-establish proper drainage patterns in select cases.
- Linear parks are popular with residents and developers. However, due to configuration and on-going drainage issues, maintenance costs are at least 10% higher in these areas. Stakeholder engagement is required to review the future use of linear parks in new neighbourhoods.

### **Customer Service**

*Note: Parks is one of the priority areas for a review for Service Saskatoon – 311 following Public Works.*

#### Current Process and Procedure

- There are a number of citizen calls and inquiries about the design and maintenance of parks and open spaces. These calls and requests for service are being addressed by multiple staff, resulting in duplication of effort.

### Changes for More Efficient and Effective Service

- Streamline the inquiry/concern process through a single point of contact, such as a Customer Service Coordinator, in order to reduce duplication of effort and improve consistency in response to citizen and Councillor inquiries and concerns.

- Streamlining this process would reduce the amount of time spent by the Parks Director and Superintendents, allowing their time to be redirected to other management priorities such as schedule and program optimization. Cost savings are estimated at \$20,000 per year by deploying a dedicated customer service representative.
- Ultimately, the process will transition to the 311 system.

## **Reducing Downtime and Improving Productivity**

### Current Process and Procedure

- Aging equipment results in breakdowns and operational down time.
- Parks Satellite Maintenance Facilities and Locations - as Saskatoon continues to grow and the footprint of the city expands, crews are traveling greater distances from the main Parks yards on Avenue P, Nutana-Kiwanis, Umea Park and the Forestry Farm, to the parks they maintain on a daily basis. This increased travel has resulted in an increase in safety concerns as staff are travelling on major roadways with equipment and increasing wear and tear on equipment that was meant to be used in parks and open spaces, not on roadways. Travel time to remote locations was also identified as a barrier to productivity, resulting in significant downtime. Existing storage yards are also full to capacity.
- The use of one-ton trucks in parks also results in damage to pathways, irrigation lines, turf, etc.

### Changes for More Efficient and Effective Service

- Satellite maintenance yards are being established in remote park locations to ensure that an appropriate-sized facility is within reasonable access. This change will have an immediate positive impact on the safety of staff as they are no longer travelling with slow moving equipment on busy roadways. Downtime due to travel will also be reduced, saving an estimated 5% in labour costs, or about \$750/ha per year.
- Conduct a CSR with Fleet Services and Parks as a stakeholder to address issues with aging equipment and preventative maintenance. This CSR is underway and the results will be reported to Committee near the end of 2015.

## **Staffing and Scheduling of Work**

### Current Process and Procedure

- Specialized crews work on a specific component of the park, such as mowing, pruning trees, weeding plant beds, etc. Crews are scheduled to complete their area of maintenance and then move on to the next park. This requires a significant amount of travel time for each specialized crew.
- When the growing conditions are excellent during the middle of summer, there is overgrowth of grass and weeds that are not being maintained to the level that citizens expect.
- New seasonal employees are hired at the end of May and require training, reducing possible productivity levels until staff are comfortable with the equipment and the maintenance requirements.

### Changes for More Efficient and Effective Service

- Horticulture and Turf crews formed multi-disciplinary crews which increased efficiency. For the 2015 season, two crews piloted a model where horticultural and turf maintenance staff formed one crew that works together to maintain an entire park as opposed to each arriving in the park on varying days or at varying times as per previous maintenance schedules. Savings in travel time is estimated to reduce labour cost by 5% or \$750/ha per year.
  - Furthermore, the advantage of the combined crew model is the crews becoming experts in the specific maintenance requirements of a particular park and an increase in ownership within the crews. Residents become familiar with the day in which the crew is expected to arrive in their park and potentially get to know the staff. This model also reduces confusion as to why there may be 3 or 4 different Parks Division vehicles in a park on any given day.
- Double shift or contract out certain maintenance activities in busy months when weather patterns may result in a need for increased frequency of maintenance activities such as mowing or trimming in order to reduce complaints related to overgrowth of grass or weeds.
- Bring new Parks staff on two weeks earlier to ensure they are trained and ready to go when the busy season starts.

### **Special Events**

*Note: There is a detailed Service Review currently underway for Special Events and the results of this review will be reported to Committee.*

### Current Process and Procedure

- There has been a significant increase in the number of special events held in parks and open spaces.
- If an event causes damage to the park, there is little accountability for the event organizer and no incentive to minimize the potential for damage.

### Changes for More Efficient and Effective Service

- Review the impact of special events on parks and open spaces. An increase in the number of special events increases the potential for damage to turf, irrigation lines and trees, results in increased garbage collection and requires Parks resources pre and post event.
- Consideration should be given to introducing a damage deposit for events as well as restricting the use of certain parks for some events to minimize potential for damage.
- Proactively design and construct event sites with appropriate infrastructure.

The opportunities outlined above continue to ensure a wide variety of park types and designs, are maintained and preserved by the Parks Division so residents, as well as visitors to Saskatoon can enjoy the parks today and for years to come. A new event site is planned to be established in Kinsmen Park in 2016. Other event site opportunities are being explored. Future event sites, like Kinsmen Park, will be

designed with appropriate infrastructure to significantly reduce park repair costs which are typically \$3,000 to \$5,000 per incident.

**Next Steps**

Parks Division staff are identifying actions required to implement the suggested improvements. Consideration is given to benefit citizens, cost of implementation and potential efficiencies to be gained following implementation. Future reports will be brought to the SPC on Planning, Development and Community Services regarding service levels and options for consideration for the remainder of Parks services.

**Summary of Recommendations:**

<b>Recommendation</b>	<b>Estimated Savings</b>
1. Reduce future maintenance costs through appropriate park design review (subject to stakeholder consultation).	\$750/ha per year in new park development areas
2. Enhanced process for allowing contractor/utility vehicles to enter developed parks, to improve service, reduce damage, and improve cost recovery.	\$50,000 per year
3. Streamline the inquiry/concern process to a single point of contact, such as a customer service coordinator, to reduce redundancy and improve service to citizens.	\$20,000 per year.
4. Establish satellite maintenance yards in new development areas, reducing travel time, improving safety, and providing needed storage space.	\$750/ha per year in new park development areas
5. Utilize a “combined crew model” where one integrated team takes ownership of designated park areas, resulting in improved quality and reduced labour cost due to reduced travel.	\$750/ha per year
6. Provide improved site infrastructure in new festival sites to reduce park damage.	\$3,000 to \$5,000 per incident
7. Introduce a systematic asset management approach for ongoing maintenance of “hard” park assets.	Overall benefit is consistent funding for approved service levels.

## Parks Civic Service Review: Park Pathway Snow Clearing

### Description: Pathway Snow Clearing

Includes all district and neighbourhood park pathways, and sidewalks adjacent to parks, that have been designated for snow clearing services.

**Target Service Level:** Cleared within 48 hours of the completion of a snowfall or drifting event of 2.5 cm or greater

Description	Area (Km)	Cost per Kilometer		Total Cost		Total cost
		Clearing	Pathway Maintenance	Clearing	Pathway Maintenance	
<b>Facilities that are cleared:</b>						
Park Pathways:						
Lighted Asphalt	56	\$ 1,200	\$ -	\$ 67,000	\$ -	\$ 67,000
Non Lighted Asphalt	20	1,200	-	24,000	-	24,000
Sidewalks Adjacent to Parks	26	1,200	-	31,000	-	31,000
Total Kilometers Cleared	102			\$ 122,000	\$ -	\$ 122,000
<b>Facilities not cleared:</b>						
Pathways: Crusher Dust	32	\$ -	\$ -	\$ -	\$ -	
Non Lighted Asphalt	33					
Total Inventory	167					
Existing Budget						\$ 122,000
Funding Gap*						\$ -

\*Budget allocation is not sufficient to absolutely (100%) meet a 48 hour service level but is reasonable for current inventory.

### Issues/Challenges

- There are approximately 141 km of park pathways within City parks. Parks Division currently clears snow from the following pathway and sidewalk areas:
  - 100% or 56 km of lighted asphalt pathways;
  - 38% or 20 km of non-lighted asphalt pathways; and
  - 26 km of sidewalks adjacent to parks.
  - Pathway clearing priorities are based on the asphalt pathways with the highest pedestrian activity established over time.
- Current service level (48 hour clearing) is met about 75% of the time. Work management tools continue to be implemented so that performance and cost can be accurately captured.
- 33 kilometers of non-lighted asphalt pathways and 32 kilometers of crusher dust park pathways are not currently cleared.
- 14 kilometers of crusher dust pathway inventory is located within Naturalized Parks including: Donna Birkmaier Park, Hyde Park, Lakewood Park, Heritage Park, and Mark Thompson Park.
- Remaining 18 kilometers of crusher dust pathway inventory includes secondary pathways spread through many parks where primary lighted and some non-lighted asphalt pathways are cleared and allow good access through the parks during the winter season, in the absence of cleared crusher dust pathways.

- Crusher dust pathways are typically constructed within naturalized parks to minimize runoff potential and account for an average 93% of the pathway system within naturalized parks.
- Crusher dust pathways located within non-naturalized parks are typically smaller sections of secondary pathways that do not serve as the main access through the park.
- Due to the lack of pathway snow clearing, accessibility can be limited within naturalized parks during winter seasons.
- Accessibility within non-naturalized parks is good with all lighted main asphalt and some non-lighted asphalt pathways being cleared.
- Conditions that can sometimes cause a delay in meeting clearing service level include:
  - Equipment breakdown;
  - Heavy snowfall or drifting event resulting in 10 cm or greater accumulation;
  - Snow accumulation along edges of pathway greater than 45 cm; and
  - Successive snowfall or drifting events that interrupt clearing progress, forcing operators to start clearing high priority routes prior to completing entire pathway inventory. For example, during periods of heavy snowfall, resources are reallocated in an effort to prioritize the clearing of sidewalks adjacent to parks (26 km) so that the 48 hour Snow Clearing Bylaw is met.
- 76 km of park pathway is cleared as quickly as possible, with a target of completion in 48 hours in accordance with the Sidewalk Snow Clearing Bylaw.
- Park pathway inventory in new neighbourhoods are prone to drifting and often require additional clearing efforts, like special equipment and related labour.
- Crusher dust surfaces, where snow has been cleared, often require substantial repair to the surface at the end of winter operations. This represents a significant repair cost above and beyond the costs of snow removal and regular maintenance.
- Annual clearing costs are seasonably variable, and depend on the total amount of snowfall that occurs during a winter season.
- Additional inventory due to City growth is not accounted for in this review.

## Optional Service Levels: Pathway Snow Clearing

Total Inventory Cleared	Optional Service level	Estimated Total Cost	Budget Allocation	Gap
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**Recommendation** - Current Service Level plus **14 km** of crusher dust pathways in Naturalized Parks

Description	Area (Km)	Cost per Kilometer		Total Cost		Total cost
		Clearing	Pathway Maintenance	Clearing	Pathway Maintenance	
Park Pathways:						
Lighted Asphalt	56	\$ 1,200	\$ -	\$ 67,000	0	\$ 67,000
Non Lighted Asphalt	20	1,200	-	24,000	0	\$ 24,000
Crusher Dust	14	1,200	660	17,000	9,000	\$ 26,000
Sidewalks Adjacent to Parks	26	1,200	-	31,000	0	\$ 31,000
	116			\$ 139,000	\$ 9,000	\$ 148,000
Existing Budget						\$ 122,000
Funding Gap						<b>\$ 26,000</b>

### Option 1: Maintain Current Service Level

Description	Area (Km)	Cost per Kilometer		Total Cost		Total cost
		Clearing	Pathway Maintenance	Clearing	Pathway Maintenance	
Park Pathways:						
Lighted Asphalt	56	\$ 1,200	\$ -	\$ 67,000	\$ -	\$ 67,000
Non Lighted Asphalt	20	1,200	-	24,000	-	\$ 24,000
Sidewalks Adjacent to Parks	26	1,200	-	31,000	-	\$ 31,000
	102			\$ 122,000	\$ -	\$ 122,000
Existing Budget						\$ 122,000
Funding Gap*						<b>\$ -</b>

\*Budget allocation is not sufficient to consistently (100% of the time) meet a 48 hour service level but is reasonable for current inventory

### Option 2: Current Service Level plus full inventory (32 km) of crusher dust pathway, and full inventory (33) of non lighted asphalt pathway

Description	Area (Km)	Cost per Kilometer		Total Cost		Total cost
		Clearing	Pathway Maintenance	Clearing	Pathway Maintenance	
Park Pathways:						
Lighted Asphalt	56	\$ 1,200	\$ -	\$ 67,000	\$ -	\$ 67,000
Non Lighted Asphalt	53	1,200	-	64,000	-	\$ 64,000
Crusher Dust	32	1,200	660	38,000	21,000	\$ 59,000
Sidewalks Adjacent to Parks	26	1,200	-	31,000	-	\$ 31,000
	167			\$ 200,000	\$ 21,000	\$ 221,000
Existing Budget						\$ 122,000
Funding Gap						<b>\$ 99,000</b>

## Parks Civic Service Review: Shelterbelt and Buffer Strip Maintenance

### Description: Shelterbelts and Buffer Strips

- **Shelterbelt** – a row of trees or larger shrubs planted to separate incompatible uses or to protect an area from noise or strong winds.
- **Buffer strips** – a parcel of land used to separate incompatible land uses, through the use of landscaping, open space, or other features.
- **A drip line** is the area defined by the outmost circumference of a tree canopy.
- Buffer strips containing shelterbelts are typically found along major arterials and freeways.

**Current Service Level:** buffer strips adjacent to shelterbelts mowed up to the shelterbelt drip line twice per season; garbage pick up to the drip line twice per year; 1:13 year pruning cycle; refuse pick up from roadway shelterbelt on complaint basis. No turf maintenance is done within the 12 meter width of shelterbelt.

Description	Area (Ha)	Mowing, Trimming, Garbage		Pruning	Reactive Clean up Response	Total Costs
		Per Ha Cost	Total			
Roadway Shelterbelts	37	\$ -	\$ -			
Buffer adjacent to Roadway Shelterbelts	96	770	74,000			
	133		\$ 74,000	\$ 50,000	\$ 15,000	\$ 139,000
Existing Budget						124,000
Funding Gap*						\$ 15,000

\*\$15,000 required for reactive refuse pick up does not have budget allocated.

### Issues/Challenges

- Roadway shelterbelt maintenance is a service level that was discontinued in 2012 due to resource limitations.
- All reactive responses are currently being absorbed by operating resources and are considered to be a significant pressure point on operating budgets.
- Many shelterbelt areas have had sound walls constructed in close proximity, making access to the areas difficult and decreasing sight lines, creating safety and CPTED issues.
- Some sound walls have been installed at the top or bottom of steep slopes reducing safe turn around areas for equipment including the risk of equipment roll over. These areas are now classified “no mow” areas.
- Lack of maintenance in shelterbelts results in citizen dissatisfaction as dumping, refuse build up and occurrences of rough camping continue in these unkept areas. These issues can have a negative impact on property perceptions as well as reducing the quality of life for those who utilize these areas for passive recreation opportunities.
- Labour for roadway shelterbelt maintenance has been reallocated over the last 5 years in an effort to maintain mowing and horticultural service levels throughout the growing park and open space inventory.
- Previous service level including mowing under shelterbelts, basic tree pruning, and picking up garbage twice per year on a dedicated rotation.
- The current service level is very reactive. When complaints are received about a service, such as mowing and garbage pick-up in shelterbelts, we are forced to reduce service elsewhere.

## Optional Service Levels: Shelterbelt and Buffer Strip Maintenance

Total Inventory Cleared	Optional Service level	Estimated Total Cost	Budget Allocation	Gap
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**Recommendation** – Increase service level to include roadway shelterbelt mowing and trimming twice per season and two garbage pick-ups per season; 1:13 year pruning cycle.

Description	Area (Ha)	Mowing, Trimming, Garbage		Pruning	Total Costs
		Per Ha Cost	Total		
Roadway Shelterbelts	37	\$ 1,200	\$ 44,000		
Buffer adjacent to Roadway Shelterbelts	96	770	74,000		
	133		\$ 118,000	\$ 50,000	\$ 168,000
Existing Budget					124,000
Funding Gap					<b>\$ 44,000</b>

### Option 1: Maintain Current Service Level

Buffer Strips adjacent to shelterbelts mowed up to the shelterbelt drip line twice per season; garbage pick up to the drip line twice per year; 1:13 year pruning cycle; refuse pick up from roadway shelterbelt on complaint basis. No turf maintenance is done within the 12 meter width of shelterbelt.

Description	Area (Ha)	Mowing, Trimming, Garbage		Pruning	Reactive Clean up Response	Total Costs
		Per Ha Cost	Total			
Roadway Shelterbelts	37	\$ -	\$ -			
Buffer adjacent to Roadway Shelterbelts	96	770	74,000			
	133		\$ 74,000	\$ 50,000	\$ 15,000	\$ 139,000
Existing Budget						124,000
Funding Gap						<b>\$ 15,000</b>

\*\$15,000 required for reactive refuse pick up does not have budget allocated.

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# Community Solar Power Co-operative – Memorandum of Agreement

## Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

That the City Solicitor be requested to prepare a Memorandum of Agreement, in accordance with the terms set out in this report with the SES Solar Co-operative Ltd. and that His Worship the Mayor and the City Clerk be authorized to execute the agreement under the Corporate Seal.

## Topic and Purpose

Saskatoon Light & Power (SL&P) and SES Solar Co-operative Ltd. (the Solar Co-operative) are prepared to jointly own and operate a solar photovoltaic generation system. The purpose of this report is to recommend that a Memorandum of Agreement (MOA) prepared collaboratively by both parties be executed.

## Report Highlights

1. The solar photovoltaic (PV) generation system (PV System) will create a long-term demonstration site of PV technologies and the evaluation of their associated cost and performance that will direct future deployment.
2. This solar PV demonstration project will create a source of PV generation and revenue for the Solar Co-operative, the first solar co-operative in the province.
3. SL&P and the Solar Co-operative have prepared an MOA that defines how the PV System will be designed, constructed, operated and maintained, and decommissioned, including financial terms.

## Strategic Goals

This report supports the four-year priority to continue implementation of the Energy and Greenhouse Gas Management Plan, under the Strategic Goal of Environmental Leadership. The Energy and Greenhouse Gas Management Plan lays out a number of actions related to the development of renewable energy, and promotes Community Wide Demonstration Projects.

## Background

At its meeting held on May 25, 2015, City Council resolved that the Administration be directed to develop a MOA with the Solar Co-operative for the purpose of partnering on the capital costs for construction of a solar power facility, and report on the final terms of the MOA and issue and report on an Request for Proposals (RFP) for the PV System. As the project developed, and as the Solar Co-operative wants to play a role in the development of the RFP, both parties are completing the MOA and will then report further to City Council on the RFP.

## **Report**

### Solar PV Demonstration Project

SL&P, in partnership with the Solar Co-operative, are prepared to co-own a PV System. The objective of this project is to design, supply, install, and commission a PV System for the long-term evaluation of the technologies, and to generate electricity from a renewable energy source for the facility and the Solar Co-operative. In the future, it is anticipated that a much larger scale solar project (1 megawatt range) will be built near this smaller demonstration project.

The Solar Co-operative is an initiative of the Saskatchewan Environmental Society. It is organized as a consumer co-operative whose members are investing in solar power generation assets for the purpose of producing renewable energy, reducing their greenhouse gas footprint, and advancing research in solar energy. They currently have 74 members.

SL&P and the Solar Co-operative will develop a fixed-angle PV array and a single-axis seasonal tilt PV array. Each party will contribute up to \$90,000 toward capital infrastructure, which is estimated to build a 36 kilowatt (kW) system. The contribution from the Solar Co-operative will come from both its own member share capital base and also by way of a contribution from the Saskatchewan Environmental Society.

The partnership provides a unique opportunity for local residents, who otherwise may not have the means to install solar panels on their house or apartment, to generate some of their own electricity from a renewable source. The co-operative is best equipped to organize and sell collective PV ownership.

### Memorandum of Agreement

SL&P and the Solar Co-operative created a committee made up of members from both parties who have prepared a MOA. The central purpose of this MOA is to record the basis upon which the PV System will be designed, constructed and commissioned, operated and maintained, decommissioned, and upon which the associated electrical energy generated by the Solar Co-operative will be recorded and paid for by the City of Saskatoon (City) to the Solar Co-operative.

Electricity generated from the Solar Co-operative's portion of the PV System will be purchased by SL&P under a long-term power purchase agreement. The electricity purchased from the Solar Co-operative replaces electricity that would be purchased from SaskPower. Starting in year one, this PV System is estimated to provide the City with \$3,000 in reduced electricity costs and the Solar Co-operative with \$3,000 in revenue.

The key terms of the MOA will be as follows:

- a) the Agreement defines how the PV System will be designed, constructed, operated and maintained, and decommissioned, including financial terms;
- b) the PV System will be located adjacent to the Landfill Gas Power Generation Station;

- c) the term of the Agreement will be 25 years with an option to renew for a further five (5) years subject to the mutual agreement of the parties;
- d) the participating interest of each Party shall be based on the percentage shares owned by each Party;
- e) the parties will develop and the City will issue an RFP for the PV System;
- f) both parties will play a role in the evaluation of Proposals;
- g) acceptance of a preferred Proposal will be subject to City Council's agreement prior to award;
- h) the City will manage the construction of the PV System;
- i) the parties will establish an operations committee to address post-construction matters;
- j) the City will charge the Solar Co-operative an annual fee to look after day-to-day operations, and the parties will share the costs of any required replacement equipment;
- k) the City shall pay the Solar Co-operative for the electricity produced by their share of ownership;
- l) the data collected from the PV System will be shared by both parties and with the Saskatchewan Environmental Society;
- m) there will be standard mutual requirements for insurance and indemnity;
- n) the agreement will contain an option to terminate at any time, and there will be a process to address this possibility; and
- o) the agreement does not create a legal partnership, each party remains separately responsible and cannot bind the other unless all parties agree.

### **Public and/or Stakeholder Involvement**

If the solar power demonstration project proceeds, and on successful installation of the PV System, the public will be invited to an open house.

### **Communication Plan**

If the solar power demonstration project proceeds, appropriate communication materials will be jointly prepared by the City and the Solar Co-operative to share the project details with city residents. This may include website content, social media posts, news release, video, and/or brochures.

### **Financial Implications**

The capital cost will be funded from Capital Project No. 1281 - Sustainable Power Generation Options. By reducing the electricity purchased from SaskPower, the project payback of the capital cost is estimated at 20 years. Payment to the Solar Co-operative will be funded from Operating Budget 03-200 – Landfill Gas.

### **Environmental Implications**

The Saskatchewan grid has one of the highest carbon emissions per kWh generation in Canada. The electricity bought from SaskPower for use in the facility has 107 tonnes of CO<sub>2</sub>e per year associated with it. By generating electricity using solar panels rather than buying it from SaskPower, a 36 kW project is estimated to reduce annual Greenhouse Gas emissions by 32 tonnes CO<sub>2</sub>e.

**Other Considerations/Implications**

There are no options to the recommendation, and no policy, privacy, or CPTED implications or considerations.

**Due Date for Follow-up and/or Project Completion**

An RFP for supply and installation of the solar power system is planned for the winter 2015/2016. A recommendation for award of the successful proposal will be presented to City Council following the closing of the RFP.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Report Approval**

Written by: Nathan Ziegler, Sustainable Electricity Engineer  
Reviewed by: Trevor Bell, Director of Saskatoon Light & Power  
Approved by: Jeff Jorgensen, General Manager, Transportation & Utilities  
Department

EUCS NZ - Community Solar Power Co-operative – Memorandum of Agreement

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## **Xylem Water Solutions – Supply of Proprietary Parts – Blanket Purchase Order**

### **Recommendation**

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the Administration prepare a blanket purchase order with Xylem Water Solutions for the supply of Flygt equipment for up to five years, for a maximum total cost of \$750,000 (including taxes); and
2. That Purchasing Services issue the appropriate blanket purchase order.

### **Topic and Purpose**

The purpose of this report is to request that City Council approve a blanket purchase order from Xylem Water Solutions (Xylem), a division of Xylem Canada Company, for the supply of proprietary parts, exclusive to Flygt equipment, for the Wastewater Treatment Plant (WWTP).

### **Report Highlights**

1. A blanket purchase order is recommended to improve maintenance efficiency for the WWTP.
2. Xylem is the exclusive distributor that can supply Flygt equipment and maintenance parts for the WWTP.
3. A multi-year blanket purchase order with Xylem is recommended to streamline the procurement process.

### **Strategic Goals**

This report supports the Strategic Goals of Asset and Financial Sustainability, and Continuous Improvement. These goals are met by improving maintenance efficiency through the standardization of equipment. It also simplifies the procurement process by establishing multi-year blanket orders for standard equipment.

### **Background**

The WWTP provides sewage treatment to the citizens of Saskatoon. This is accomplished by operating the plant and 28 lift stations. The plant and lift stations utilize Flygt pumps, mixers, and proprietary electrical and instrumentation equipment.

### **Report**

#### Improve Maintenance Efficiency

Regular maintenance and repairs of plant equipment is performed by WWTP personnel. This is done by rebuilding equipment using rebuild kits and by purchasing the pertinent parts for repair. An inventory of critical parts is maintained for emergency repairs to mitigate risks associated with equipment failure and to improve maintenance efficiency. Attachment 1 lists the pumps, mixers, electrical and instrumentation equipment

(Mactechs), and repair kits that are used at the WWTP and lift stations. Required maintenance parts, rebuild kits, and new equipment is forecasted to cost \$150,000 annually.

Xylem Water Solutions

The Flygt brand is currently owned by Xylem, making them the only authorized distributor of Flygt pumps, mixers, rebuild kits, and associated electrical and instrumentation equipment. Attachment 2 is a letter from Xylem confirming this.

Multi-year Blanket Purchase Order

Blanket purchase orders allow for more effective purchasing by the WWTP personnel by reducing administration time in obtaining sole source approvals and by allowing the City to take advantage of bulk pricing discounts. With a commitment for orders up to \$150,000 per year, a blanket purchase order for Flygt equipment for the WWTP will have higher purchasing power and will result in better unit prices for the City.

**Options to the Recommendation**

The supply of pumps, mixers, and pump rebuild kits could be individually sole sourced to Xylem.

**Financial Implications**

Funds are available in the Maintenance Program of the WWTP 2015 (and future) Operating Budgets.

**Other Considerations/Implications**

There are no public and/or stakeholder involvement, communication, policy, environmental, privacy, or CPTED implications or considerations.

**Due Date for Follow-up and/or Project Completion**

This blanket purchase order should be in place as soon as possible, provided the supplier provides acceptable pricing and maintains the status as the sole supplier of Flygt equipment and maintenance parts.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Attachments**

1. List of Pumps, Mixers, Repair Kits, and Mactechs
2. Letter – Xylem Water Solutions - Dated August 24, 2015

**Report Approval**

Written by: Leslie Squire, Engineering Intern, Wastewater Treatment Plant  
Reviewed by: Amanda Conway, Maintenance Engineer, Wastewater Treatment Plant  
Reviewed by: Tim Bushman, Plant Manager, Wastewater Treatment Plant

**Xylem Water Solutions – Supply of Proprietary Parts – Blanket Purchase Order**

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Reviewed by: Reid Corbett, Director of Saskatoon Water  
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities  
Department

EUCS LS – BPO - Xylem Water Solutions – Supply of Proprietary Parts.docx

## WWTP Pumps, Mixers, and Repair Kits

WWTP Pumps		
Pump Model	Quantity	Repair Kit
C-3085-171	2	6018947
3085-181	13	6018947
3085-183	3	6018948
C-3102-180	7	6018906
3102-185	2	6018906
3127-180	2	6018909
3152-181	7	6018921
3153-181	1	6571708
3201-180	2	6018932
3300-180	1	6018924
3501-805	5	N/A
7061-705	4	N/A
4670-410	10	6340106
4680-410	8	6340106
N-3102-181	1	
3067-180	4	
2201-320		
A-C150	2	
Type NSW Model 100 and 150	1	

WWTP Mixers		
Mixer Model	Quantity	Repair Kit
4410-011	20	7263800
4650-410	8	6340103
4660-412	2	6656804
4660-410	4	

Lift Station Pumps and Mactechs

Lift Station Pumps		
Lift Station	Pump Model	Quantity
14th Street	CT 3201.180 MT	2
58th Street	CT 3300.181 MT	3
Agriplace	Submersible CT 3152.120 HT	2
Avenue P	3085.091	2
Bandstand	CT 3300	2
Blairmore	NT 3171.181 MT	2
Borden	NT 3171.181 MT	2
	CT 3231.665	1
	CT 3127.181 HT	1
Briarwood	CT 3152.181 MT	2
Diefenbaker	NT 3102	1
Dundonald Green	CT 3102	2
Fletcher Road (New)	NT 3153.185 MT	2
Hampton Village	NT 3202.180 HT	2
Jasper Avenue (Old)	CT 3201	2
Jasper Avenue (New)	NT 3202.180 MT	2
	NT 3301.180 MT	1
Kingsmere and Boychuk	CT 3127.180 MT	2
Lakeridge	CT 3127.180 MT	2
Lakewood	NT 3202.180 MT	2
Landfill	NP 3153.180 HT	2
Landfill South	CP 3102.180 HT	2
Landfill Heavy Grit	CP 3102.181 MT	2
McKinnon Avenue	CT 3085	2
Powerhouse	CT 3300 MT	2
Rotary Park	NT 3301.180 MT	4
Spadina Crescent	CT 3530	4
Stonebridge Sanitary	NT 3202.180 HT	3
Stonebridge Storm	NT 3127.181 MT	1
	NT 3400.735 MT	2
Storm Lift	PL 7050.680	3
	CS 3102	1

Mactechs	
Station	Control Type
Stonebridge	APP 721
Borden Place	APP 721
Rotary Park	APP 741
Jasper	APP 741
Lakewood	FMC 200
Landfill	FMC 200
Landfill	APP 521
Melville	APP 521
Hampton Village	FMC 300
Fletcher	APP 721
Blairmore	FMC 200
58th Street	APP 741

**Xylem**  
Bay 10, 3111 Millar Avenue, Saskatoon, SK S7K 6N3  
Tel (306) 933-4849 Fax (306) 931-0051



August 24, 2015

City of Saskatoon  
470 Whiteswan Drive  
Saskatoon, Sask. S7K 6Z7

Attention Leslie Squire,

Xylem Water Solutions, a division of Xylem Canada Company is the manufacturer and sole supplier of Flygt products.

If you should have any questions concerning this matter, please feel free to contact us at 306-933-4849.

Sincerely,

Don Ball  
Sales Representative  
Xylem Water Solutions

SN:cg