



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

**Monday, November 9, 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 October 13, 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)**

- 6.3.1 Greenhouse Gas Reduction Recommendations (File CK. 375-4)**

**5 - 12**

A letter submitting comments and requesting to speak from the Saskatchewan Environmental Society (SES), dated October 28, 2015 is provided. Peter Prebble and Sarina Gersher will be in attendance to speak on this matter.

## **Recommendation**

That the speakers be heard.

## **7. REPORTS FROM ADMINISTRATION**

### **7.1 Delegated Authority Matters**

### **7.2 Matters Requiring Direction**

- 7.2.1 Strategic Plan: 2015 Progress Report for Performance Measures (Files CK. 116-1 and CP. 116-2) 13 - 28**

#### **Recommendation**

That the report of the General Manager, Corporate Performance Department dated November 9, 2015 be forwarded to City Council for information.

- 7.2.2 Compact of Mayors (Files CK. 375-4 and CP. 7540-001) 29 - 35**

#### **Recommendation**

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

1. That the City of Saskatoon commit to the Compact of Mayors agreement on climate change; and
2. That the Mayor be authorized to sign the Compact of Mayors on behalf of the City of Saskatoon.

- 7.2.3 2015 Curbside Swap (Files CK. 7830-5 and CP. 7832-007) 36 - 42**

#### **Recommendation**

That the report of the General Manager, Corporate Performance Department dated November 9, 2015, be forwarded to City Council for information.

- 7.2.4 Landfill Ban Implementation Considerations (Files CK. 7830-4 and CP. 7832-006) 43 - 56**

#### **Recommendation**

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

That a phased landfill ban program for paper and cardboard begin in 2016 as outlined in this report.

- 7.2.5 Update on the Education for Sustainable Development Partnership Program: Student Action for a Sustainable Future (Files CK. 7550-1, WT. 7550-031 and CP. 7550-004)** 57 - 65
- Recommendation**
- That the report of the General Manager, Corporate Performance Department dated November 9, 2015, be forwarded to City Council for information.
- 7.2.6 Roadways Design, Construction, and Maintenance - Civic Service Review (Files CK. 6000-1, x CK. 116-1 and 0116-003)** 66 - 86
- Recommendation**
- That the Standing Policy Committee on Environment, Utilities and Corporate Services refer this report to the Standing Policy Committee on Finance recommending:
1. That the information be received in conjunction with the pending audit on Roadway Maintenance and Rehabilitation; and
  2. That the report of the General Manager, Corporate Performance Department dated November 9, 2015 be forwarded to City Council for information.
- 7.2.7 Bylaw No. 8880, Private Sewer and Water Service Connection Bylaw, 2010 - Update Request (Files CK. 7780-1 and TS. 7820-0)** 87 - 88
- Recommendation**
- That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:
- That the City Solicitor be instructed to draft the necessary amendments to Bylaw No. 8880, Private Sewer and Water Service Connection Bylaw, 2010 for consideration by City Council as outlined in this report.
- 7.2.8 Wastewater Treatment Plant - Odour Monitoring System Update (Files CK. 7800-1 and TU. 7990-82)** 89 - 92
- Recommendation**
- That the report of the General Manager, Transportation & Utilities Department, dated November 9, 2015, be forwarded to City Council for information.

8. MOTIONS (NOTICE PREVIOUSLY GIVEN)
9. GIVING NOTICE
10. URGENT BUSINESS
11. IN CAMERA SESSION (OPTIONAL)

**Recommendation**

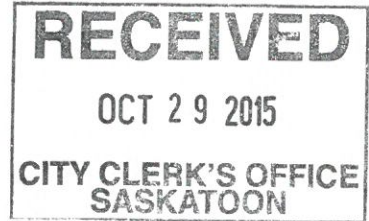
That the Committee move In Camera to consider item 11.1

**11.1 Land Development (Files CK. 4205-39 and RS. 4205-1)**

*[In Camera - Economic/Financial and Other Interests]*

12. ADJOURNMENT

375-4



Dear Mayor Atchison and Members of City Council,

RE: Greenhouse Gas Reduction Recommendations

Saskatoon is in a period of change as the city is growing. The City of Saskatoon has been active in trying to guide future infrastructure investments in order to provide more choices for residents in how they live and move around the city. The Saskatchewan Environmental Society (SES) recognizes the hard work that the City of Saskatoon and City Council have conducted so far in such initiatives and consultations as the *Growth Plan to Half a Million* and the *2015 Performance Goals*.

SES is a non-profit, registered charity whose mandate is to work towards a world in which all needs can be met in sustainable ways. Sustainability requires healthy ecosystems, livelihoods, and communities. Recently the Board of Directors of the Saskatchewan Environmental Society adopted a recommended strategy on municipal greenhouse gas reduction for Saskatoon. This strategy was prepared with the view to providing suggestions on how Saskatoon could successfully curb its rising greenhouse gas footprint.

The City of Saskatoon has a long history of being leaders and innovators on important sustainability and preventive health initiatives, such as helping found the Meewasin Valley Authority and being the first city in the province to enforce a smoking ban in public places. Climate change is now the most important sustainability challenge we face and a looming public health threat. SES believes the suggestions in the attached greenhouse gas reduction strategy could help the City of Saskatoon play a major leadership role in reducing community-wide greenhouse gas emissions in Saskatoon, and at the same time set an example for the rest of Saskatchewan to follow.

The attached emission reduction strategy contains 21 recommendations. Highlights of these recommendations include establishing an inventory of city-wide greenhouse gas emissions, putting in place a municipal building code for energy efficiency, supporting widespread installation of solar power, encouraging low-emission transport options and adopting an idle-free bylaw.

Achieving greenhouse gas emission reductions at a community level will require City Council leadership and a strong community-wide effort. As such, SES recognizes that leadership will be needed from several civic departments. We would be happy to meet with interested civic department managers to discuss how some of our suggestions in the attached paper might be implemented.

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Time is now an important consideration. The damage that has already been done to the global climate from fossil fuel emissions is not reversible over the next several centuries, but there is much we can do in the years ahead to prevent the consequences of climate change from becoming far worse than they are right now. This summer's forest fires in northern Saskatchewan, the 2011 and 2014 intense rainfall and flooding events in southeast Saskatchewan, the spread of Lyme Disease in Canada, and the increasing acidification of coastal waters on every Canadian coastline provide glimpses of what the future holds if local, provincial and national governments do not take the steps necessary to achieve deep greenhouse gas reductions.

With the international negotiations to forge a global climate change treaty scheduled for December of 2015, we suggest this could be an opportune time for the City of Saskatoon to develop a comprehensive community-wide greenhouse gas reduction plan.

We look forward to assisting you in any way we can and to receiving your response in regards to our recommendations when you have had time to consider them.

We would be grateful for the opportunity to make a short presentation on the attached document before the appropriate Standing Policy Committee of Council. Our sincere thanks.

Yours truly,

Bert Weichel, SES Board President

Sarina Gersher, SES Board Member

Ann Coxworth, SES Board Member

Allyson Brady, SES Executive Director

Peter Prebble, SES Director of Environmental Policy

CC. Brenda Wallace, Manager of Environment and Corporate Initiatives  
CC. Trevor Bell, Manager of Saskatoon Light and Power



# Recommendations for a Municipal Greenhouse Gas Emission Reduction Strategy for the City of Saskatoon Focused On Community-Wide Emissions

October 28, 2015

The board of directors of the Saskatchewan Environmental Society is pleased to offer the following suggestions on important components of a community-wide greenhouse gas reduction strategy that we would like to see the City of Saskatoon move forward with. There are many important policy levers that can be exercised at a municipal level to reduce the City's greenhouse gas footprint.

## Monitoring, Assessment and Public Education

### 1. **Community GHG Reduction Target**

We hope the City of Saskatoon will adopt an official target for community-wide reduction of greenhouse gases (GHGs). The Saskatchewan Environmental Society (SES) urges the City of Saskatoon to adopt an ambitious reduction target followed by the establishment of clear city policies needed to achieve it. Based on the physical realities of climate science and the threat posed by rising greenhouse gas concentrations in the atmosphere, SES recommends an overall community GHG reduction target of at least 35% below current emission levels by 2025. In the items that follow, we recommend several key policy directions for the City to consider as it works to achieve that goal.

### 2. **An Up-to Date Assessment Of Current Community GHG Emissions**

The City of Saskatoon does not have an up-to-date detailed assessment/inventory of current annual community-wide greenhouse gas emissions. This assessment is essential for tracking future emission reduction progress, for setting emission reduction targets for each sector of the Saskatoon economy, and for formulating good public policy for each sector. We urge the City to publish such an assessment in the near future and to update it every two years.

### 3. **Public Education Campaign on Climate Change**

Community-wide emissions will only decline if the public supports and actively participates in local initiatives towards that end. To achieve higher levels of public engagement, a local information campaign on the urgency of climate change and the exceptionally long-lived nature of greenhouse gases is needed. Such a campaign could also highlight potential monetary savings from reduced fossil fuel use.

### 4. **Reporting Progress On Emission Reduction**

SES recommends that the City take steps to ensure that residents are kept aware of progress being made to reduce greenhouse gas emissions in our community. One option would be to consider updates on signs or billboards - similar to what the United Way does when informing the public how close it is to reaching its annual fund raising goal. A chart could show the reduction of total GHG emissions put out by Saskatoon and our progress towards meeting our 2025 goal.





## **Buildings and Subdivision Design**

### **5. Energy Efficiency Provisions in the Municipal Building Code**

The Saskatchewan government has conducted consultations on introducing energy efficiency provisions into the provincial building code, and received a positive response. Unfortunately, the Province has yet to take action, and may not do so for some time. However, the City of Saskatoon has the authority to adopt its own energy efficiency provisions for new building construction. We recommend that the City do so, and urge City Council to adopt R80 (ENERGY STAR®) as the official standard, and then continually upgrade the standard every 5 years. ENERGY STAR® would represent a significant improvement over current building practice, and offers a good starting point, since many builders have some experience with it. ENERGY STAR® has also been widely promoted by the Saskatchewan Home Builders Association, and is already the requirement for all new home construction in the Province of Ontario.

### **6. Medium Term Goal for Energy Efficiency: Net Zero Energy Buildings**

If Saskatoon is to grow over the medium and long term without significantly adding to its existing level of greenhouse gas emissions, it is important - within a decade - to move to a level of energy efficiency in new building construction that does not rely on fossil fuels for heating or electricity. Net-zero energy house construction is becoming more widely adopted in Canada and costs are declining. The City should work towards the goal of making net-zero energy building construction the municipal standard for energy efficiency by 2025 for both new homes and new commercial buildings. With this in mind, appropriate training sponsored by the City of Saskatoon, SIAST and numerous other partners should get underway as soon as possible for architects, home builders, carpenters, electricians, plumbers and other relevant building trades.

### **7. Design Standards for New Neighbourhoods To Utilize Solar Energy**

The Saskatchewan Environmental Society urges the City of Saskatoon to modify all new subdivision design so as to maximize the ability of homeowners to use solar energy in both passive and active applications. The City should require that future subdivision design and street layout allows all new homes to have good south facing exposure and to be able to make full use of passive solar energy.

### **8. Solar Provisions In New House Construction And Protection of Solar Access**

The City of Saskatoon should require that all new homes be designed and wired for future potential installation of solar photovoltaic systems. The City should also actively encourage builders to install solar hot water as a standard feature in new home construction. The City of Saskatoon should also consider taking steps to ensure that those who have installed solar systems will have their right to access sunlight on their solar installation protected.

### **9. Financial Incentives for All Forms of Solar Energy**

As a way of incenting solar installations, the City of Saskatoon could consider giving a small property tax discount to homeowners that install solar hot water systems, solar heating systems, or solar photovoltaic systems.

### **10. Model Low GHG Emission Neighbourhood**

We suggest the City of Saskatoon consider the development of a model environmentally sustainable neighbourhood. Examples of features that could be built into such a neighbourhood include: (a) well designed walking and cycling paths (b) all homes designed for passive solar energy use (c) all homes super-insulated (d) all homes equipped with solar hot water and solar photovoltaic systems (e) all homes designed to conserve water.





## **Greenhouse Gas Reduction in the Electricity Generation Sector**

### **11. Use of Saskatoon Light & Power As A Vehicle for GHG Reduction**

The City of Saskatoon is fortunate to have its own municipal utility. This provides it with enormous potential to set its own policy path in support of clean, sustainable electricity production. It would be valuable for Council to consider using this potential to incent the use of energy efficiency measures, and to incent the most promising source of renewable power the City has available to it: solar energy.

### **12. Net Metering As A Policy Initiative for SLP**

The Saskatchewan Environmental Society congratulates the City of Saskatoon and Saskatoon Light and Power on the decision to adopt net metering for the SLP area. This is an important element in building a municipal greenhouse gas reduction strategy.

### **13. Financial Options for Accelerating Installation of Solar Photovoltaic Systems**

Here are two options to consider:

#### **a) Facilitating Payment of Capital Costs For Solar Photovoltaic Installations**

The City of Saskatoon could follow the lead of several other cities and offer financial assistance to help offset the significant up-front capital investment associated with solar electric installations. This might mean a small subsidy on loans for solar power installations or permitting residents to pay off the cost of their solar installations on their property taxes.

#### **b) The City Could Explore the Option of a Feed-In-Tariff**

More than 70 countries in the world now have a feed in tariff to incent renewable electricity installations. A feed-in-tariff is a policy under which customers who install renewable power receive a price for the electricity they produce that reflects actual installation costs plus a modest profit. In the absence of the Province of Saskatchewan having adopted such a policy measure, Saskatoon could follow the lead of several other cities in North America and consider a modest feed in tariff targeted at accelerating the adoption of solar power. Banff, Alberta was the first city in Canada to adopt a feed-in-tariff at the municipal level. Given the good sunlight resource in Saskatchewan and the pace at which solar costs are dropping, the extra incentive would not need to be high.

### **14. Saskatoon Light and Power Could Consider Direct Installation of Electricity Efficiency Technologies**

The City of Saskatoon could ask Saskatoon Light and Power to consider 'direct installation' of electricity saving measures to help customers cut their power bill and reduce their greenhouse gas emissions. SLP could offer to cover the up-front cost of electricity saving measures that pay for themselves within six years, and then allow their customers to pay off the installation costs via their monthly payment on their electricity bill. After each electricity-saving installation was complete, a customer's electricity bill would remain the same (except for regular rate increases charged to all customers) until such time as costs of the installation had been fully paid for. In other words, installation costs and interest charges would be paid in full through energy savings.

### **15. The City of Saskatoon Could Move into Wind Power and Ask the Province of Saskatchewan for Permission to Build Wind Turbines Outside the City**

Saskatoon Light and Power is currently limited to installing renewable power within the SLP district. This places unreasonable limits on the City of Saskatoon being able to pursue wind power. A 20-50 MW wind power installation would be financially attractive for Saskatoon and





would be an important vehicle for reducing GHG emissions, but it naturally needs to be located outside City limits. Saskatoon Light and Power should consider asking permission from SaskPower to be able to build a wind generation station outside Saskatoon city limits and within a 50 km range of Saskatoon.

#### **16. LED Street Lighting for all Neighbourhoods**

The City is to be commended for installing 100% LED street lighting in the Evergreen neighbourhood and in all new areas of the city. We recommend converting every neighbourhood in Saskatoon to LED street lighting. The majority of street lights in Saskatoon are still high pressure sodium. A switch to LED lighting would offer a 60% reduction in energy use.

#### **17. A Bylaw To Regulate Over-lighting On Signs**

Numerous establishments in Saskatoon are using unnecessary amounts of light on their signs and their outdoor lighting. The City should consider an educational campaign to discourage the unnecessary use of electricity for outdoor lighting purposes, and should also consider the adoption of a bylaw that would have the effect of curbing outdoor over-lighting practices. The initial application of the bylaw should be with respect to signage.

### **Transportation**

#### **18. City Support for Low-Emission Transport Options**

Climate change and public health are two important reasons why the City of Saskatoon should encourage local residents to reduce their vehicle use. SES supports many of the improvements the City of Saskatoon is planning for the transit system, but encourages the City to set much higher targets for transit ridership. Increasing transit ridership will require more bus frequency, lower bus fares, better snow maintenance around bus shelters, and a system that gets people to their destination more efficiently. SES also encourages the City of Saskatoon to support a large increase in cycling during the spring, summer and fall months. Saskatoon needs a comprehensive system of bicycle lanes and bicycle paths, with built-in safety features for cyclists when they need to travel along or cross major traffic routes. Such a system will foster higher rates of cycling in Saskatoon.

#### **19. Adoption of an Idle-Free Bylaw**

Many cities in eastern Canada have adopted bylaws to limit vehicle idling. Idling is typically not allowed for more than 3 minutes on private property, municipal property, or while parked on the side of the road within city limits. Exemptions are usually provided for police, fire or ambulance vehicles or any other vehicles responding to an emergency situation. There are usually several other categories of exemptions such as armoured vehicles, vehicles that need to preserve cargo on board with heating or refrigeration, and vehicles where idling is required in order to service the engine, conduct repairs or refuel. The Saskatchewan Environmental Society urges the City of Saskatoon to adopt an idle-free bylaw that will apply in the spring, summer and fall months (when temperatures are above freezing), and that will limit vehicle idling to no more than 3 minutes.

#### **20. Incentives For Ultra-Low Emission Vehicles**

Ultra-low emission vehicle use needs to be actively encouraged in Saskatoon. The Saskatchewan Environmental Society urges the City to consider incentives/privileges to reward motorists who have purchased a super-energy efficient vehicle or an electric car powered by a renewable energy source.



## **21. GHG Emission Reduction in the Industrial Sector**

The industrial sector is Saskatoon's largest source of greenhouse gas emissions and one that the City of Saskatoon has little direct control over, making it a very challenging sector to manage. We have three suggestions on steps the City may wish to consider. First, we recommend the City of Saskatoon adopt strict standards for space heating and electrical efficiency for all industrial facilities built in Saskatoon in the future. Second, we suggest that the City explore options for tax incentives for major energy efficiency initiatives by industrial companies. Third, we recommend that Saskatoon Light and Power be mandated by Council to negotiate with large industrial facilities on a schedule for energy efficiency improvements.

## **Conclusion**

The recommendations we have made here are our observations about best places to start in reducing community-wide greenhouse gas emissions in Saskatoon. We hope these suggestions are helpful in your deliberations. Thank you very much for considering them.





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# Strategic Plan: 2015 Progress Report for Performance Measures

## Recommendations

That the report of the General Manager, Corporate Performance Department dated November 9, 2015 be forwarded to City Council for information.

## Topic and Purpose

The purpose of this report is to provide a mid-year update on 16 performance measures that have new information (Attachment 1).

## Report Highlights

1. Mid-year updates are available for 16 of the 25 corporate performance measures.
2. All divisions have identified initiatives and supporting measures that contribute to the corporate targets.
3. Next Steps: “Our Performance” website will be updated with mid-year progress towards targets, how we are making strides, opportunities for improvement, and strategies for success.

## Strategic Goal

A robust performance measurement program will contribute to the City’s strategic goal of “A Culture of Continuous Improvement” and the vision of becoming the best-managed city in Canada. Performance measures and targets will help focus resources and actions to make progress on all strategic goals.

## Background

Performance Measures for our 2013-2023 Strategic Plan were approved by City Council on April 27, 2015 after consultations with citizens and stakeholders. As follow-up, the April 27, 2015 report committed that:

“The Administration will provide regular updates to Executive Committee and/or City Council.”

## Report

### Progress Highlights

Of the 16 performance measures with new data available, the following seven targets are moving in the desired direction or were met as an annual target:

- Representative Workforce
- Zero Lost Time Incidents
- 500 New Attainable Housing Units annually (met)
- Vacancy Rate for Rental Housing of 3% (met)
- Increase in Cycling-Specific Infrastructure of 10%
- One to Two Year Supply of Residential and Industrial Land (met)
- 5% Decrease in Crime Rates Relative to the Previous Five-Year Average (met)

The following two targets were similar in 2015 to what they were in 2014:

- 90% Satisfaction with Civic Services
- Maintain Key Civic Infrastructure at B Service Level

The following two targets did not move in the desired direction relative to the previous year:

- 70% of Waste Diverted from the Landfill
- 5% Annual Decrease in Traffic Collisions (First six months of 2014 and 2015)

The following five indicators were also updated:

- Municipal Property Tax as a Percentage of Total Municipal Revenues
- Perceived Quality of Life
- Population Growth
- Number and Value of Building Permits (first six months)
- Business Growth

“Perceived Quality of Life” decreased only slightly from last year but has trended downward over the last three years from 91% in 2012 to 85% in 2015. Perceptions of quality of life may be influenced by the general economic situation which the City has little influence over. The City will continue to collaborate with other levels of government and community organizations to ensure services are available for marginalized populations.

“Municipal Property Taxes as a Percentage of Total Municipal Revenues” have increased every year since 2012; however, the increases have been specifically driven by service level increases in Transportation and Police Services that are supported by increased property taxes. The City is continuing to evaluate alternative revenue sources and address growth through continuous improvement to help keep property taxes lower. Utilities are expected to contribute \$56.2 million in revenues to the 2016 budget to fund civic programs and services.

City waste diversion programs, particularly residential recycling programs, are increasing the life of our landfill by reducing waste going to the landfill. New data; however, indicates that waste diversion through the new diversion programs has not kept pace with the increase in waste going to the landfill as a result of growth. The Environmental and Corporate Initiatives division is planning to complete a comprehensive community waste audit and develop a waste diversion plan that outlines the specific strategies and benchmarks for increasing the waste diversion rate to 70% by 2023. Communications are also being undertaken to increase the amount of non-contaminated materials being recycled through the multi-unit residential recycling program.

“Traffic Collisions” increased in 2015 because of more cars on the road leading to more congestion, more distracted drivers, and less traffic enforcement as police officers were redeployed to higher priority activities. The collisions are being addressed through continued implementation of the *Strategic Traffic Safety Action Plan* which identifies



seven focus areas for traffic safety: aggressive driving, distracted driving, impaired driving, intersections, older drivers, young drivers, and vulnerable road users. The City has made changes to increase “participation at City-owned recreation and culture facilities” including implementing a lower pricing strategy for leisure centres and opening the newly renovated PotashCorp Playland at Kinsmen Park. Although 2015 numbers are not yet available for the target, the dashboard status was changed from “needs improvement” to “neutral”.

The following summarizes the most recent status of all 25 of the City’s performance measures:

- Watching: 6
- Annual Target Met or Long-Term Target On-Track: 8
- Neutral: 6
- Needs Improvement: 5

### Supporting Initiatives

Each division identified initiatives and supporting measures for 2016 linked to our corporate performance targets. All divisions have initiatives that support targets under our strategic goal of a Culture of Continuous Improvement and the majority of divisions identified initiatives to support the Environmental Leadership targets.

The following are some examples of 2016 division initiatives that support the corporate targets:

- Zero lost time incidents: Enhance our safety culture by implementing a comprehensive Health and Safety Management System with clear responsibilities for all employees.
- Representative workforce: Cultural awareness and inclusion training, career pathing for Aboriginal employees
- Citizen satisfaction with civic services: Implement Service Saskatoon and the 311/Customer Relationship Management System; initial focus will be on service provided by Public Works.
- Municipal tax increase less than Municipal Price Index (MPI): Continuous improvement initiatives such as improved road sanding process, standardized information technology applications
- Reduction in GHG emissions: More efficient routes for city vehicles, installing more LED streetlights, newer vehicles with better mileage and fewer emissions
- Waste diversion of 70%: Implementation of Managed Print, incentives for compost bins in new neighbourhoods, Recovery Park

The proposed “*2016 Corporate Business Plan and Budget*” includes over 60 supporting initiatives under Performance Measures in the business line overviews.

### Next Steps

- Update “Our Performance Website” to incorporate new performance information.
- Continue to work with divisions on monitoring and refining supporting targets and initiatives.

- Evaluate the performance measures and make any recommendations for changes when the 2015 end-of-year update is completed.
- Continue with further integration of the performance measures and targets into our business planning and budgeting processes.

**Communication Plan**

- The Performance Measures Update as of July 2015 will be highlighted under “Announcements” on the Saskatoon.ca website homepage.
- The Progress Report will be promoted through social media, including Facebook and Twitter.

**Other Considerations/Implications**

There are no options to the recommendation, policy, environmental, privacy, or Safety/Crime Prevention Through Environmental Design (CPTED) implications or considerations.

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

In early 2016, an updated progress report with available data as of December 31, 2015 and a summary of significant effects on the targets will be provided to City Council.

**Public Notice**

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

**Attachment**

1. Performance Measures Progress Report as of July 2015, Making Strides towards our Strategic Goals

**Report Approval**

Written by: Angela Schmidt, Performance Measurement Consultant,  
Strategic and Business Planning  
Reviewed by: Kim Matheson, Director, Strategic and Business Planning  
Approved by: Catherine Gryba, General Manager, Corporate Performance  
Department

# **Performance Measures**

**Progress Report as of July 2015**

***Making Strides towards our Strategic Goals***





## INTRODUCTION

A performance measurement program contributes to the City of Saskatoon's strategic goal of "A Culture of Continuous Improvement" and the vision of becoming the best-managed city in Canada. In April 2015, City Council approved 25 corporate performance measures to help focus the City's resources and actions to make progress towards our strategic goals and to help assess whether investments are achieving expected results. Our 25 performance measures include 19 targets that we are working to achieve and six indicators that we are watching to evaluate progress towards our corporate goals.

New data is available for 16 of the City's corporate performance measures as of July 2015. The following seven targets are moving in the desired direction or were met as an annual target:

- Representative Workforce
- Zero Lost Time Incidents
- 500 New Attainable Housing Units annually (met)
- Vacancy Rate for Rental Housing of 3% (met)
- Increase in Cycling-Specific Infrastructure of 10%
- One- to Two-Year Supply of Residential and Industrial Land (met)
- 5% Decrease in Crime Rates Relative to the Previous Five-Year Average (met)

The following two targets were similar in 2015 to what they were in 2014:

- 90% Satisfaction with Civic Services
- Maintain Key Civic Infrastructure at B Service Level

The following two targets did not move in the desired direction relative to the previous year:

- 70% of Waste Diverted from the Landfill
- 5% Annual Decrease in Traffic Collisions (First six months of 2014 and 2015)

The following five indicators were also updated:

- Municipal Property Tax as a Percentage of Total Municipal Revenues
- Perceived Quality of Life
- Population Growth
- Number and Value of Building Permits (first six months)
- Business Growth

"Perceived Quality of Life" decreased only slightly from last year but has trended downward over the last three years from 91% in 2012 to 85% in 2015. Perceptions of quality of life may be influenced by the general economic situation which the City has little influence over. The City will continue to collaborate with other levels of government and community organizations to ensure services are available for marginalized populations.

"Municipal Property Taxes as a Percentage of Total Municipal Revenues" have increased every year since 2012. The City is continuing to evaluate alternative revenue sources and address growth through continuous improvement to help keep property taxes lower. Utilities are expected to contribute \$56.2 million in revenues to the 2016 budget to fund civic programs and services and help to keep property taxes lower. This includes \$3.0 million from the first year phase-in of a 10% ROI for the Water and Waste Water Utilities.

City waste diversion programs, particularly residential recycling programs, are increasing the life of our landfill by reducing waste going to the landfill. New data, however, indicates that waste diversion through the new diversion programs has not kept pace with the increase in waste going to the landfill as a result of growth. Environment and Corporate Initiatives is planning to complete a comprehensive community waste audit and develop a Waste Diversion Plan that outlines the specific strategies and benchmarks for increasing the waste diversion rate to 70% by 2023. Communications are also being undertaken to increase the amount of non-contaminated materials being recycled through the multi-unit residential recycling program.

“Traffic Collisions” increased in 2015 because of more cars on the road leading to more congestion, distracted drivers, and less traffic enforcement as police officers were redeployed to higher priority activities. The collisions are being addressed through continued implementation of the Strategic Traffic Safety Action Plan which identifies seven focus areas for traffic safety: aggressive driving, distracted driving, impaired driving, intersections, older drivers, young drivers, and vulnerable road users.

The City has made changes to increase “participation at City-owned recreation and culture facilities” including implementing a lower pricing strategy for leisure centres, opening the newly renovated PotashCorp Playland at Kinsmen Park, and starting the transition to the new Remai Modern Art Gallery of Saskatchewan. Although 2015 numbers are not yet available for the target, the dashboard status was changed from “needs improvement” to “neutral” to reflect the changes the City has implemented.

The following summarizes the most recent status of the City’s 25 performance measures:

- Watching: 6
- Annual Target Met or Long-Term Target On-Track: 8
- Neutral: 6
- Needs Improvement: 5

The 2014/15 Performance Measures Progress Update on the following page summarizes the most recent progress and status of all 25 performance measures. This is followed by additional information on the performance measures with new data and initiatives.

## 2014/2015 Performance Measures Progress Update

19 Performance Targets	Progress
<b>Culture of Continuous Improvement</b>	
Overall Satisfaction with Civic Services of 90% or more	—
City of Saskatoon's Workforce Represents the Diversity of Saskatoon's Population	↓
Zero Lost Time Incidents	↓
<b>Asset and Financial Sustainability</b>	
Annual Municipal Property Tax Increase Equal or Less than Municipal Price Index	↓
Maximum Long-Term Tax-Supported Debt per Capita of \$1,750	↓
Maintain Key Civic Infrastructure Status at Annual 'B' Service Level	—
<b>Quality of Life</b>	
500 New Units Annually Across the Attainable Housing Continuum	↑
Maintain an Average Rental Housing Vacancy Rate of 3%	↑
Increase visits to City Recreation & Culture Facilities to 6,600 Visits per 1,000 Residents	—
Decrease Overall Crime Rates by 5.0% Annually over the Previous Five-Year Average	↓
Respond to Fire Calls Within Six Minutes and 20 Seconds at Least 90% of the Time	↑
<b>Environmental Leadership</b>	
Divert 70% of Waste from the Saskatoon Landfill	↓
Reduce the City of Saskatoon's Greenhouse Gas Emissions by 30% from 2006 Levels	↑
<b>Sustainable Growth</b>	
At Least 25% Five-Year Rolling Average of Residential Development is in Infill Neighbourhoods	↑
<b>Moving Around</b>	
Increase the Amount of Cycling-Specific Infrastructure by 10%	↑
Increase Transit Ridership to 62 Rides Per Capita	↓
20% of People Use Cycling, Walking or Transit to get to Work	—
Decrease Traffic Collisions by 5% Annually	↑
<b>Economic Diversity and Prosperity</b>	
One Year Inventory of Land for Single Family Units, a Two-Year Inventory of Land for Multi-family Units and a Two-Year Inventory of Industrial Land	↓

### 6 Indicators

- The measure is being monitored as an indicator of progress.
- No target has been set because of the external influences on progress.

Municipal Property Tax per Capita	Watching
Municipal Property Tax as a Percentage of Total Revenues	Watching
Perceived Quality of Life	Watching
Population Growth Rate	Watching
Building Activity (Building Permits)	Watching
Business Growth	Watching

### Overall Progress Definitions

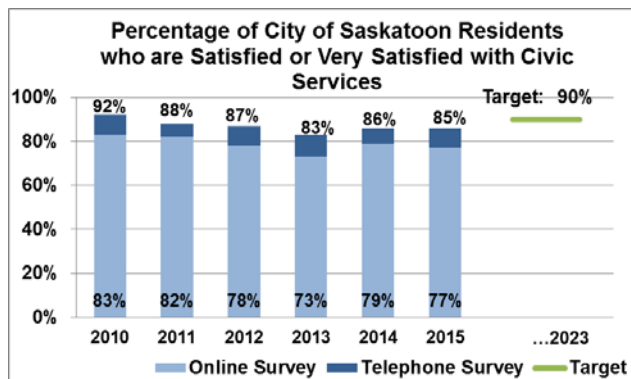
<b>On – Track</b>	<ul style="list-style-type: none"> <li>• Annual target has been met, and/or</li> <li>• Improvement has been made from the previous year, and/or</li> <li>• Minimal change in direction is required to achieve the target</li> </ul>
<b>Neutral</b>	<ul style="list-style-type: none"> <li>• No new numbers, and/or</li> <li>• No change or relatively small change from previous year or baseline, and/or</li> <li>• Moderate change is required to achieve the target</li> </ul>
<b>Needs Improvement</b>	<ul style="list-style-type: none"> <li>• Annual target has not been met by a significant amount, and/or</li> <li>• Adverse change from baseline and from previous year, and/or</li> <li>• Significant change is required to achieve the target</li> </ul>
<b>“Achieved Target”</b>	<ul style="list-style-type: none"> <li>• Annual or long-term targets have been met</li> </ul>
<b>Progress Relative to Previous Year (or Most Recent Period)</b>	
↑ ↓	• Progress increased or decreased towards target or preferred direction
—	• No change in progress or no new information
↓ ↑	• Progress increased or decreased away from target or preferred direction





## Culture of Continuous Improvement

### Vision: Saskatoon is the best-managed city in Canada

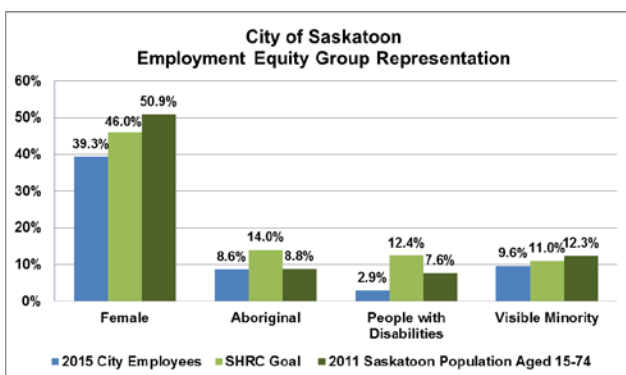


The City of Saskatoon strives to continually improve civic services to increase citizen satisfaction. In 2015, citizen satisfaction is highest for quality of drinking water, fire protection, accessibility of city parks, and electrical services reliability.

Satisfaction is lowest for road maintenance and affordable housing. Road and sidewalk repair, crime and policing, traffic flow and congestion, and general infrastructure are most commonly identified as the most important issues facing the city.

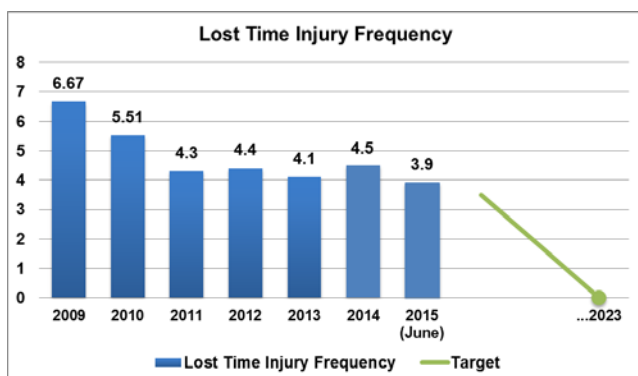
The City is striving for a workforce representative of our population. Considerable progress has been made to increase employment of visible minorities.

New targets set by the Saskatchewan Human Rights Commission in 2014 highlight opportunities for the City to improve recruitment of Aboriginal employees, employees with disabilities, and women in under-represented roles.



The City has made strides in reducing its Lost Time Injury Frequency (LTIF) over the last few years through emphasizing a culture of “safety first”. The LTIF has decreased by over 40% since 2009.

Incidents including “near misses” are being tracked and all divisions have initiatives in place to help keep their employees safe.



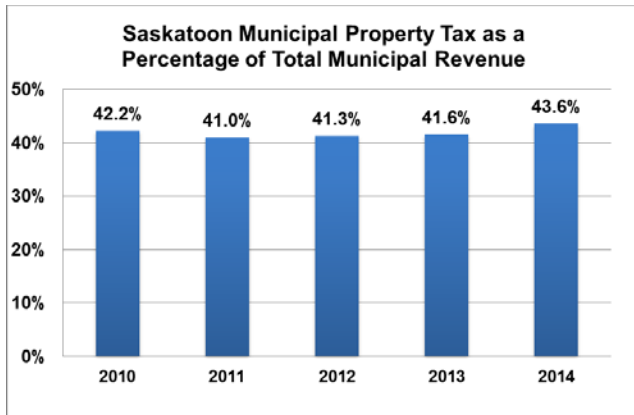
### Key Strategies for Success

- Identifying new ways through Innovation Teams to provide the best possible services for citizens and increase workplace efficiencies as part of the City’s **Performance Improvement Plan**.
- Implementing **citizen-focused technology** including a user-friendly website, *Service Saskatoon* (one-stop customer service), public Wi-Fi access in more designated areas, and Open Data.
- Implementing the new **2015 Diversity and Inclusion Report** and the seven-point **Aboriginal Employment Action Plan** to reduce barriers to recruiting and retaining a diverse workforce.
- Providing **cultural awareness and inclusion training** to foster workplaces that welcome diverse employees.
- Enhancing our **safety culture** by implementing a comprehensive **Health and Safety Management System** with clear responsibilities for all employees.
- Ensuring that all incidents that have, or could have, resulted in an injury are investigated and **proactive strategies** are put in place to reduce future similar incidents.
- Developing plans to help employees who are injured at work to **return to work** as soon as safely possible.



# Asset and Financial Sustainability

Vision: Saskatoon invests in what matters



Non-tax revenues are an important part of the City’s total revenues because they help to keep everyone’s municipal taxes lower. Non-tax revenues include fees for service which directly contribute to the cost of providing those services.

The proportion of municipal property taxes relative to total municipal revenue has increased over the last three years because of increased service levels in Transportation and Police Services that are supported by increased property taxes. Additionally, growth in non-tax revenues has not kept up with expenditure growth associated with the rapid increase in population that the City has experienced.

## Key Civic Infrastructure

A “B Service Level” funding plan for “our road network” will be met by 2017 to slowly reduce the backlog of roads needing rehabilitation through the Building Better Roads program. An investment of \$53.5 million was made in 2015 to improve the condition of our roads, an amount that was more than double the 2011 investment of \$24.6 million. With continually aging infrastructure, higher levels of future investments will be needed to meet expected condition levels.

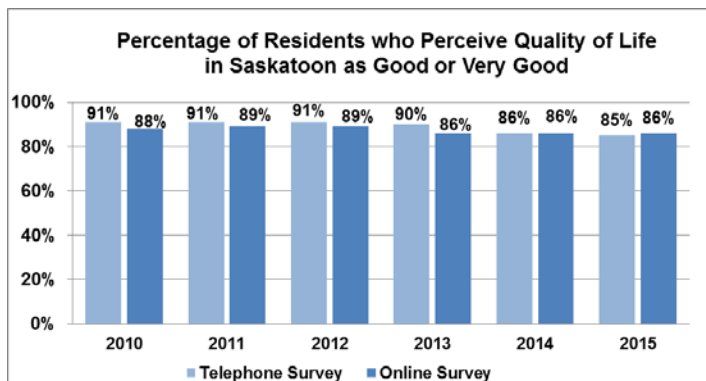
## Key Strategies for Success

- Continuing to implement continuous improvement and identify alternative revenue sources to address the City’s growth-related costs.
- Engaging citizens in **Shaping Saskatoon’s Financial Future** through a new budget process that will get input on the City’s spending priorities.
- Utilizing **Public Private Partnerships** to provide new infrastructure if there are long-term net benefits for citizens.
- Implementing **Building Better Roads**, a four-year strategy (2014 - 2017) to dramatically improve the condition, safety and longevity of Saskatoon’s road network.
- Developing a **Corporate Asset Management Plan** to achieve desired service levels for key civic infrastructure.



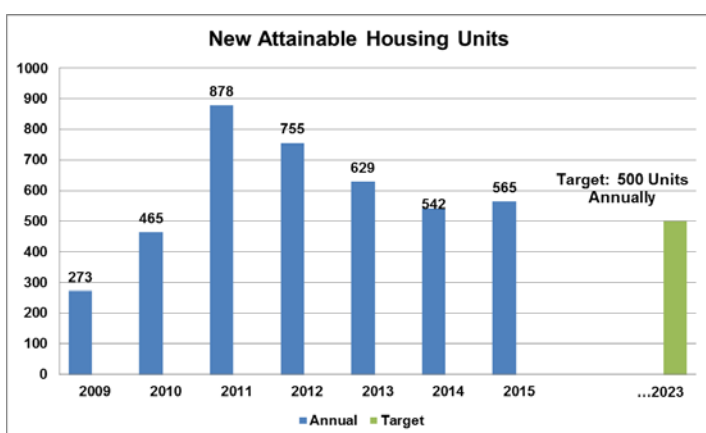
# Quality of Life

Vision: Saskatoon is a warm, welcoming people place

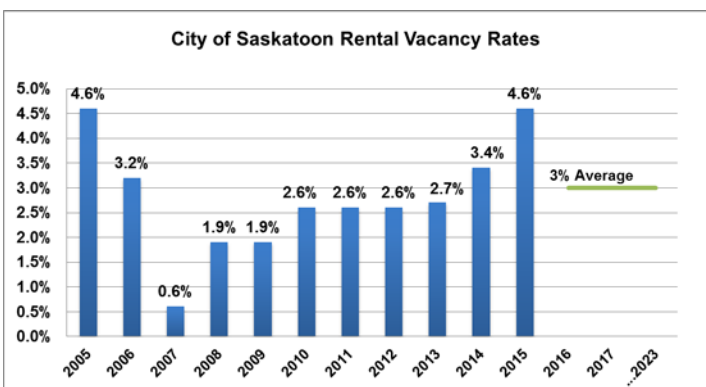


Citizens' perception of their quality of life is influenced by many factors, some of which are environmental and personal factors. Services supported by the City, such as recreation and culture activities, adequate housing, and emergency services also contribute to high quality of life.

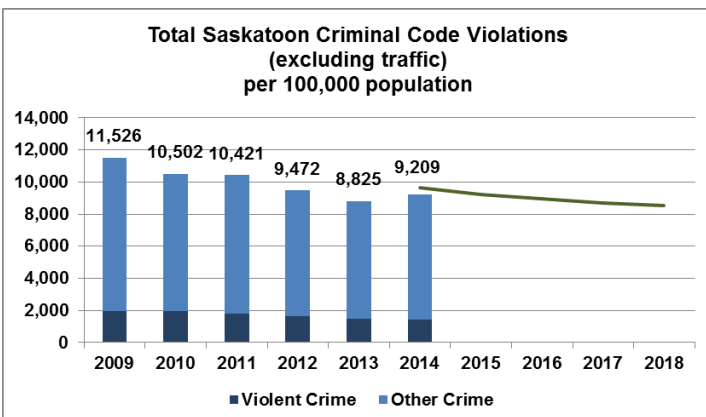
In 2015, 85% of telephone respondents and 86% of online respondents indicated good or very good perceptions of quality of life in Saskatoon. Quality of life perceptions compare favourably to perceptions in other major Western Canadian cities but decreased slightly since 2012.



The City supported the development of 565 attainable housing units in 2015 which exceeded the target. The City's *Housing Business Plan* contains a variety of incentives and initiatives which support the creation of attainable housing units across the housing continuum from emergency shelters to home ownership units for first-time buyers.



In 2015, Saskatoon's vacancy rate increased to above the national average and at 4.6% it is the highest it has been in 10 years. Some areas of the city have up to 12% vacancy rates. The higher vacancy rates are influenced by new rental supply; economic factors; and low interest rates, stable home prices, and incentives from developers for condos which are making home ownership an attractive option.



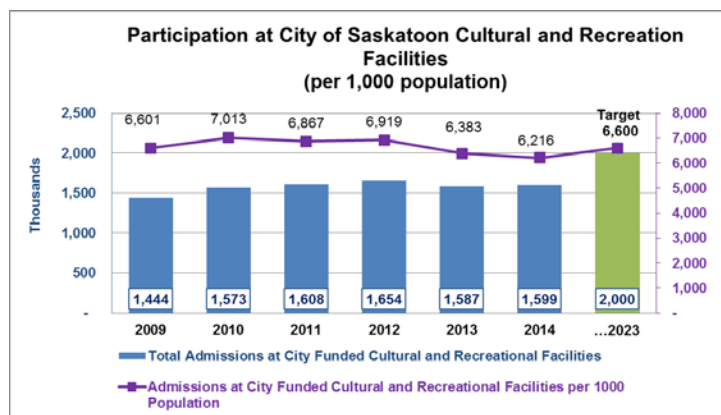
Feeling safe in neighbourhoods contributes to quality of life. Saskatoon's per capita crime rate in 2014 was 11.7% lower than the average over the previous five years. The per capita crime rate has decreased by 22% since 2009.

Saskatoon's per capita crime rates were higher than in other major Western Canadian cities and increased slightly in 2014. A marginalized population and the City's rapid population growth contribute to crime challenges. After roads and infrastructure, citizens identify "crime and policing" as the next most important issue facing Saskatoon. Rising gang activity is a top concern.



## Quality of Life

Vision: Saskatoon is a warm, welcoming place



Data for 2015 is not yet available to reflect changes made to increase “participation at City-owned recreation and culture facilities.” For instance, a lower pricing strategy to increase participation at leisure centres was implemented and the newly renovated PotashCorp Playland at Kinsmen Park was opened. The transition to the new Remai Modern Art Gallery of Saskatchewan began in 2015 with the closure of the Mendel which will decrease visitation numbers in the short-term but will increase longer-term visitation.

As a result of the changes made by the City, the dashboard status was changed from “needs improvement” to “neutral”.

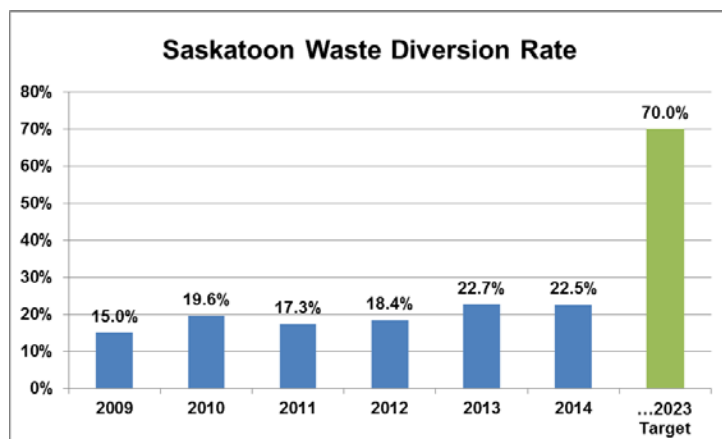
### Key Strategies for Success

- Implementing **Saskatoon’s Housing Business Plan 2012-2022**.
- Strengthening partnerships with Aboriginal organizations to enhance access to training, employment, economic opportunities, and housing.
- Developing a new **Recreation and Parks Master Plan** to provide accessible recreation opportunities to meet changing needs.
- Working in partnership with community-based organizations to develop a new **joint-use city centre recreation facility** to better serve core neighbourhoods.
- Partnering to construct and operate a **winter recreation park and lifestyle centre** at Diefenbaker Park
- Completing construction and transitioning of the new **Remai Modern Art Gallery of Saskatchewan**.
- Working with community organizations to implement **Age-Friendly Saskatoon Initiative** recommendations.
- Ensuring City of Saskatoon services and facilities are **physically and financially accessible**.
- Working in partnership with the community to develop collaborative **community-based policing** strategies to reduce crime by combining enforcement with proactive prevention, education, and early intervention.
- Developing a plan to **strategically locate fire stations** to maximize the service area that can be reached within four minutes to meet the safety needs of citizens and minimize overlap of service areas.



## Environmental Leadership

Vision: Saskatoon grows in harmony with nature



In 2014, the total amount of waste recycled in Saskatoon increased by 4.5% and helped recapture 10% of the landfill airspace, equivalent to adding 5.5 years to its life. With the addition of the Multi-Unit Residential Recycling Program, recycling is now accessible to all Saskatoon residents. The amount of hazardous waste collected during the Household Hazardous Waste Collection Days increased by over 40% in 2014. Participants in the Green-Cart Yard Waste Program almost doubled in two years to 5,800 subscribers in 2015.

Although strides have been made in diverting waste, the proportion of waste going to the landfill increased in 2014.

*The amount of garbage collected per home in Saskatoon in 2013 was 0.95 tonnes which is almost 50% more than the national average.*

### Key Strategies for Success

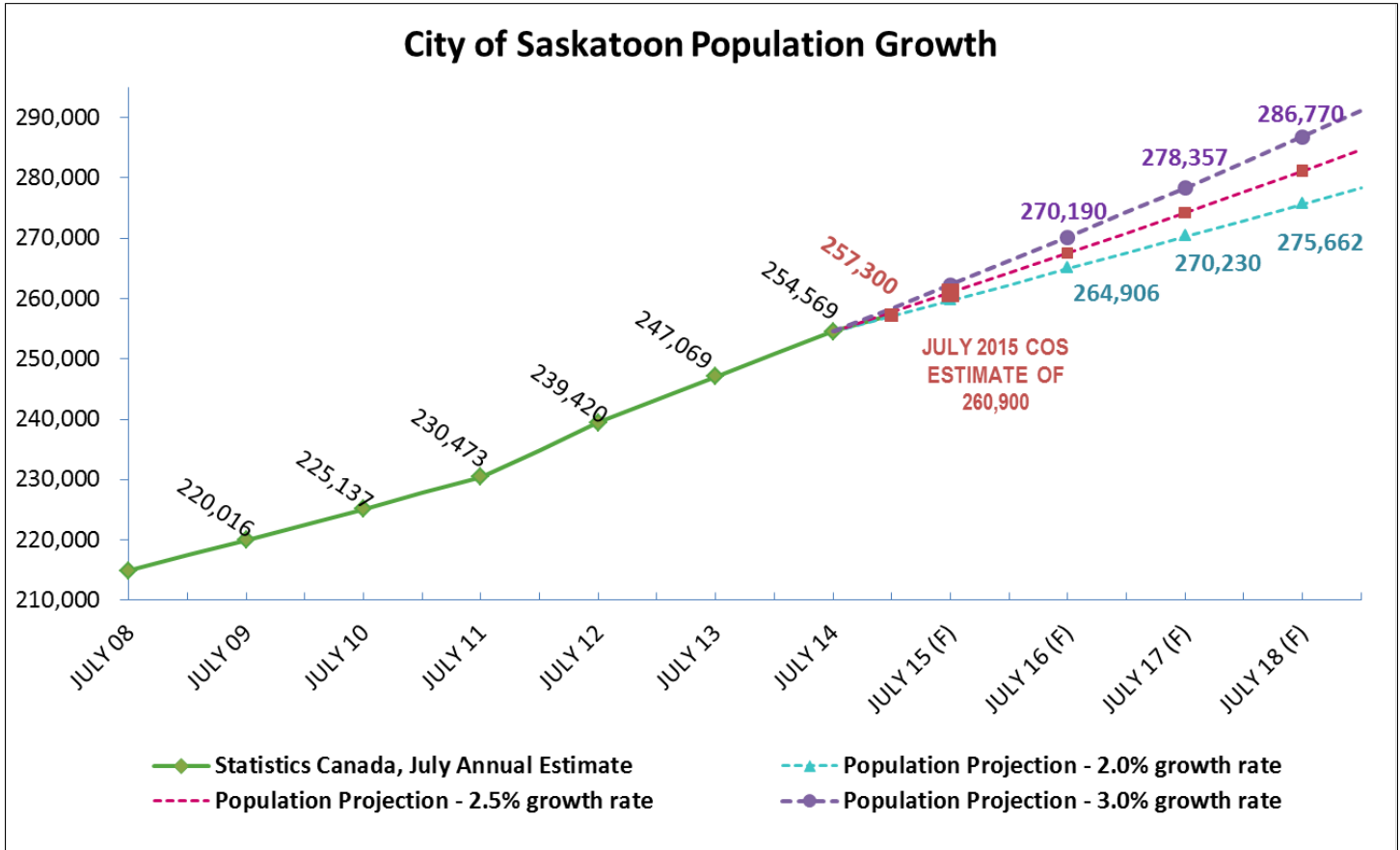
- Completing a **comprehensive community waste audit** and developing a **Waste Diversion Plan** that outlines the specific strategies and benchmarks for increasing the waste diversion rate to 70% by 2023.
- Developing **Recovery Park** for community construction material recycling, including a soils hub for civic projects.
- **Diverting food and yard organic material**, which accounts for 38% of total household waste, is critical to achieving the waste diversion target and will also reduce greenhouse gas emissions.
- Creating a **business plan to reduce GHG emissions** while improving Saskatoon's competitive position in the new green economy. The plan will help capture opportunities for energy-efficient practices in City buildings, transportation and operations, and replace conventional energy sources with green energy technologies.
- Implementing broader-scale energy improvements to civic buildings through **Energy Performance Contracting**.





# Sustainable Growth

Vision: Saskatoon is known for smart, sustainable growth



Saskatoon had the fastest growing population among major Canadian cities from 2009 to 2014 with an average annual increase of 2.9%. Growth has slowed during the first half of 2015 to an estimated 2.5% increase.

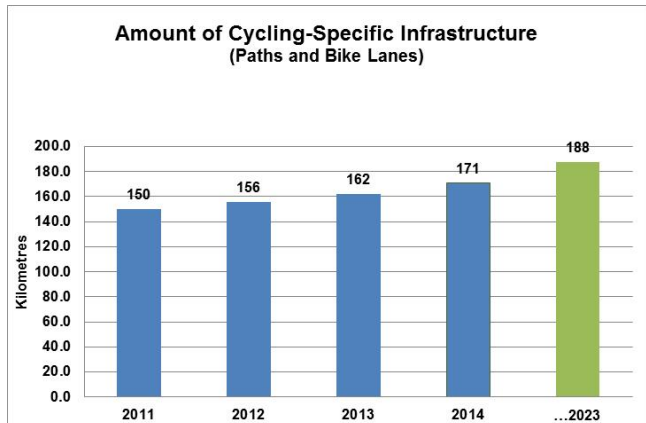
## Key Strategies for Success

- Implementing the **Neighbourhood Level Infill Development Strategy**.
- Implementing the ‘**growth near major corridors**’ component of the “**Growing Forward! Shaping Saskatoon**” initiative which focuses on infill along 22<sup>nd</sup> Street, 8<sup>th</sup> Street and other key corridors.
- Advancing the timeframe for implementing the **North Downtown Master Plan**.
- Shifting the focus of **Saskatoon Land** to include more development in infill neighbourhoods.
- Partnering with the University of Saskatchewan to expedite implementation of their **Vision 2057 Plan** for its endowment lands.
- Reviewing options for **reducing or replacing offsite levies** considered as “owing” on sites within the City’s infill neighbourhoods with re-development levies to provide more direct benefits to these areas.
- Completing the **Saskatoon North Partnership for Growth Regional Plan** in collaboration with Corman Park, Warman, Martensville, and Osler.



## Moving Around

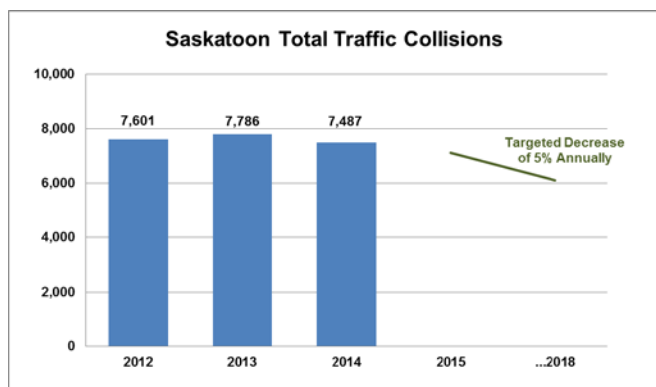
Vision: Saskatoon is on the move.



The City is striving to make cycling easier as a recreational activity and as an environmentally-friendly choice for transportation. Almost 10 km of new bike lanes and paths were added in 2014 and 2015. The 23rd Street Protected Bike Lane opened in July 2015 and will be expanded in 2016 as part of a pilot project.

All full-size buses now have bicycle racks which increase the ability of people to combine cycling and transit to move around.

*The 2011 Census indicated the proportion of people cycling to work in Saskatoon is almost double the average in other similar size Canadian cities.*



Traffic collisions declined by almost 4% in 2014. During the first six months of 2015, however, there were 3,934 collisions, an increase of almost 12% from the same time period in 2014. Traffic collisions increased because of more cars on the road leading to more congestion, distracted drivers, and less traffic enforcement as police officers were redeployed to higher priority activities.

Traffic impacts when roads are under construction are lessened through promoting transit and active transportation choices.

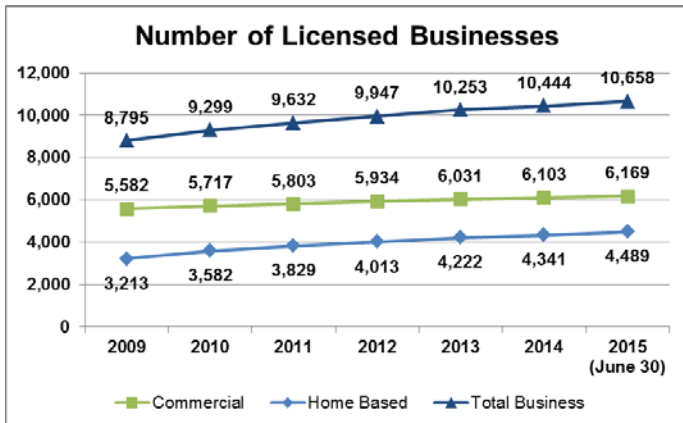
### Key Strategies for Success

- Developing an **Active Transportation Strategy** to make it easier to get around by walking and cycling.
- Ensuring that Saskatoon Land's new commercial, industrial and residential areas include parks, paths and routes that encourage walking, cycling and transit use.
- Piloting an 18-month **Downtown Protected Bike Lane Demonstration Project** in 2015 and 2016.
- Implementing a **Five-Year Transit Plan** including enhanced customer service; reliable, safe and clean bus services; a new marketing campaign; and a funding model to support transition to a modern fleet.
- Completing and implementing the **Growing Forward! Shaping Saskatoon Transit Plan** incorporating Bus Rapid Transit, a high frequency bus service along major corridors featuring dedicated bus lanes, enhanced stations and real-time information.
- Implementing the **Strategic Traffic Safety Action Plan** which identifies seven focus areas for traffic safety: aggressive driving, distracted driving, impaired driving, intersections, older drivers, young drivers, and vulnerable road users.
- Building the **North Commuter Parkway Project** and **Traffic Bridge** and supporting the province on the **Perimeter Highway and North Bridge** to reduce congestion and related traffic collisions.



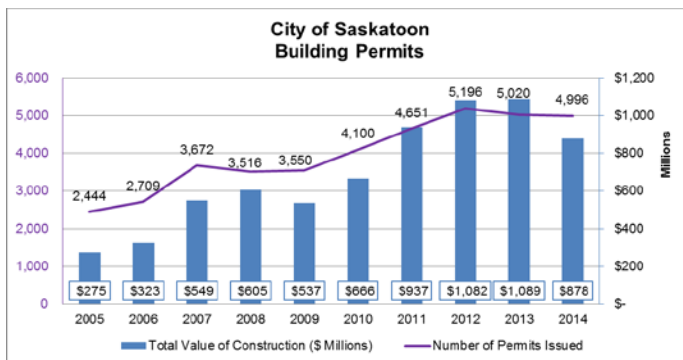
# Economic Diversity & Prosperity

Vision: Saskatoon thrives thanks to a diverse local economy

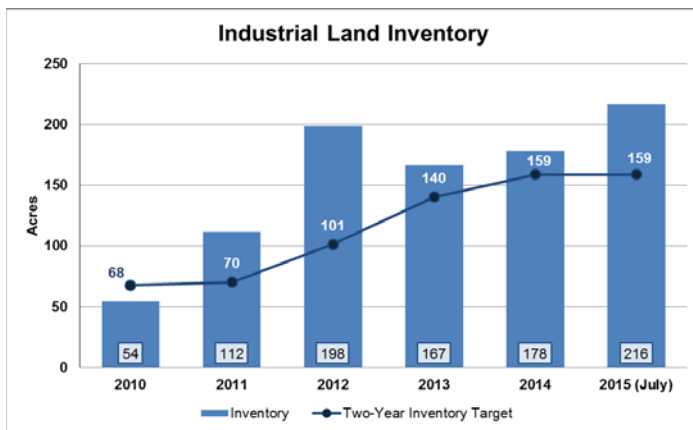


The number of licensed businesses grew by about 2% in 2014 and another 2% during the first six months of 2015. The growth rate is lower than during the previous four years which is reflective of the overall economy. Home-based businesses are growing at a faster rate than other businesses.

*In 2014, the Canadian Federation of Independent Business (CFIB) rated Saskatoon as the third best major city in Canada for starting and growing a business.*



During the first six months of 2015, 2,244 building permits valued at \$444.9M were issued. The annual number and total value of Saskatoon's building permits over the last four years has been significantly higher than prior to 2011. The value in 2014 however saw a decline, largely due to the decrease in the number and average value of commercial and institutional projects. Building permits issued in 2014 represent the creation of 2,936 new residential units.



Saskatoon Land's supply of serviced residential and industrial land increased in 2014 and is meeting the target for a one- to two-year supply of inventory in 2015. The City had 216 acres of serviced industrial land and inventory for 1,855 single family homes and 2,719 multi-family units as of July 2015.

*Saskatoon had the highest average annual economic growth among major Canadian cities from 2005 to 2014. The Conference Board of Canada forecasts that Saskatoon's economic growth will continue to be higher than the Canadian average in 2015 and 2016.*

## Key Strategies for Success

- Maintaining a **business-friendly environment** with competitive property tax rates, fees and permits; online services; infrastructure to support new businesses and workers; and clear public policies to build on the City's strong economic performance.
- **Working collaboratively** with local businesses, Saskatoon Regional Economic Development Authority (SREDA), other levels of government, and educational institutions to promote Saskatoon as a great place to live, work and raise a family.
- Developing an **Employment Area Strategy** to create new employment areas adjacent to residential areas.
- Investing in infrastructure and facilitating the appropriate amount of **serviced residential and industrial land** are keys to attracting new business and generating employment opportunities.

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## Compact of Mayors

### Recommendation

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

1. That the City of Saskatoon commit to the Compact of Mayors agreement on climate change; and
2. That the Mayor be authorized to sign the Compact of Mayors on behalf of the City of Saskatoon.

### Topic and Purpose

The purpose of this report is to provide information on the Compact of Mayors agreement on climate change.

### Report Highlights

1. The City has received a letter of invitation to sign the Compact of Mayors and commit to reducing greenhouse gas (GHG) emissions and adapting to the impacts of climate change.
2. The City of Saskatoon is well-positioned to meet the requirements of the Compact of Mayors.

### Strategic Goals

The recommendation in this report supports the priority to implement the Energy and Greenhouse Gas Reduction Plan under the Strategic Goal of Environmental Leadership.

### Background

A letter from the U.N Secretary-General's Special Envoy for Cities and Climate Change was received (Attachment 1) asking His Worship, Mayor Atchison, to sign the Compact of Mayors as a member of the Federation of Canadian Municipalities, Big City Mayors' Caucus (BCMC).

### Report

#### Commitments Under the Compact of Mayors

The Compact of Mayors ([www.compactofmayors.org](http://www.compactofmayors.org)) was launched at the 2014 United Nations Climate Summit and is an agreement whereby cities are asked to undertake a transparent and supportive approach to reduce community-level emissions to reduce vulnerability and enhance resilience to climate change.

By joining the Compact of Mayors, signatory cities commit to:

- Within one year
  - Complete a community-wide greenhouse gas (GHG) inventory
  - Identify climate hazards

## **Compact of Mayors**

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- Within two years
  - Set increasingly ambitious GHG reduction targets
  - Assess climate change vulnerability
- Within three years
  - Create a Mitigation and Adaptation Action Plan demonstrating how the City will deliver on its commitment to reduce GHG emissions and adjust to actual or expected climate change impacts

### City of Saskatoon Readiness

The City of Saskatoon is well-positioned to meet the requirements of the Compact of Mayors. The Administration is preparing to complete a community-wide GHG inventory in 2016 and will provide a report on this initiative to City Council during the 2016 Business Plan and Budget deliberations.

A climate change vulnerability assessment based on identified climate hazards predicted for the Saskatoon region is also underway with a preliminary report on infrastructure anticipated early in 2016 and additional risk assessments built into the 2017 business planning process for each civic division.

A GHG emissions reduction target has been established for the City of Saskatoon and the Executive Committee unanimously endorsed the request to set a community GHG target by the Saskatoon Environmental Advisory Committee. Once a Performance Target for community GHG emissions has been established and the GHG inventory is underway, work to update the Energy and GHG Reduction Business Plan will begin. The Administration anticipates having an updated Plan in place by 2017, one year ahead of the Compact of Mayors commitment requirement.

The signing of the Compact of Mayors is timely, given that the 21<sup>st</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (“COP 21”) is happening in December 2015, in Paris, France. To prepare for this event, the BCMC member cities passed a resolution in June 2015, which commits the BCMC to support binding GHG targets on all orders of government that address both short-term and long-term commitments to reduce greenhouse gas emissions. It calls on all members of the big cities caucus to develop and implement climate actions plans that both identify the risks from climate change and detail how those risks will be mitigated. The resolution also commits cities to regular and transparent reporting of their GHG emissions through the Carbon Disclosure Project.

### **Options to the Recommendation**

City Council may choose to forgo signing the Compact of Mayors.

### **Financial Implications**

There is no membership fee associated with the Compact of Mayors commitment. Costs for completing the various milestones of the commitment have already been included in the 2016 Business Plan and Budget.



**Environmental Implications**

A positive impact on greenhouse gas emissions is anticipated as a result of the City becoming a signatory to the Compact of Mayors.

**Other Considerations/Implications**

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

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

If signing the Compact of Mayors is pursued, a status report on activities would be provided to the Standing Policy Committee on Environment, Utilities and Corporate Services in July 2016.

**Public Notice**

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

**Attachment**

1. Letter of Invitation to Join the Compact of Mayors

**Report Approval**

Written by: Brenda Wallace, Director of Environmental and Corporate Initiatives  
Reviewed by: Mike Jordan, Director of Government Relations  
Approved by: Catherine Gryba, General Manager, Corporate Performance Department

Administrative Report - Compact of Mayors.docx

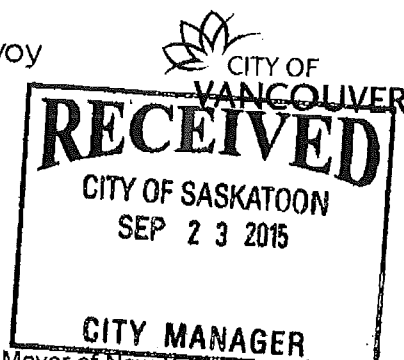
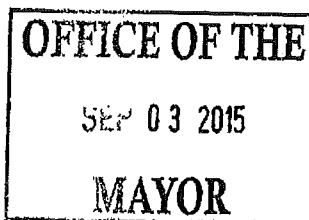
**MICHAEL R. BLOOMBERG**

UN Secretary-General's Special Envoy  
for Cities and Climate Change

August 28, 2015

The Honorable Donald J. Atchison  
222 Third Avenue North  
Saskatoon, SK S7K 0J5

Dear Mayor Atchison:



We write to you as the Chair of the Big City Mayors' Caucus and the Former Mayor of New York City and the UN Secretary-General's Special Envoy for Cities and Climate Change to ask for your city's commitment to the Compact of Mayors.

The Compact of Mayors is a global platform where cities can publically register current or new climate commitments using one common standard for the measurement and reporting of their emissions and climate risk. It was launched at the UN Climate Summit last September in partnership with UN Secretary-General Ban Ki-moon and Mayors Eduardo Paes of Rio de Janeiro, Anne Hidalgo of Paris and Park Won-soon of Seoul. Although many cities like yours have already made ambitious commitments, sometimes even publically through other international, regional and national platforms, the global community is still unaware of the full power of city action. We created the Compact of Mayors to solve this problem.

We share the Secretary General's view that spotlighting the leadership of cities in a single platform is a key to leveraging that leadership to encourage more ambitious and meaningful climate actions by all of the parties participating in COP21. The Compact of Mayors, by aggregating the climate commitments of hundreds of cities representing hundreds of millions of people, can send a much more powerful signal to the negotiators in Paris than a series of disparate and disconnected groupings and pledges.

The Big City Mayors Climate Action resolution that your city signed is an example of leading initiatives that we want to recognize and make even more visible. The primary aim of the Compact is to serve as a single, transparent platform to collect both the individual and collective achievements and commitments cities like yours have already made, as well as new ones you'd like to make public now. Commitments made through the Big City Mayors Climate Action resolution are easily transferrable as commitments to the Compact of Mayors – taking your domestic call to action to a global audience in time to influence a positive outcome during the Paris Conference of Parties negotiations this December.

Vancouver has committed to the Compact, and Gregor and I urge you now to do the same. We are asking that you take the next step to make it official by submitting a letter to indicate your city's commitment to the Compact of Mayors through either carbonn Climate Registry, CDP Cities, or by directly sending a letter to [info@compactofmayors.org](mailto:info@compactofmayors.org).

As the global community works towards a climate treaty at the end of this year in Paris, during the UNFCCC's COP21, now is a critical time to share your city's climate commitment and showcase your actions on an international stage through The Compact of Mayors. It is through this voluntary action and transparent reporting that cities will be finally recognized as legitimate partners in a global climate solution.

We have also included here a summary of how the Compact relates to your current commitment through the Big City Mayors Caucus and stand ready to answer any questions you may have about the Compact of Mayors initiative. We have asked Amanda Eichel with Bloomberg Philanthropies to follow up with your office in the coming days, and your representatives should feel free to contact her with any questions. She can be reached at [amandae@bloomberg.org](mailto:amandae@bloomberg.org) or +1-212-205-0213.

We hope you will join us in this critical effort and thank you for your continued commitment to global sustainability.

Sincerely,

Michael R. Bloomberg  
U.N. Secretary-General's Special Envoy for Cities and Climate Change

Gregor Robertson  
Mayor of Vancouver

✓ Copy: Murray Tolhurst - Sep 23/15



## Coordination of Climate Initiatives for Canadian Cities – Domestic and International

### Goal

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Through leadership of the Big City Mayor's Caucus, 21 Canadian Cities have supported the Big City Mayor's Climate Agreement. This agreement indicates significant support for municipal, national and international action to address climate change. Some cities, such as Vancouver have committed to long term carbon reductions as well as 100% renewable energy. Others are working exclusively toward climate targets. Through this effort, each city can highlight their commitment and unique approach to solving the greatest challenge of our time.

There is an opportunity in the lead-up to the COP meeting in Paris, to align the Canadian Mayor's agreement to the Compact of Mayors, an international effort by cities across the world to demonstrate their commitment to taking action. As the Big City Mayor's Climate Agreement has very similar commitments to the Compact of Mayors, the goal is to ask Canadian Mayor's to join Vancouver in signing-on to the Compact of Mayors. Through this alignment, there is a further opportunity for Canadian cities to highlight their leadership nationally and internationally.

### Objectives

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This initiative has the following primary objectives:

- Ask BCMC cities to agree that their signing onto the Big City Mayor's Climate Agreement is equivalent to a commitment to the Compact of Mayors.
- Demonstrate to the Canadian public that Canadian Cities are leading in addressing climate change and pursuing renewable energy.
- Highlight the Canadian Mayoral leadership at Climate Week in New York at the end of September.
- Highlight the Canadian Mayoral leadership during the COP meeting in Paris.

A short description of each effort and a summary of how these efforts are working collaboratively to elevate your city's critical climate commitments is outlined below:

### The Compact of Mayors

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#### What is the Compact of Mayors?

The Compact of Mayors is an international effort to organize and create visibility around city climate protection commitments (both mitigation and adaptation), by employing common measurement and reporting standards and a central platform to allow for the broadest recognition of city action in the global climate conversation.

It was launched by the UN Secretary General and his Special Envoy for Cities and Climate Change, Michael Bloomberg, in partnership with international city networks (namely C40, ICLEI and UCLG) to engage their members to undertake a transparent and supportive approach to reduce city-level emissions, to reduce vulnerability and to enhance resilience to climate change, in a consistent and complimentary manner to national level climate protection efforts.

Because the Compact of Mayors aims to build on, and incorporate, the ongoing efforts of Mayors that increasingly set ambitious, voluntary city climate commitments, the Compact is partnering with new and





existing regional, national and international sector-based initiatives to capture all of these efforts in one place, using a single standard. At the same time, the Compact mirrors the requirements that national governments face in the international negotiation process in order to ensure that city efforts are given the greatest possible consideration for future resourcing and recognition.

**What Are the Compact Commitments?**

Cities and towns of any size or location may take part in the Compact of Mayors. Upon making an initial pledge to the Compact, cities commit to measure their impacts, set targets, establish a plan and report annually on their progress. Cities that make this commitment have up to three years to meet these requirements to fully comply with the Compact, including:

1. Registering a Commitment – this is done through either a letter or email indicating the city’s official commitment.
2. Take Inventory (within one year of commitment)
  - a. Mitigation: Build and complete a community-wide GHG inventory using the GPC standard
  - b. Adaptation: Identify climate hazards
3. Set Reduction Targets (within two years of commitment)
  - a. Mitigation: Set GHG reduction target
  - b. Adaptation: Assess climate change vulnerability utilizing Compact guidance
4. Create a Mitigation and Adaptation Action Plan (within three years of commitment)
  - a. Mitigation: Develop climate action plan demonstrating how city will deliver on its commitment to reduce greenhouse gas emissions.
  - b. Adaptation: Develop a climate change adaptation plan demonstrating how the city will adjust to actual or expected climate change impacts.

**How does Reporting Work?**

The Compact of Mayors partners with existing city climate reporting platforms – namely CDP Cities and the Carbonn Climate Registry. All reporting may be done through existing reporting commitments to these two platforms. Additionally, the Compact aims to establish additional data partners and would welcome input from cities that may currently be reporting elsewhere so that we may enable easy transfer of data between these platforms, with the fundamental aim of ensuring that cities are reporting only once, no matter the breadth of their climate commitments.

**Canadian Big City Mayors’ Climate Change Action Agreement**

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**What is the Canadian Mayors Climate Change Action Agreement?**

The Canadian Mayors Climate Change Action Agreement is a call to action, from the 21 city members of the nation’s Big City Mayors Caucus, for the Canadian government to work closely with cities and provinces to develop a national climate change strategy. It is a vehicle for coordinated commitments, communications and engagement for mayors in Canada.

It was adopted by the Big City Mayors Caucus in June 2015 and announced publically on July 6, 2015.

**Members of the Big City Mayors Caucus have committed to:**

1. Support binding emission reductions at the international, national and city level that address both short- and long-term commitments.



2. Develop and implement municipal climate action plans that have specific actions designed to cut GHG emissions, identify the risks posed by climate change, and how those risks will be mitigated
3. Regular reporting of municipal GHG emissions through the Carbon Disclosure Project and move towards standardized inventories and reporting to ensure greater accountability and transparency.
4. Through the Chair of the BCMC, communicate these commitments to COP21, the Canadian government and other interested parties.

### Comparing Initiatives

The following table aims to identify areas of alignment and/or additionality for these 4 complementary city climate protection initiatives. In particular, cities that commit to the Canadian Climate Action Agreement can easily meet the Compact's Compliance Requirements and join fellow cities to show their collective impact in combating climate change on a global scale.

Commitment Type	Compact Commitment	BCMC Commitment
<b>GHG Measurement &amp; Reporting</b>	Within 1 year of commitment complete a community-wide GHG inventory using the internationally recognized "GPC" standard (can be an existing inventory). Inventory must be updated every 3 years.	Report municipal emissions via the CDP (Carbon Disclosure Project) platform. Move towards standardized inventories (standard TBD)
<b>Climate Hazard &amp; Risk Measurement and Reporting</b>	Within 1 year of commitment complete a hazard assessment, within 2 years of commitment complete a climate risk assessment – using international standard currently under development.	Identify the risks posed by climate change
<b>Climate Mitigation Target</b>	Within 2 years of commitment, establish a target for GHG reduction (can be an existing target). No requirements around target year, or specific ambition.	Support city level GHG emissions reduction targets that address both short- and long-term commitments
<b>Climate Adaptation Target</b>	Within 2 years of commitment, establish a target for climate resilience (can be an existing target).	Via Climate Action Plan
<b>Climate Action Plan - Mitigation</b>	Within 3 years of commitment, publish a plan to address GHG reduction target (can be an existing plan)	Develop and implement municipal climate action plans that have specific actions designed to cut GHG emissions
<b>Climate Action Plan -- Adaptation</b>	Within 3 years of commitment, publish a plan to address adaptation target (can be an existing plan)	Develop and implement municipal climate action plans that identify the risks posed by climate change and how those risks will be mitigated
<b>Advocacy &amp; Communications</b>	Support provided through the Compact of Mayors to communicate city commitment to the international audience.	Call on the Government of Canada to engage with the Provinces and big cities in developing a national climate change strategy Communicate BCMC commitments to the COP21, the Canadian government and other interested parties.



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## 2015 Curbside Swap

### Recommendation

That the report of the General Manager, Corporate Performance Department dated November 9, 2015, be forwarded to City Council for information.

### Topic and Purpose

The purpose of this report is to provide a summary of the 2014 and 2015 Curbside Swap program and provide recommendations for 2016 and beyond.

### Report Highlights

1. Program feedback and survey results show that both the 2014 and 2015 Curbside Swap events were well attended. In 2015 nearly 900 participants attended the Facebook event; 50 participating homes were visited by City staff; and 61 participants provided their address on Facebook.
2. A one-day city-wide Curbside Swap event was held in 2015 to bring greater awareness to the program through focussed communications. Community Associations participated in the Curbside Swap program by either by hosting their own event or by communicating the city-wide event.
3. Other Canadian municipalities involved in facilitating swaps hold one-day city-wide events in their communities.

### Strategic Goals

This report support the priority to promote and facilitate city-wide recycling under the Strategic Goal of Environmental Leadership.

The Curbside Swap program also helps the City achieve its corporate performance target to divert 70% of waste from the Saskatoon landfill.

### Background

On December 4<sup>th</sup> 2013, City Council resolved to add \$15,000 to the Environmental Health Business Line to develop a “Gently Used Items” program.

### Report

The Saskatoon Curbside Swap is intended to build community, provide residents with a convenient way to pass on reusable items, and to raise awareness about the importance of reusing.

### 2014 Curbside Swap

The 2014 Curbside Swap program took place on four different days in September, in four different neighbourhoods: College Park, City Park, Buena Vista, and Meadow Green. Environmental and Corporate Initiatives (E&CI) coordinated the City-supported events and worked extensively with Community Consultants and Community Associations to ensure the success of the program.

## 2015 Curbside Swap

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The events were generally well attended, although weather played a role in participation. A follow-up survey indicated that participants found it to be a worthwhile initiative but suggested increased advertising through the use of social media.

### 2015 Curbside Swap

In 2015, five neighbourhood-level swaps were held along with an additional city-wide Curbside Swap on September 12, 2015. The city-wide event was available to all residents regardless of their neighbourhood. This city-wide approach was taken in order to provide more residents the opportunity to participate, minimize the staff resources required, and focus communications efforts.

The September 12<sup>th</sup> event was well-attended with higher participation evident in the four neighbourhoods that participated in 2014. Results included:

- At least 50 homes confirmed to have items on their curbs; 61 attendees posted their addresses on Facebook 830 attendees on the Facebook event page
- Five communities held events in the spring:
  - King George – May 9
  - Hudson Bay Park/Mayfair/Kelsey-Woodlawn – May 10
  - North Park/Richmond Heights – May 30
  - Stonebridge – May 31
  - Buena Vista – June 6
- Twelve communities promoted the city-wide event on September 12 through their website and/or in their newsletter

Following the city-wide event, a survey was made available to residents on the City of Saskatoon website and on Facebook. Key findings are summarized in Attachment 1. Feedback was largely supportive, with a common complaint noted that a city-wide event creates the challenge of commuting to disparate areas of the City.

Customizable communication materials are now available on the City's website to assist residents and Community Associations wishing to take part in future swap events.

### Similar Programs Across Canada

Throughout Canada there are various re-use programs that aim to keep gently used items out of municipal landfills. These programs vary in length, reach, and level of municipal involvement. In many cases, the exchange of gently used goods happens informally (online, at the curb, or through charity organizations). The majority of these programs are organized and overseen by non-municipal organizations; however, Table 1 provides a summary of gently used item swap programs that are supported by municipalities in Canada.

**Table 1**

Community	Population	Program Name	Duration	Reach
Ottawa, ON	883,391	Give Away Weekend	One weekend (October)	City-wide
Barrie, ON	128,430	Free Goods Exchange Days	Two consecutive Saturdays (June)	City-wide
Guelph, ON	114,940	Goods Exchange Weekend	One spring weekend and one fall weekend	City- Wide
St. Albert, AB	61,466	Take it or Leave it!	One Day (June)	City- wide at a central location
Meaford, ON	11,100	Goods exchange/ Curbside Swap day	One Day (May)	City- wide

The Administration plans to continue to promote the program by supporting a one day city-wide Curbside Swap event. As the event becomes more well-known, the Administration believes the number of neighbourhood-level swaps will increase and the density of participants during a one-day event will also increase to offset the challenges in commuting distances.

**Stakeholder Involvement**

Curbside Swap participants and Community Associations were engaged in planning the 2014 and 2015 events through Facebook, surveys, and other direct communications; similar engagement will continue going forward.

**Financial Implications**

In 2014, brand development, design, and communications cost \$11,500; staff time is estimated at an additional \$7,000. In 2015, \$3,600 was spent on communications (lower as the brand and design work were complete in 2014). Costs for staff time were approximately \$5,000. The costs for City support to the Curbside Swap program in 2016 are expected to be similar to 2015. The balance of the \$15,000 budget provided for this program will be used for bylaw compliance support.

**Public Communication Plan**

Curbside Swap events may continue to be communicated through the news media, social media, City Page, Kijiji and Facebook ads, the City’s website and a Facebook event page. Information would also continue to be provided to the Community Consultants to share with Community Associations and their members. Postcards, posters, signage and a Curbside Swap Host Manual are available on the website for residents to download and use to plan and promote their events. An interactive map of the locations of curbside swaps locations may be considered.

**Environmental Implications**

Curbside Swaps have a positive impact on waste diversion by preventing and reducing the amount of waste going to the landfill, and raising awareness about reusing. The amount of waste diverted through this program is not currently measureable.

**Other Considerations/Implications**

There are no policy or privacy considerations at this time.

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

The results of future Curbside Swaps will continue to be reported within the Integrated Waste Management Annual Report. The 2016 events will be described in a report to City Council in April 2017.

**Public Notice**

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

**Attachment**

1. 2014 & 2015 Survey Results

**Report Approval**

Written by: Rebecca Anderson, Environmental Coordinator

Reviewed by: Shannon Dyck, Environmental Coordinator

Amber Jones, Education and Environmental Performance Manager

Brenda Wallace, Director of Environmental and Corporate Initiatives

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

Administrative Report – 2015 Curbside Swap.docx



## 2014 & 2015 Survey Results

### 2014 Curbside Swap – Survey Summary

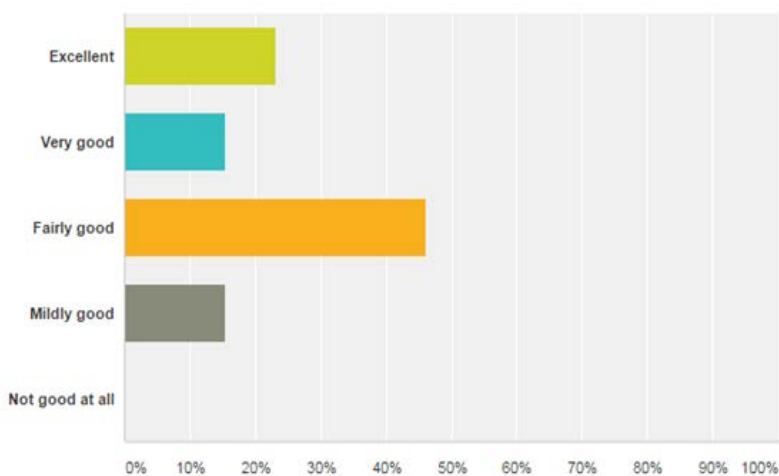
The City conducted a survey to understand attitudes, usage, and satisfaction with the 2014 Curbside Program. The survey was sent via email to residents and community leaders in the four participating neighbourhoods (Buena Vista, Meadowgreen, College Park and City Park).

### Key Findings

The survey results revealed that residents in these four neighbourhoods are supportive of the Curbside Swap program. Nearly all survey respondents indicated that they would like this program to continue in subsequent years. Increasing promotion of this program (particularly through social media) was the most common recommendation for improvement.

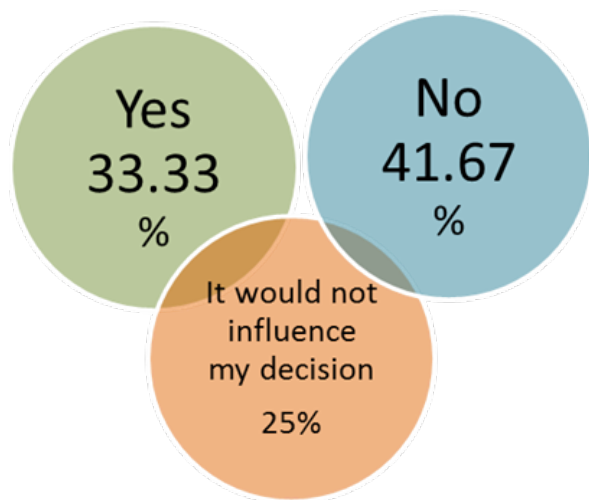
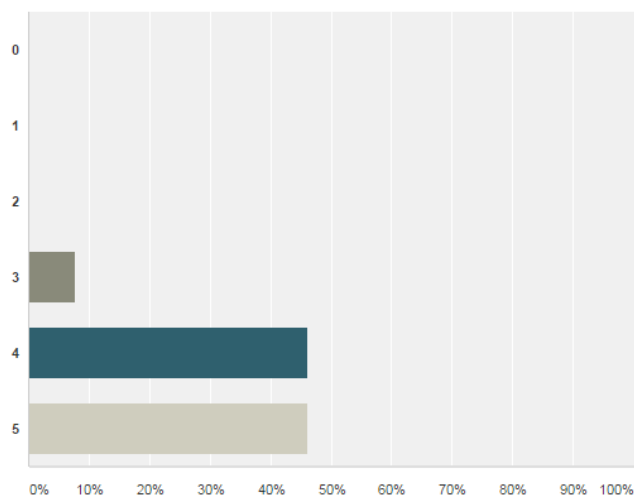
Overall, how would you rate the Saskatoon Curbside Swap?

Answered: 13 Skipped: 0



How likely is it that you would recommend Saskatoon Curbside Swap to another community association/neighbourhood? Scale: 0 = not at all likely and 5 = extremely likely

Answered: 13 Skipped: 0



Support for a centralized and neighbourhood specific versus a city wide curbside swap program was split. Among survey respondents, 33% indicated that they would be more likely to participate in this program if it was expanded to include the entire city, 42% of respondents prefer neighbourhood-specific events, while 25% indicated that it would not impact their decision.

## 2015 Curbside Swap – Survey Summary

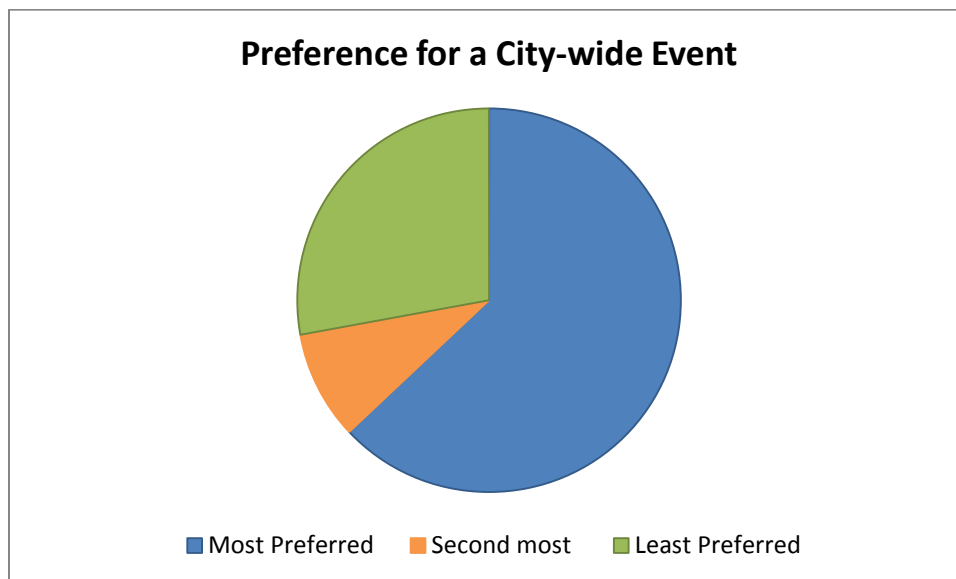
The City conducted a survey to understand attitudes, usage, and satisfaction with the 2015 Curbside Program. 245 public respondents completed a survey that was available on Saskatoon.ca, and on Facebook. 154 of the 245 survey respondents identified that they participated in the 2015 program. The surveys took place between October 9 and 26, 2015.

### Key Findings

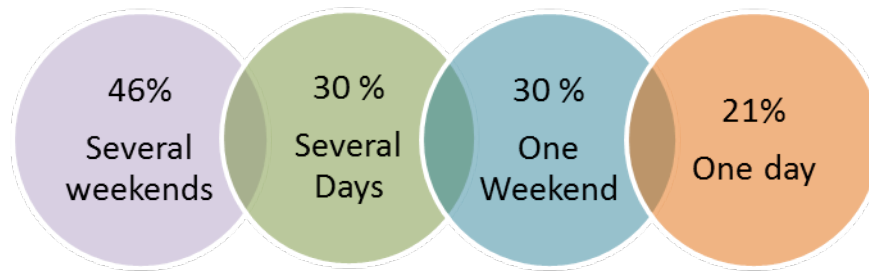
The survey results revealed that residents continue to be supportive of the Curbside Swap program. 55% of respondents suggested increasing promotion of this program (particularly through social media) and more advanced notice of the event as recommendations for improvement.

Respondents were asked to rank their preference for the type of event. A city-wide event was ranked first by most of the respondents (63%). Other options included in the survey were:

- holding individual neighbourhood-level events only
- coordinating several individual neighbourhood-level events.



More than half of those surveyed showed preference towards participating in a Curbside Swap multiple times a year with stronger preference given to weekend events versus one day events.



Positive feedback included:

“I think this is a great idea, I have visited other cities where this happened and always wished Saskatoon had this available to us. It is a wonderful way to recycle articles and saves both financially and saves a lot going to the city landfills.”

“Loved it! Curbside Swap was a phenomenal event!! I got rid of almost every item I put out. I had so much fun with my 2 neighbours on the search for stuff! I got things I needed & we all felt we scored great stuff! The Curbside Swap Facebook page was great with people posting their addresses & what they had. I highly recommend promoting this.”

“This was the best day!!! I had a bunch of kids stuff I didn't want anymore, couldn't be bothered with Kijiji and didn't know where to donate it... Everything I put out was gone by the end of the day! I loved curbswap day!!!!”

Constructive feedback:

“Better advertising so more people aware. Advertise sooner, utilize all forms of media (radio, newspaper, etc). Provide a bit of info to inform people about how it works.”

“Other cities (I am in Toronto now) have been doing this for many years, with citizens leaving out their unwanted but in good condition items at any time. This encourages regular collection of items by other citizens. Why does Saskatoon feel the need to regulate this by making it happen only one day/year or one weekend/year? People may not have the space or the interest in keeping unwanted items until that special day/weekend finally arrives, and this can lead to more items (useful to others) ending up in the landfill.”

“I think having it city wide dilutes the intent and results in less people picking up stuff. Focus should be on concentrating on a neighbourhood or a few at a time and encouraging them to coordinate it with a neighbourhood garage sale, or fair, or BBQ - so much potential to "Build Community"”

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## Landfill Ban Implementation Considerations

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to the 2016 Business Plan and Budget deliberations:

That a phased landfill ban program for paper and cardboard begin in 2016 as outlined in this report.

### Topic and Purpose

The purpose of this report is to outline a potential program plan and budget to restrict paper and cardboard from entering the landfill and in so doing improve waste diversion efforts in Saskatoon. The report outlines best practices, stakeholder engagement, program development, education, enforcement and budget implications.

### Report Highlights

1. In order to effectively divert waste from all Saskatoon area landfills, a landfill ban program needs to address paper and cardboard at the curb.
2. The main considerations for implementing a successful landfill ban program for paper and cardboard in Saskatoon are:
  - a) That all sectors have programs in place to support paper and cardboard diversion prior to enforcing a ban at the landfill.
  - b) That waste haulers, material recovery facilities and landfills are prepared to divert paper and cardboard.
  - c) That extensive stakeholder consultations and education are used in the development and set-up of the program.
3. 10.7% of the total waste received at the City's landfill in 2014 was paper and cardboard from the Industrial, Commercial and Institutional (ICI) sector, presenting a significant opportunity for advancing the waste diversion rate in Saskatoon toward the Performance Target of 70%.

### Strategic Goal

The recommendation in this report supports the long-term strategy to eliminate the need for a new landfill under the strategic goal of Environmental Leadership.

### Background

At its May 25, 2015 meeting, City Council recommended:

“That a program for implementing a landfill ban on paper and cardboard be developed and referred to the 2016 Business Plan and Budget deliberations.”

### Report

#### Landfill Ban Program Components and Considerations

A Landfill Ban is a range of measures to restrict the disposal of select categories of waste to landfills. It can be implemented through a ban at the landfill or during collection. Key components of successful programs are described in Attachment 1.

Landfill Ban programs are most straightforward in communities where there is only one landfill, all collection or processing services are provided by the municipality or all landfills are required to enforce the same bans (as is the case in Nova Scotia). In these cases, a landfill ban can be enforced by load inspections as materials enter the landfill and apply to both residential and ICI sectors. In other cases, such as Saskatoon, programs must enforce the landfill ban at the curb (by requiring the separation of recyclables from other garbage before they are collected by a waste hauler) in order to be successful. These programs often target the ICI sector and include regulatory program tools.

#### Proposed Paper and Cardboard Landfill Ban Program For Saskatoon

In Saskatoon, there are three landfills in the region and waste collection is done by a variety of haulers. For this reason, a ban of materials at the landfill would likely result in the flow of materials to other landfills, resulting in no overall diversion. To address this concern, a landfill ban program needs to address waste diversion before waste arrives at the landfill through regulations on collection programs.

Based on the key components of successful programs described in Attachment 1, a proposed program is outlined in Attachment 2 and includes two major phases:

1. The first phase will result in the requirement for diversion of paper and cardboard at the curb in the ICI sector and is expected to be fully implemented in two years. For example, some municipalities require businesses to contract recycling collection services from licensed haulers. Stakeholder engagement will help determine what type of program makes sense for Saskatoon. Residential recycling programs are in place in Saskatoon to divert paper and cardboard and residents are therefore exempt from the first phase of the ban.
2. The second phase, which will only occur if necessary after the first phase is fully implemented, includes a ban on paper and cardboard from entering the landfill at all. This second phase involves load inspections and would apply to all sectors.

The specific role of the City in implementing the Landfill Ban program requires clarification. The City currently offers the following waste services to the ICI sector:

- garbage collection for approximately 600 ICI customers
- receipt of an estimated 41,400 tonnes by the landfill in 2014 from commercial haulers
- compost depot permits for approximately 150 commercial companies

More details on the City's role in waste services can be found in Attachment 3.



## Landfill Ban Implementation Considerations

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### Diversion potential from an ICI sector paper and cardboard diversion program

10.7% of landfilled waste was paper and cardboard from the ICI sector in 2014. The ICI sector was responsible for 41,400 of the total 124,400 tonnes of waste that was landfilled. 13,269 tonnes was paper and cardboard from the ICI sector. The biggest components of ICI waste at the landfill are paper and cardboard (32%), food waste (27%), yard waste (15%), and plastics (13%).

### **Options to the Recommendation**

City Council may choose to implement other programs that target ICI waste instead of, or in addition to, paper and cardboard. Paper and cardboard has the most significant diversion potential and the diversion services and infrastructure are in place for these materials (while not widely available for other materials).

City Council may choose not to launch a landfill ban program in 2016 and instead incorporate its development into the Waste Diversion Plan that will be developed over the course of the next year.

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

A preliminary engagement of waste haulers, material recovery facility and landfill operators was conducted through telephone conversations to gauge the local capacity to divert paper and cardboard and gather initial impressions and feedback on the landfill ban program. The preliminary engagement indicated that these stakeholders are generally supportive of an ICI paper and cardboard diversion program, especially one with a focus on education (Attachment 4). Businesses have not yet been consulted. Extensive consultations with businesses, along with more in-depth meetings with waste haulers and facility operators are planned as the first step in the development of a landfill ban program.

### **Communication Plan**

The first stage of the landfill ban program involves stakeholder engagements. Communications will include direct mail to stakeholders, open houses, an online survey, and print and social advertising to communicate the stakeholder opportunities.

A detailed multi-year communication and education plan will be presented with the final results of the stakeholder engagements. The target audience will be the ICI sector with additional communications to the public and internal stakeholders.

### **Policy Implications**

Landfill bans are implemented through Saskatoon's Waste Bylaw (Bylaw No. 8310). Specific implications for the Bylaw, along with details about enforcement, will be identified in a future report focused on implementation following the stakeholder engagement program.

### **Financial Implications**

Phase 1 of the landfill ban program (focussing on regulations for the recycling of paper and cardboard in the ICI sector) is expected to cost \$65,000 in 2016 and \$52,000 in

## Landfill Ban Implementation Considerations

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2017. This includes the costs for coordinating and implementing stakeholder engagement, developing the program and necessary amendments to the Bylaw, and providing education through the development of appropriate materials. Funding required for 2016 could be made available from the existing landfill capital projects designed to optimize the life of that facility as some initiatives have been deferred into the future. If approved, the funds required in 2017 would be built into the 2017 capital budget.

Ongoing education and enforcement efforts are expected to generate additional need for Environmental Protection Officers; needs that will be quantified once alignment of positions within the new Community Standards Division is complete. Based on research of programs implemented in other cities, the estimated FTE requirement for Saskatoon is 0.5 FTE for enforcement.

### **Other Considerations/Implications**

There are no environmental, privacy or CPTED implications at this time.

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

Updates on stakeholder engagements will be provided to the Standing Policy Committee on Environment, Utilities and Corporate Initiatives following completion of each phase. A final program recommendation will be made following the completion of the third phase of stakeholder engagement in the fall of 2016.

### **Public Notice**

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

### **Attachments**

1. Components of Successful Landfill Ban Programs
2. Proposed Landfill Ban Program for Saskatoon
3. The Role of the City in ICI Waste and Recycling Services
4. Preliminary Stakeholder Meetings

### **Report Approval**

Written by: Katie Burns, Environmental Coordinator

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 - Landfill Ban Implementation Considerations.docx

## Components of Successful Landfill Ban Programs

### Key Considerations When Implementing Landfill Bans

As reported in May, a Landfill Ban program can be an effective measure for significantly increasing waste diversion. Municipalities implementing bans consider the following before establishing policy or regulations that ban specific materials from the landfill:

- Ensure suitable and convenient options for waste diversion are already in place for the material being banned. Bans should only be implemented after well-established and easily accessible options exist in order to avoid dumping. Options include one-stop-drop recycling depots or curbside collection programs.
- Provide adequate time prior to landfill ban coming into effect. It is important to ensure an education program is used to make sure all those affected by the ban clearly understand its implications.
- Establish resources to effectively enforce the landfill ban using fines under a waste bylaw or differential landfill fees.
- To maximize community buy-in, focus on items that have the greatest waste diversion impact or highest toxicity first.

The Administration recommends beginning a Landfill Ban program with paper and cardboard. Recycling options for these materials have been available in the community for more than forty years. 10.7% of the total waste received at the City's landfill in 2014 was paper and cardboard from the Industrial, Commercial and Institutional (ICI) sector, presenting a significant opportunity for waste diversion.

### Suitable Diversion Programs in Place

Landfill Ban programs require alternative disposal options for the banned material. In Saskatoon, the City provides extensive recycling options for residential properties. Businesses and institutions may access a variety of recycling services from private waste haulers. The City does not currently know how extensively these ICI recycling services are used.

Specific to the ban of paper and cardboard, every business and institution would require bins for separating these materials from other garbage, collection and/or depot services, and a recycling facility to sort and market the materials (Material Recovery Facility or MRF). These services and infrastructure are available in Saskatoon; however, the introduction of a Landfill Ban program is expected to require collection services to be scaled up, which takes time and will require private investment.

### Stakeholder Engagement

Key stakeholder groups for paper and cardboard Landfill Ban programs include waste generators (residential and ICI sectors), waste haulers, and processors (landfills and MRFs). Engagement with all of these groups has been shown to be critical to a program's success, including selecting program elements and enforcement methods that will be effective in the local context. Literature reviews of Landfill Ban programs

have identified waste haulers in particular because of their role in educating their customers and ensuring compliance during collections.

Stakeholder engagements for Landfill Ban programs are a minimum of six months and include three phases:

1. Discussing and ranking program options based on preference and effectiveness,
2. Refinement of preferred program options, and
3. Presentation of the program.

Once a Landfill Ban program is in place, adding additional materials to the ban requires a minimum of 3 months of stakeholder engagements to ensure infrastructure, services, education and enforcement are in place and appropriate.

### Education

As is the case for any wide-reaching waste program, education is critical. Often the municipality takes a leadership role in education for a Landfill Ban program as it goes hand-in-hand with enforcement. Waste haulers and processors also play an important role, as they will teach their customers how to separate materials at source (the 'curb'), place bins, reduce contamination, and address other issues as they arise.

### Grace Period

The majority of Landfill Ban programs offer a phase-in period, where the program is enacted on paper but not enforced. Three to six months is the average and depends on whether it is the first time materials are banned from the landfill or whether it is for additional items. This is an important period to ensure that all stakeholders are made fully aware of the program and the consequences for not complying. The staff that will enforce the program are also able to prepare and offer education, including issuing education letters or "recycling opportunity notices" to those found not in compliance.

### Enforcement

Enforcement is considered essential to the success of a Landfill Ban program. The program needs to offer an incentive or disincentive that encourages compliance. In cases where a more comprehensive approach is required for a Landfill Ban program, enforcement usually begins at the curb to ensure diversion programs are in place, followed by enforcement as waste enters the landfill (especially as more materials are eventually banned).

### Proposed Landfill Ban Program for Saskatoon

The Administration recommends the development of a Landfill Ban program in phases. The following chart outlines proposed activities for the first phase leading to a ban on paper and cardboard during collections.

<b>Milestone</b>	<b>Description</b>	<b>Time Required</b>
<b>Stakeholder Engagement</b>	A 3-part engagement of key stakeholders to rank program options (described below), refine program options, and present the program.	6 months (minimum)
<b>Program Setup</b>	Program details will be dictated by engagement, but may include: <ul style="list-style-type: none"> <li>• Prepare/amend bylaws/civic policies</li> <li>• Finalize program tools (such as registration, forms, licensing, or permitting)</li> <li>• Hire/train Environmental Protection Officer</li> </ul>	3-6 months
<b>Education</b>	General and targeted messages to create awareness of the program, when enforcement will come into effect, and how to participate. Target Audiences: <ul style="list-style-type: none"> <li>• ICI Sector</li> <li>• Waste Haulers</li> <li>• Waste Processors (landfills and material recovery facilities)</li> <li>• General public</li> </ul>	1 year (can overlap with Program Setup)
<b>Grace Period</b>	Program underway but not yet enforced. May include: <ul style="list-style-type: none"> <li>• Program registration, licensing, or permitting</li> <li>• Education through “recycling opportunity notices”</li> </ul>	3-6 months
<b>Enforcement</b>	Program in full effect with incentives and/or disincentives to encourage participation	Ongoing (begins after grace period)
<b>Monitoring and Evaluation</b>	Determine how much paper and cardboard is still being landfilled by sector and proceed with Phase 2 (ban of materials at the landfill) if the amount exceeds an acceptable threshold	TBD



Program Options to be presented during engagement include:

### **Voluntary**

- Waste diversion assistance: Technical and information assistance to companies that want to implement waste diversion programs. This can be helpful to businesses that may not have the technical knowledge or capacity to investigate diversion opportunities.
- Waste diversion promotion: Promote waste diversion in the commercial sector. Promotion and education can encourage waste diversion awareness and participation in the ICI sector. Options include recognizing businesses that show progressive initiatives in this area, and certification of businesses that achieve certain diversion standards.
- Recycling collection opt-in: Municipality provides collection of recyclables to small businesses and fit within the collection parameters of the existing curbside programs. A cost recovery fee would be applied.
- Waste exchange program: Online waste exchange system, such as the former Calgary Materials Exchange.
- Zero waste special events: Special events offer an opportunity for focussed waste diversion as well as public education. To avoid the waste associated with these events, organizers can be required as part of their permit to include waste diversion opportunities and meet certain targets. This can be first introduced on a voluntary basis, and can also be led by the City as part of its special events.
- School waste diversion and education programs: Target a specific area of ICI that both diverts waste and provides education that has been shown to also influence residential diversion.
- Working group on waste diversion: An ICI working group could be formed with members of the ICI community to provide focussed discussions around common issues and challenges related to waste diversion in this sector.

### **Economic**

- Disposal surcharges – dedicated landfill levy: Levy or surcharge placed on all waste entering landfills. This surcharge serves the dual purpose of creating a financial disincentive, while also providing a funding mechanism for diversion programming.
- Differential tipping fees: Increased fees for loads containing specified/designated materials.

## **Regulatory**

Regulatory tools will require further investigation to determine their availability in Saskatoon. Some potential tools are:

- ICI mandatory recycling/source separation requirements: Businesses must participate in recycling and/or must divert designated materials through a recycling program. Mandatory recycling or source separation places a regulatory requirement on businesses and organizations to participate in diversion programs as part of their daily operations. This requirement may take the form of physical diversion infrastructure such as separate collection containers, or proof of material diversion through recycling contracts.
- Franchise waste system: Franchising the waste system would see the City of Saskatoon administering ICI waste collection service contracts. This would give the City control over how this waste stream is managed, allowing for the establishment of targets and diversion mechanisms.
- Mandatory waste audits and diversion plans: To encourage consideration of waste diversion options, businesses can be required through regulation to complete waste audits or management plans that set out plans and targets for diverting waste materials.

Program Incentives and Disincentives to consider following further investigation and discussion through stakeholder engagement:

- Tax credits
- Deposit programs
- Differential fees
- Tipping fees
- Fast tracking at disposal facilities
- Material ban surcharges
- Public recognition for high performers
- Reduced cost of business license
- Recycling rebate or diversion credit
- Recycling grants

## The Role of the City in ICI Waste and Recycling Services

The City of Saskatoon currently provides waste collection, transportation and diversion services to the ICI sector in three different ways.

- Garbage collection services are provided to approximately 600 ICI customers.
- The City's landfill is used by several major waste hauling companies as well as many smaller or more specialized companies.
- The ICI sector utilizes the City's Compost program. Approximately 150 commercial companies purchased \$200 permits to provide unlimited access to the depots for the season.

The City's recycling depots have been found to be used by the ICI sector to a limited extent.<sup>1</sup> At this time the recycling depots are intended for residential use only.

The City's approach to waste collection and landfill services has been:

- To offer services at a rate that is in line with market averages
- To limit competition with the private sector, such as no advertising campaigns for services

### ICI Garbage Collection Services:

618 commercial customers used the garbage collection services of the City of Saskatoon in 2014. The number of commercial customers has remained relatively stable. Rates were last set in 2011 and have remained unchanged. Schedule A in the Waste Bylaw outlines the rates.

The commercial customers share the same equipment and operators as the multi-unit residential collection services. The City operates 2 fork-lift trucks in the provision of metal bin garbage collection services to multi-unit residential properties and commercial contracts. 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. Revenues from the commercial customers directly fund the operation of the 2 fork-left trucks and therefore have a direct impact on reducing property taxes.

### ICI at the Landfill

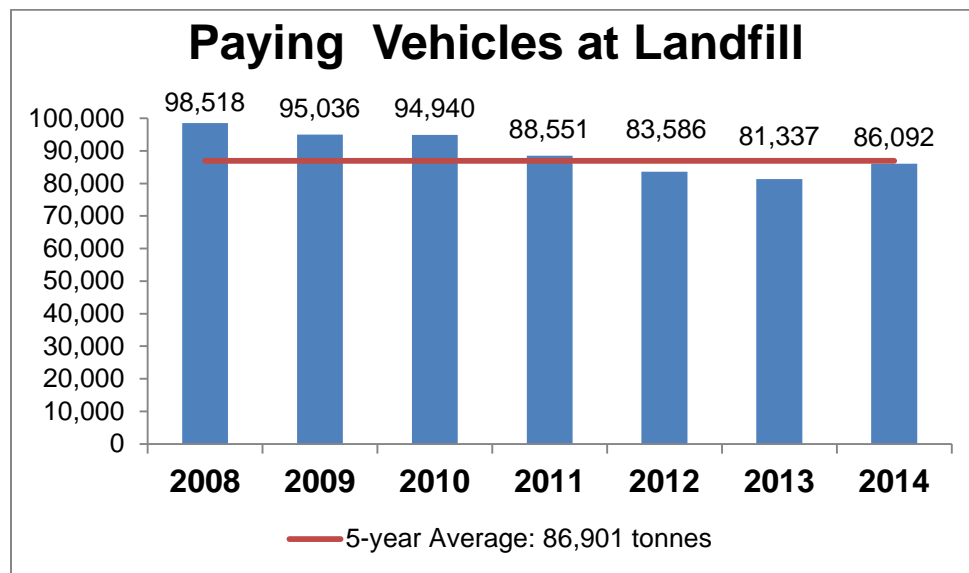
Between 2013 and 2014 the number of commercial hauler visits to the landfill has decreased, with some of the decline likely the result of competition from the Northern Landfill operated by Loraas Disposal and more recently, competition from Green Prairie Environmental, the new owner and operators of the former South Corman Park Landfill. The average size of chargeable loads delivered to the landfill has been shrinking and was approximately 0.6 tonnes in 2014. The landfill fees are outlined in Schedule B of the Waste Bylaw with incremental increases for 2015 and 2016.

The amount of chargeable tonnes that has been received by the landfill and the number of paying vehicles has been lower over the past 3 years than the 4 years before that.

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<sup>1</sup> A 2012 survey conducted as part of the waste characterization study showed that depending on the depot, up to 11% of materials was from the ICI sector.

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.



### The Role of the City in Diverting ICI Waste from the Landfill

In other jurisdictions, the role of the municipality may include, but is not limited to:

- Creating a waste diversion strategy which includes:
  - establishing targets and waste diversion goals
  - measuring and reporting on ICI waste management and diversion
  - Supporting communications
  - Providing appropriate programs and infrastructure to meet the needs of the ICI sector that are the result of stakeholder engagement
- Demonstrating leadership in municipal operations
- Implementing supporting policy and regulation

The City must determine, through stakeholder and internal engagement, how much involvement it will have in garbage and recycling collection. Some considerations include:

- Deciding whether to increase, maintain, or decrease garbage collection service
- Planning based on the trend of reduced chargeable tonnes being received at the landfill
- Determining what recycling supports and services are required, noting some potential services include:
  - Recovery Park at the Landfill
  - Allowing access to Recycling depots by the ICI sector
  - Expanding organics and composting options

## Preliminary Stakeholder Consultations

### Highlights

Select waste haulers and material recovery facilities were contacted for discussions on a landfill ban program. Highlights from those discussions included:

- That the proposed program for an ICI paper and cardboard diversion program was generally supported;
- Stakeholders had concerns about a ban at the landfill including:
  - That fees (surcharges) or other barriers to using the City landfill would reduce use at the City landfill including the potential for increased illegal dumping;
  - Enforcement would be challenging and need careful consideration
- Expectation for meaningful engagement for the ICI sector program, and especially for a landfill ban program;
- Strong education and an appropriate lead time would be required for a successful program;
- That the ICI sector be able to select their service provider;
- That the cost of recycling paper and cardboard for the majority of the ICI sector would be the same or less than regular waste collection;
- Small businesses that produce low volumes of paper and cardboard may be adversely impacted with higher costs and that additional program options should be considered for these businesses.

### Summary of Findings:

The conversations summarized the background, research findings, the proposed timeline and possible program options:

#### **Impact of a Ban on Paper and Cardboard Enforced at the Landfill**

The waste haulers that currently use the City's landfill were asked how enforcement of a ban on paper and cardboard as waste enters the landfill would impact their decision to continue using the landfill. One noted that use of the landfill has declined significantly and a ban that turned away loads or applied a surcharge that doubled the cost of loads would result in even less use of the facility. Another felt that fees were already too high at the landfill, noting that the fees were the highest in the province. Furthermore, there was frustration that the City's \$50/tonne fees that were meant to be in place for 3 years to build new cells continues to be charged, feeling that it should be repealed.

Other waste haulers noted that they would attempt to align with the City as surcharges or other practices were introduced (depending on the surcharge) including Loraas Disposal who is committed to mirroring any surcharges for paper and cardboard that is applied at the City's landfill.

## **Paper and Cardboard Recycling**

The waste haulers and material recovery facilities were asked whether they provided paper and cardboard recycling services, whether the cost was more, less or equal to landfilling waste, and how a requirement to have the ICI sector recycle would impact their business.

All stakeholders that were contacted provide paper and cardboard recycling services. For the majority of their customers having paper and cardboard recycling was less expensive or equal to waste disposal. Exceptions are smaller businesses that produce a low volume of paper and cardboard. Costs such as bin rental and collection for these recyclables would not be offset by reduced landfill fees. A suggestion provided to resolve this issue was to open up access to recycling depots or assist with arrangements for communal bins that many small businesses could share.

One waste hauler expressed concerns over recent changes to the fees at the Material Recovery Facility that significantly increased the costs and was uncertain if providing recycling options at an affordable cost would continue.

The stakeholders were generally comfortable with a requirement for the ICI sector to divert paper and cardboard. The main consideration was to ensure an adequate lead time to adapt and ensure all contacts and equipment is in place. Education was also considered essential to the program to develop a culture of recycling throughout the community and to reduce illegal dumping. Of particular concern was misuse of the Multi-unit Residential Recycling Program by Cosmopolitan Industries.

Stakeholders suggested that barriers to recycling for ICI customers include a lack of awareness of recycling options and space considerations for an extra container (conflict with parking or snow storage). And that contamination will be an ongoing concern.

## **Program Options**

Stakeholders were concerned about how a ban at the landfill would be fairly enforced, for instance:

- How to fairly apply penalties for non-compliant loads from multiple
- Too much reliance on financial penalties
- Expecting haulers to enforce diversion

For these reason, stakeholders preferred a program with enforcement at the “front end”. They emphasised they wanted it to be fair to customers and straight forward for haulers. Examples where proof of recycling services was required, with the ICI sector being able to select their preferred service provider, were mentioned by a couple of stakeholders as a preference. One example was the Regina multi-family recycling program. Ensuring that recycling rates were consistent or considering subsidies to offset recycling costs was suggested as a way to incentivize participation.

Education was considered a responsibility of the City and important to ensure success of any program. One hauler noted that an education program on recycling needs to go beyond the ICI sector in Saskatoon, making a strong case that it should include



education in schools and even a regional audience as the City accepts regional waste and to look to other Cities for examples.

Other comments on program options from *individual* stakeholders included:

- Ensuring that the City does not favour one service provider over another and an equal marketplace is maintained;
- Resources are properly allocated to ensure program success;
- Franchising recycling service for the ICI sector should not be considered;
- Reasonable exemptions need to be considered, for example a meat cutter would not be expected to recycle bloody cardboard;
- Single stream recycling is preferred over a program that just includes paper and cardboard.

### **Proposed Stakeholder Engagement**

All of the stakeholders were interested in participating in the stakeholder engagement process outlined in this report. While one stakeholder noted the timelines were a little aggressive, another was happy that the engagement process would start in 2016 if approved in the budget. One stakeholder was concerned about having all possible options on the table at the first phase of the engagement and instead thought the focus should be on the options most realistic in Saskatoon. Another noted intent to participate as long as it was felt the process was actually being influenced and would stop participation if the outcome appeared predetermined.

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## Update on the Education for Sustainable Development Partnership Program: Student Action for a Sustainable Future

### Recommendation

That the report of the General Manager, Corporate Performance Department dated November 9, 2015, be forwarded to City Council for information.

### Topic and Purpose

This report outlines the results of the 2014-2015 Student Action for a Sustainable Future (SASF) program, a creation of the Education for Sustainable Development Partnership that includes the City of Saskatoon (City).

### Report Highlights

1. The SASF program has led to measurable classroom, school, and household greenhouse gas (GHG) reductions and sustainability benefits.
2. Results of the first two years of the pilot program are now featured in a video and available on the [Saskatoon.ca/studentaction](http://Saskatoon.ca/studentaction) website.
3. The Saskatchewan Environmental Society (SES) has been contracted to coordinate the program for the 2015-2016 school year. Participating classrooms were selected in October 2015 and the program is now underway.

### Strategic Goals

The SASF program supports several Four-Year Priorities under the strategic goal of Environmental Leadership through energy efficiency and consumption, waste elimination and diversion, water consumption, community and backyard gardens, and improving access to ecological systems and spaces (natural and naturalized). It also supports the goal of Moving Around through transit ridership and promoting a mix of transportation modes within the community.

SASF will help the City achieve three of the City's corporate performance targets, specifically: Waste Diverted from the Landfill, Reduction in Greenhouse Gas Emissions, and Transportation Choices.

### Background

On August 21, 2014, City Council resolved:

- " 1. That funding of up to \$43,500 be approved for the 2014-2015 Student Action for a Sustainable Future program; and
2. 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."

## **Report**

### Program Overview

The purpose of the SASF program is to engage grade 5-8 students from the Public and Catholic School Divisions in action projects that measurably reduce greenhouse gas emissions and result in sustainability benefits. 10-14 classes are accepted each year, directly engaging up to 350 students annually. Each teacher works with program partners to facilitate student learning and action in one or more program areas: waste, water, energy, food, biodiversity, and transportation.

The program has won two awards: a Regional Centre for Expertise award for Education for Sustainable Development, and the Saskatchewan Waste Reduction Council's 2013 Waste Minimization Award for Youth/Schools.

### Program Outcomes

At the end of the year, students highlight the results of their projects at a student showcase, which is an exciting and celebratory event for everyone involved. The 2015 Showcase Brochure is included in Attachment 1.

Teachers and students work with program partners to measure the environmental and economic outcomes of their projects. Taking action and monitoring outcomes has proven to be an effective way to engage students who participate in real-world solutions and learn through experiences (e.g. sorting waste, counting the number of lights that are left on in their school, calculating food miles, measuring water use, growing a garden, etc.).

Many initiatives also lead to lasting environmental and educational impacts in their schools, even once the students who implement them move on to other grades. For example, projects such as creating a bike generator, installing LED lights, procuring gardening equipment, building a skateboard stand, installing solar panels, developing vermi compost bins and recycling systems, and implementing food-share boxes, all benefit future students and contribute to ongoing environmental benefits and educational legacies.

A summary of direct feedback from program participants and a list of additional outcomes are included in Attachment 2.

### Education for Sustainable Development Partnerships

The Education for Sustainable Development partners who created Student Action for a Sustainable Future provide participating classrooms with support such as teaching resources, professional development, planning time, networking opportunities, action project funds, and access to sustainability and environmental expertise. Partner contributions are listed in Attachment 3 and total approximately \$40,000.

The SASF program is currently in its third year, with hopes for continuation following the 4-year pilot which ends in 2017. Twelve grade 5-8 classes have been accepted this year from across Saskatoon, representing both Public and Catholic School Divisions.

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

Stakeholders have been directly involved from the beginning of the program's development through to its launch and delivery; these partners include the Public and Catholic School Divisions, Sustainability Education Research Institute, Saskatchewan Environmental Society, Saskatoon Light & Power, and the City of Saskatoon.

### **Communication Plan**

The ability of youth to make a difference in their community and inspire others will continue to be recognized and supported throughout the program's communications. Program information and results are included on the City's website and through a video on [Saskatoon.ca/studentaction](http://Saskatoon.ca/studentaction). Media has been and will continue to be invited to report on the students' projects at the year-end showcase.

### **Financial Implications**

In addition to the in-kind resources, services, and time contributed by partners (valued at over \$30,000/year), the City of Saskatoon will provide \$60,000 from existing capital funds (Capital Project #2183 – Greenhouse Gas Reduction) to the Saskatchewan Environmental Society for project coordination and other program costs not covered by partner contributions.

The Greenhouse Gas Reduction capital project has funded the development of the Energy and Greenhouse Gas Reduction Plan that set out corporate and community emissions reduction targets and activities. Funding was approved in 2005 from RCE for the implementation strategy which includes actions and initiatives that focus on emissions reductions, reduce energy costs and have environmental, infrastructure, social and health benefits.

Initiatives include energy efficiency improvements to civic facilities, development of policy tools and incentive programs, education programs and energy-related projects. This also includes ensuring the corporation has a current greenhouse gas emission inventory. Partners continue to seek funding in the community to support the program into the future.

### **Environmental Implications**

If students and action-project participants maintain their activities for a full school year, the annual estimated savings from the 2014-2015 program are:

- 18,600 kWh electricity, 350m<sup>3</sup> water, 500 L fuel, 2,210 kg waste, and 18,660 kg greenhouse gases.

### **Other Considerations/Implications**

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

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

An update on the 2015-2016 program will be provided to City Council in the fall of 2016.

### **Public Notice**

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

**Update on the Education for Sustainable Development Partnership Program:  
Student Action for a Sustainable Future**

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**Attachments**

1. 2015 Brochure
2. Program Outcomes
3. Partner Contributions

**Report Approval**

Written by: Shannon Dyck, Environmental Coordinator

Reviewed by: Amber Jones, Education & Environmental Performance Manager  
Brenda Wallace, Director of Environmental & Corporate Initiatives

Approved by: Catherine Gryba, General Manager Corporate Performance  
Department

Administrative Report – Update on the Education for Sustainable Development Program.docx

2015 Brochure

**HOW STUDENT ACTION FOR A SUSTAINABLE FUTURE**  
MAY 12TH 2015 10:00 A.M. - 11:30 A.M.  
UNDERGROUND PARKING  
COMMUNITY GARDENS

**GRADE 5-6  
WESTMOUNT COMMUNITY SCHOOL  
TAMRA KNAUS**  
The Grade 5/6 students at Westmount Community School have been working on an investigation into climate change and carbon footprints. Through their research, students discovered that Saskatchewan emits a large amount of greenhouse gases through the burning of coal for electricity. The students made a rough estimation about how much money is being spent on electricity at Westmount school. Students decided through an analysis of the building that many classrooms have enough natural light for learning and that many classrooms could function with lights off or half off. They worked to educate other classes about their findings through art, visual reminders, and presentations. Students not working on conservation did research into alternative sources of renewable energy and applied their knowledge to building solar powered devices.

**GRADE 8  
BUENA VISTA SCHOOL  
JANA MILLER AND TYLER RITTINGER**  
Ecoquest's inquiry project is working to collectively reduce our classroom's footprint and, in a sense, move towards a 'LEED' classroom.  
We have five groups working at taking our classroom 'off the grid' for a period in April. Although we cannot rebuild the infrastructure of a century old school, we have been creatively adapting our space through:  
1. A pedal-powered bike generator to power teacher laptops and digital projector  
2. A solar panel to assist in powering the laptops/projector as well as microwave and fridge (Classroom has south facing accessible windows and ledge)  
3. Building a container and implementing Vermicomposting to reduce lunch garbage  
4. Energy auditing with the use of wattage metres and selecting alternative low-wattage light sources (Installation of 10 T-8 LED bulbs)  
5. Air quality/CO2 testing and plant filtration through planting a variety of suitable indoor plants  
The students are excited to show off their demonstration classroom and along the way have made some very interesting discoveries about sustainable building and design.

**GRADE 8  
DR. JOHN G. EGNATOFF SCHOOL  
CORY FARTHING**  
Grade 8 students at Dr. John G. Egnatoff School have been examining and working at developing ways to reduce wasted resources, reduce the carbon footprint of the school and promote sustainable actions within the school community. Their action plans are focused on reducing improper waste and promoting better recycling practices, reducing inefficient energy consumption and energy waste through use of school lighting, working to create and promote an Idle Free zone to reduce excessive carbon emissions, and also to support the use of active transportation as means to promote sustainable and healthful transportation options for students in our school community.

**GRADE 6-8  
KING GEORGE SCHOOL  
DUSTIN MILLER AND TARA SIMPSO**  
Our students at King George School started their journey focusing on waste within the lunchroom. We decided to measure how much food was being thrown out and what that "looks" like. We started with a goal of changing our habits of how we dispose of our food. We then divided the lunchroom excess into compost and waste. Our project started as a goal of building awareness, progressed to how much waste there was at lunch and now the students are caring for the entire lunchroom. They not only monitored the waste reduction but also took charge of the cleanup of the lunchroom. This included waste, compost, recycling and clean up of dishes, tables and floors. It has been a wonderful step in empowering our students to create healthy environments!

**GRADE 8  
VINCENT MASSEY COMMUNITY SCHOOL  
GILLIAN STRANGE**  
Our class examined the importance and meaning of sustainability, which led to the students choosing three action projects. The students decided that energy use reduction would be their target area. They addressed energy reduction on three fronts. Group one worked on reducing light usage in the school. Group two developed an action plan for reducing drafts in the school. And group three educated classrooms in reducing gaming time at home, with the desire to increase physical activity in its place. They are proud to present what they have learned and the actions they have taken.

**GREATER SASKATCHEWAN CATHOLIC SCHOOLS**  
**Saskatoon Public Schools** Inspiring Learning  
**Saskatchewan Environmental Society**  
**UNIVERSITY OF SASKATCHEWAN**  
**City of Saskatoon**



**GRADE 7**  
**GEORGES VANIER CATHOLIC**  
**FINE ARTS SCHOOL**  
**LISA OBRIGEWITSCH**

Our Grade 7 class chose to focus on the concepts of water and sustainability. Our goal was to increase our knowledge of the importance of water within our lives. We began by inviting a variety of guest speakers to come to our class to share their knowledge of sustainability and water. We continued our learning by watching a variety of videos and reading a variety of articles with the focus of water. Through inquiry, the students in our class developed nine essential questions. One group chose to audit water usage of an individual class within our school. Other groups chose the topics of water footprints, access to clean water, First Nation and Metis perspective, watersheds, extreme water weather, water content in products, Canadian laws about water, and who controls the world's water. Students worked collaboratively to develop a deeper understanding of their chosen topics. This deeper knowledge will be showcased through poster boards. Within our Fine Arts program, students continued the sustainability and water themes by creating poetry that was presented in drama class and creating jellyfish out of used water bottles and plastic bags in their visual arts class.

**GRADE 7/8**  
**CARDINAL LEGER SCHOOL**  
**PETER GREYERS**

The Grade 7/8 class studied ways to reduce their own water footprint as well as their schools. We examined ways to measure water during our everyday use (showing, dish washing, toilets and brushing teeth). We measured water consumption at school and at home by looking at water meters and directly measuring water output. We then used water saving methods such as reducing shower times, fixing leaking toilets and turning off taps when brushing teeth. These methods helped us to reduce our own water footprint as well at home and at school.



**GRADE 7/8**  
**ST. MARIA GORETTI SCHOOL**  
**STEVE COLE**

The Grade 7/8 class from St. Maria Goretti School has been focusing on local food production, food waste, and food distribution. Students have completed many engaging activities to better understand how to reduce wasted food in our school and where the food they eat comes from. We are looking forward to displaying our new knowledge and celebrating the changes we have made in our school!

**GRADE 8**  
**SISTER O'BRIEN SCHOOL**  
**TED VIEW**

The students of Sister O'Brien School developed projects on different themes, but as a class we engaged in many collective experiences. Projects ranged from the sustainability of bison ranching; sourcing local foods; audits of sustainable methods of transportation and energy sources; and water usage in the home. As a class we performed an audit of garbage produced by our school. We've toured SaskMade store to understand foods are locally sourced and we've had a bison rancher visit our classroom. Also, all student projects included a First Nation and Metis focus. As a result as a class we visited with Elder Albert Scott, who described Saulteaux perspectives on sustainability of water. The students had a chance to work with Elder Mary Lee to learn about ways that the Plains Cree used the environment sustainably; work with Mary led to a weekend field trip, preparing a deer hide to make traditional hand drums.

**GRADE 7**  
**ST. PETER SCHOOL**  
**PAUL SANCHE**

Our project's aim was to reduce the waste (garbage) generated at St. Peter School. In Phase One, we addressed the litter problem outside our school. We identified the problem at a school assembly with a slideshow of the accumulated litter we had found, then asked everyone to participate in the solution. We placed garbage cans outside during recesses, and asked classes to use garbage grabbers (pick-up tools) to reduce school litter. We displayed a new St. Peter Pride logo in the school to remind all to care for others and our environment. Phase Two addressed the waste generated within the school. We conducted an audit to weigh the school waste collected in one day; we opened the bags to identify, categorize, and sort the garbage. Student groups researched topics and planned actions for waste reduction. We conducted a post-audit to determine the impact of our actions on the waste generated at St. Peter.

**GRADE 5-8**  
**ECOLE FOREST GROVE**  
**DON MCBEAN AND JENNA GERVAIS**

At École Forest Grove School we have brought this project out of a single classroom to an extra-curricular group of students in Grades 5-8 as well as the whole school. In early spring, we began a waste management campaign that included a waste audit and subsequent promotion of recycling, composting, light energy awareness and water conservation. This has been supported in tandem with a Kindergarten through Grade 8 musical production called "The Garbage Carol". This group will continue their efforts this late spring, summer and into next fall with the investigation of gardening, both for ideas of local food production and native prairie flora. Plans include visits to the grasslands and the North East Swale and "green thumbing" inside and outside the school.

**GRADE 7**  
**BRUNSKILL SCHOOL**  
**HEATHER REID**  
**JAMES L. ALEXANDER SCHOOL**  
**JAELYNNE CHERWONIAK**

The Grade 7 students at Brunskill School and James L. Alexander School both began the inquiry process by looking at sustainability in terms of heat and temperature, and what makes up energy efficient buildings. We decided to look at how well our schools are constructed and compare how Brunskill School, which is a newer brick school, and James L. Alexander School, which is a school made up entirely of portables, manage and maintain their heat. This audit was a lead in for the students to begin their own projects in terms of what they can do in order to reduce their carbon footprint on the environment. Some of the projects include action plans for what can be done to improve heat loss at the school and at home, reducing waste at school by promoting litterless lunches, drawing awareness of and getting students to commit to earth hour and participating in earth day activities. As well, students determined how to avoid phantom energy loss at home and how to reduce energy consumption at school through a lower lights campaign, committed to eliminating water waste at home, reduced meat intake by committing to eating more meatless meals, and took part in walking or biking to school to reduce the use of gas consumption. Our goal was to have the students work together between the two schools to see how every small step can make a big difference in being active citizens for sustaining our earth.

## Program Outcomes

### Teacher and Student Feedback:

Teachers and students were asked to fill out a survey at the end of the 2014-2015 SASF program. Included below is some of the feedback received:

#### Teachers:

- The SASF project was an opportunity for students and teachers alike to dream big and get excited about the possible ways to redesign our classroom learning space to make it more sustainable.
- Students were authentically engaged in their learning because they were given the opportunity to actually make a difference at school and in their community.
- When students take action into their hands, they learn not only how to improve the world around them; they learn to value themselves.
- The Student Action for a Sustainable Future project is an engaging inquiry based program that allows students to take leadership roles to promote sustainability for an authentic audience.
- Every teacher should participate in this engaging and important student led program!
- This is an excellent opportunity for students to learn about the world around them and to become environmental change agents within their home, school and community.
- My participation in this program has given my teaching new direction that has resulted in engaged students who see that classroom learning should benefit their families and communities. I am a better teacher today because of it.

#### Students:

- I will save water, not waste food, and help keep the environment clean.
- I plan to reduce our carbon footprint by letting other people know about light. If you change to less wattages you save power and money.
- The projects were fun!
- I learned a lot of interesting things and enjoyed learning this way.
- I feel like I made a positive impact on the earth and on others.
- I felt encouraged to be a leader in sustainability.
- I enjoyed the year-end student showcase.

### Other Outcomes:

Over the past two years of the program, 28 teachers and over 600 students from various schools in Saskatoon have directly participated in the program. Teachers who participated in 2015 stated that they engaged an additional 50-250 people beyond their classrooms, with one stating they engaged an additional 450.

Participants have communicated what they've learned and accomplished to other students, teachers, family members, and community members by using a number of different methods: school assemblies, talking with businesses, drama and dance

performances, creating visual learning guides for younger students, presentations to other classrooms, story writing, letter writing (to businesses and government), and column writing for school newsletters.

Both the 2014 and 2015 student showcases saw over 100 stakeholders attend, including government and school division representatives, community organizers, businesses, and family members. The media has also reported on the showcases, engaging the Saskatoon community and beyond (articles have been circulated in newspapers as broadly as Vancouver and Ottawa).

By focusing on behaviour change, solution-oriented projects, and providing tools and support for teachers and students, the SASF program has helped participants make the “leap” from knowing to doing.

Teachers and students work with the Saskatchewan Environmental Society (SES) to measure their environmental impacts by conducting a set of audits before and after their action projects take place. The SES then uses these results to help classrooms calculate environmental implications, such as water consumption, energy use, waste reduction, fuel savings, and greenhouse gas emissions. Most data is student measured and/or self-reported, and the length of each audit and action project varies; therefore, some data is incomplete and a number of assumptions are required to calculate the savings.<sup>1</sup>

If the students and the other action-project participants maintain their activities for a full school year, the annual estimated savings are:

	<b>2013-2014 school year</b>		<b>2014-2015 school year</b>	
Electricity	17,000 kWh	\$1,160	18,600 kWh	\$1,270
Gas	88 GJ	\$230	No Projects	No Projects
Water	700 m <sup>3</sup>	\$50	350 m <sup>3</sup>	\$25
Fuel (gasoline)	230 L	\$230	500 L	\$500
Waste	8,000 kg	Not Available	2,210 kg	Not Available
Greenhouse Gas (CO <sub>2</sub> )	28,850 kg	Not Available	18,660 kg	Not Available

<sup>1</sup> Assumptions include:

- Taxes and municipal charges are not included.
- Electricity savings are calculated at the commercial run-off rate of 6.85¢/kWh. Most of the electricity action projects led to savings at school.
- Gas savings are calculated at the residential rate of 10¢/m<sup>3</sup> (\$2.653/GJ). Most of the gas action projects led to savings at home.
- Water savings are calculated at the “next 600 ft<sup>3</sup>” residential rate of \$7.181/100 ft<sup>3</sup>. Most of the water action projects led to savings at home.
- Fuel (gasoline) savings are calculated at \$1/litre.

## Partner Contributions

Partner contributions include:

- Saskatoon Light & Power (SL&P) provides support for classroom projects, including \$2,500 annually in in-kind staff support and a \$10,000 contribution in the first year of the program for in-home energy use displays and school energy monitoring equipment;
- The Saskatoon Environmental Advisory Committee (SEAC) has provided \$1,800 for student projects each year, which has been collectively matched by the Saskatoon Public School Division and Greater Saskatoon Catholic Schools;
- The Sustainability Education Research Institute (SERI) provides educational and sustainability expertise, valued at approximately \$2,000/year;
- Saskatoon Transit provides two roundtrips on regular bus service per classroom, a value of almost \$2,900;
- Loraas Recycling and SARCAN offer free transportation to/from their facilities, including tours of their operations, valued at approximately \$3,600;
- Multiple community organizations,<sup>1</sup> cultural advisors, and educational advisors have provided their time and in-kind educational resources, tours, and services for students, estimated at a value of over \$11,000; and
- The school divisions have provided committee, administrative, and communications support, at a value of approximately \$5,000.

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<sup>1</sup> CHEP, Meewasin, Native Plant Society, Saskatoon Zoo Society, Wild about Saskatoon, SaskOutdoors, In Motion, Partners for the SK River Basin, Safe Drinking Water Foundation, and Ag in the Classroom.

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

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services refer this report to the Standing Policy Committee on Finance recommending:

1. That the information be received in conjunction with the pending audit on Roadway Maintenance and Rehabilitation; and
2. That the report of the General Manager, Corporate Performance Department dated November 9, 2015 be forwarded to City Council for information.

### Topic and Purpose

The purpose of this report is to provide a summary of the Roadways Design, Construction and Maintenance Civic Service Review (CSR). Improvements in process and operations identified in this summary will improve service to citizens through increased effectiveness and will improve efficiency in the delivery of civic services.

### Report Highlights

1. There are two key components of the 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 Public Works Division has prepared a Winter Road Maintenance - Level of Service document which outlines recommended levels of service for Winter Road Maintenance that will be considered at the Standing Policy Committee on Transportation.
3. The efficiencies include; improved operational planning and coordination of roadways design/development and coordinated maintenance to reduce costs and avoid duplication of efforts, streamlining of IT for the Public Works Call Centre, updated standards and improved training and education for staff, resulting in increased efficiencies of over \$2.1 million.
4. Additional efficiency gains resulting from improvements seen through the Building Better Roads program total over \$1 million to date and are expected to result in substantially greater savings in the long-term.

### Strategic Goals

This report supports the Strategic Goals of A Culture of Continuous Improvement, Moving Around, and Asset and Financial Sustainability. Process improvements focus on identification of root cause issues and innovative and creative solutions that will provide optimal service improvements. Increasing efficiency and effectiveness in roadways design, construction, and maintenance ensures people and goods can move around the city quickly and easily.

### 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 roadways. Citizens expect to be able to move around the city safely and efficiently with limited disruption, on roads that are in good condition. Effective planning, communication, and budgeting in future roadways design and construction will have a positive impact on citizen satisfaction and ensure they are receiving good value for their tax dollars.

On February 10, 2014, City Council approved the recommendation that the design, construction, and maintenance operations of civic roadways undergo an Annual Civic Service Review in 2014. The review took place in 2014 and the teams began implementing the key findings in 2015.

There were a number of recommendations for improvement from short-term, relatively quick solutions to those that will take longer to implement and may require an investment in order to achieve long-term financial gains. This report outlines the key findings as they relate to improved efficiency and increased effectiveness in roadways planning and operations. Attachment 2 provides a summary of the key findings on efficiency and effectiveness.

### Review for Efficient and Effective Service

Employees at all levels from frontline staff to directors involved in the design of roads, and the construction and maintenance of roadways came together to review each of their operations and identify opportunities to improve overall efficiency and effectiveness within their service lines and better align our services to citizen expectations.

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 opportunities to change or redesign our processes so that we are as efficient as possible and effective in delivering what citizens want.

The following issues were addressed in the CSR:

- Safety
- Communication
- Operational Planning
- Budget
- Standards
- Training and Education
- Levels of Service

Attachment 3 is an overview of the CSR. The following provides some highlights of changes being implemented:

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- Optimization Teams established to ensure the impact of design on long-term maintenance is considered at the planning stage for new roadways infrastructure and reflected in the operating budget.
- Prequalification of Contractors resulting in a reduction in the amount of time Inspectors spend following up on contractor issues resulting in potential savings of approximately \$225,000.
- Coordinated operational planning resulting in reduced rework; expected increased efficiencies of \$1.5 million.
- Streamlining of IT systems for the Public Works Call Centre to 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. Combined with a reduction in the number of inquiries to the Transportation and Utilities Department in 2015. The value of staff time is estimated to be over \$200,000.
- Improved training and education for staff operating civic vehicles and equipment resulting in reduced damage to equipment caused by motor vehicle collisions, resulting in savings over \$170,000.

### Service Level Review

By defining and approving service levels for civic services, citizens will know what they can expect for this service. The Administration will be submitting a report on Winter Road Maintenance – Levels of Service to the Standing Policy Committee on Transportation. This report outlines recommended levels of service for Winter Road Maintenance.

The Winter Road Maintenance - Levels of Service document identifies the specific tasks and measures for the following winter activities:

- Snow grading
- Snow removal
- Snow storage site management
- Sidewalk and pathway grading
- Roadway Ice Management

Levels of service will be prepared for City Council's consideration on other services such as maintenance for the following: back lanes, potholes, and utility cuts.

### **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 Service 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 tool.

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 Roadways CSR, it was identified that a review of the operating budget estimates was necessary in order to ensure they accurately reflect the 'operating unit cost per lane kilometre' for roadways maintenance. Unit cost will be utilized in the definition of maintenance service levels to ensure operating budgets accurately reflect the total costs required to maintain the current inventory at the approved service level. Additionally, this will provide accurate information for future operating budget requests to maintain and preserve additional lane kilometres coming online as Saskatoon continues to grow.

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.

### **Other Considerations/Implications**

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

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

The City's Internal Auditor, Pricewaterhouse Coopers, recently completed a Value for Money Audit for Road Maintenance to evaluate the economy, efficiency, and effectiveness of the Roadways Maintenance program. This report will be considered at a future Standing Policy Committee on Finance. The Administration is recommending that the Roadways CSR be considered in conjunction with the Value for Money Audit.

Reports related to key findings implemented by Major Projects, Construction & Design, Public Works and Transportation (i.e. asset and maintenance service levels) will be brought forward to the Standing Policy Committee on Transportation for approval. Action plans and recommendations will be incorporated into the annual business planning and budgeting process for several civic divisions involved in the design, construction, and maintenance of civic roadways.

### **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. Summary of Key Findings on Efficiency and Effectiveness
3. Roadways Efficiencies and Effective Service Delivery

### **Report Approval**

Written by: Kim Matheson, Director, Strategic and Business Planning  
Reviewed by: Jeff Jorgenson, General Manager, Transportation and Utilities  
Department  
Approved by: Catherine Gryba, General Manager, Corporate Performance  
Department

## **Continuous Improvement Strategy Overview**

In 2014, the Administration began our Civic Service Reviews (CSR). We have made good progress, and have learned much. One of our learnings has been that there are several components to a complete CSR 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 CSR.

### 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 CSRs 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).

## Summary of Key Findings on Efficiency and Effectiveness

Key Finding	Estimated Savings
Prequalification of Contractors resulting in a reduction in the amount of time Inspectors spend following up on contractor issues.	<p>\$225,000</p> <p>Assuming 25% of contracts (potentially 25 contracts a year) require additional time of approximately 300 hours over the course of a difficult contract.</p>
Coordinated planning and scheduling of preservation and maintenance work resulting in reduced rework and reduced maintenance completed on roads that have surpassed their lifespan and require replacement as opposed to repair.	<p>\$1.5 million</p> <p>Related to changes in the detailed design and construction phases</p>
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.	<p>Staff time value of approximately \$165,000 per year.</p>
Reduction in the number of inquiries to the Transportation and Utilities Department results in a decrease in the amount of time spent following up, allowing the time to be reallocated to programming and service delivery.	<p>Staff time value of approximately \$50,000 per year.</p>
Improved Training and Education for staff operating civic vehicles and equipment resulting in reduced damage to equipment caused by motor vehicle accidents	<p>Over \$170,000 in costs related to deductibles and vehicle/equipment replacement</p>
A new de-icing product and modified application technique reduced the amount of sand required by 28% and improved winter driving conditions.	<p>\$250,000 in aggregate costs</p>
Standardized tender process and tender for all roadways contracts reducing the average contractor cost per snow event by 27%.	<p>Over \$715,000 in contract costs</p>

## Roadways Efficiencies and Effective Service Delivery

There are many civic divisions involved in planning, design, construction, and maintenance of roadways. The Roadways Civic Service Review (CSR) focused mainly on the processes for new and existing roadways. Processes related to water and sewer, bridges and sidewalks were not included; however, many of the opportunities to improve effectiveness and efficiency outlined in this report are also applicable to those processes.

### Background

The civic divisions described in the following sections are responsible for the planning, design, construction, maintenance, and preservation of over 4,000 lane kilometres of roadways of various classifications. The table below summarizes the classifications and total number of lane kilometres for each.

<b>Classification</b>	<b>Total Kilometres</b>
Expressway/Ramps	165
Arterial	245
Collector	240
Local	700
Boundary	15
<b>Total Equivalent Lane Kilometres</b>	<b>4,005</b>

### Roadways Planning, Design, Construction, and Maintenance Functions

#### Transportation & Utilities - Major Projects Division:

Major Projects is responsible for providing project delivery services for the Corporation for major projects such as the North Commuter Parkway/Traffic Bridge Project.

It is also responsible for stewarding the asset condition status, rehabilitation programs, and funding levels for our roadways, bridges, and water and sewer collection and distribution system.

#### Construction & Design Division:

Construction & Design delivers municipal infrastructure projects, provides regulatory oversight, maintains infrastructure records, and provides expertise, advice, and guidance on municipal infrastructure. These services allow the City of Saskatoon to provide and maintain a high quality of infrastructure in a safe and cost effective manner to its Citizens.

Construction & Design develops, maintains, and enforces the City's standard construction specifications and drawings for roadway, sidewalk, lane, and water and sewer infrastructure.

### Public Works Division - Roadways Section:

Public Works is responsible for the operation, maintenance, and preservation of roads, lanes, sidewalks, water mains, sanitary sewer mains, storm sewer mains, and waste handling and disposal services.

The Roadways section of the Public Works division provides services for the operation and maintenance of all roadway assets, including roads, bridges, sidewalks, lanes, and pathways. The Section manages annual programs for sidewalk maintenance, paved street maintenance, lanes and earth-street maintenance, drainage, snow and ice control, earth dump sites, and street sweeping. As an example, Public Works maintains approximately 4,005 lane km, at an approximate average annual cost of \$3,500/km. An approximate average cost is provided as roadways maintenance activities are highly variable and actual costs associated with road maintenance may be affected by weather, age and design of roads, heavy-truck traffic, and deferred maintenance as examples.

The Roadways section also assists Major Projects in defining long term funding needs for asset preservation and setting annual programs for major rehabilitation.

### Transportation Division:

Transportation provides planning, design, regulation, and operation of the City's transportation network. The goal of Transportation is to provide for the safe and efficient movement of people, goods, and services within and through the City, in a cost effective manner.

The Transportation Planning Group provides long-range planning and design for the City's transportation facilities to foster Saskatoon's economy and growth while minimizing environmental impact. The Group commissions external consultants to design transportation infrastructure such as bridges and interchanges.

### **Introduction**

The Executive Committee approved the recommendation that the Roadways design, construction and maintenance processes undergo a 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.

During the CSR, the team reviewed the current state of roadways design, construction, and maintenance. They examined what success would look like from the citizen's perspective and finally examined what the processes for design, construction, and maintenance of civic roadways should be.

This report focusses on opportunities for operational efficiencies identified in the CSR, many of which have been implemented or are underway in 2015. The Administration will be submitting a report on Winter Road Maintenance – Levels of Service to the Standing Policy Committee on Transportation. Future reports will address other

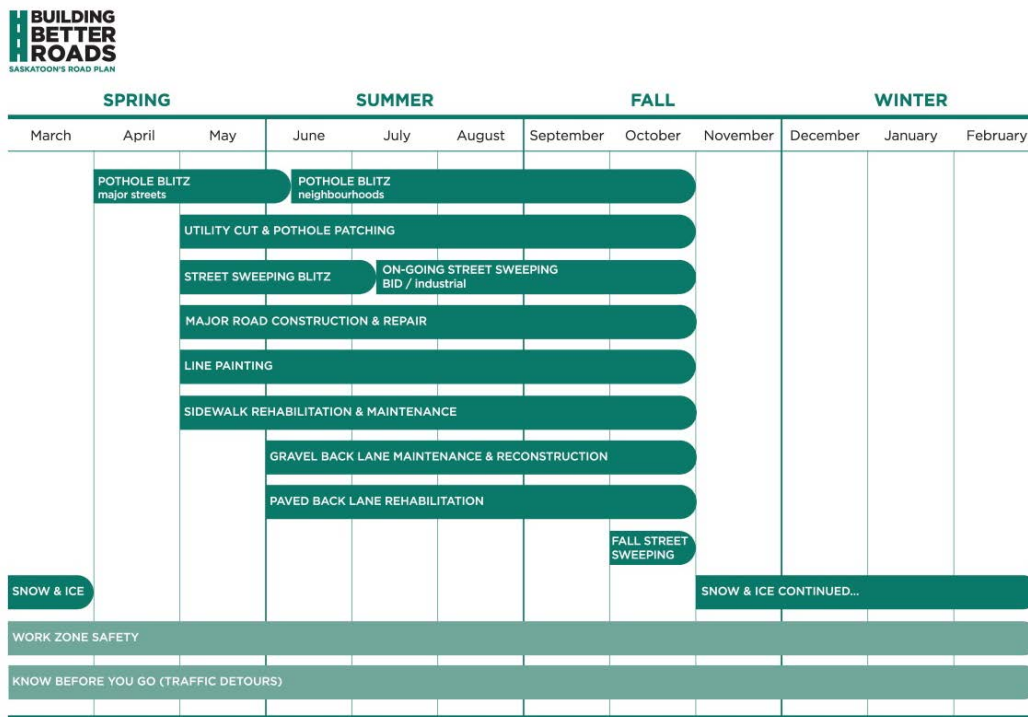


roadways asset, preservation, and maintenance service levels and will be submitted to Committee for approval.

## Report

Safe and durable roadways are essential for the economic health and success of a community. These assets are highly visible, consume a lot of space in every neighbourhood, and are costly to construct and maintain.

The Building Better Roads calendar illustrates the annual schedule for roadways maintenance and preservation activities. The teams involved with roadways have been working on more active planning by evaluating the previous season’s productivity and costs and then begin planning for the next season well before the season begins. The planning process continues to make strides in improvement each season. Active planning, combined with the increased investment in roads, is yielding significant productivity gains and service enhancements as highlighted in the 2015 Results at [www.saskatoon.ca/betterroads](http://www.saskatoon.ca/betterroads).



This is generally when programs operate throughout the year; however, start and end times can vary depending on weather conditions and unforeseen circumstances.

For more information visit [saskatoon.ca](http://saskatoon.ca)



During the CSR, the following seven elements were identified as integral to all roadways projects:

1. **Safety** – public and employee safety are a core consideration that impacts roadway design, construction, and maintenance.
2. **Communication** – ensuring internal, public, and stakeholder groups have timely and appropriate information is a central aspect of success.

3. **Operational Planning** – involving all stakeholders early on in the planning and design process assists in accurately planning and budgeting for the entire lifecycle of a road prior to starting construction.
4. **Budget** – improving accuracy in budgeting by defining unit costs and identifying direct operational impacts at the start of a project will ensure funding is available in the appropriate budget year.
5. **Standards** – ensure standards are up to date and consistent with other divisions or sections. All employees working on roadways design, construction, and maintenance are aware of, and understand all relevant corporate standards.
6. **Training and Education** - providing the necessary training creates an overall knowledgeable staff with employees who can take over for one another as needed, work on teams or work independently as needed. Increased focus on training will also help reduce motor vehicle collisions and associated costs.
7. **Levels of Service** – defined and approved levels of service are reviewed and communicated to citizens, stakeholders, and City Council.

### **Next Steps**

Staff involved in all aspects of roadways design, construction, and maintenance (Planning, Transportation, Construction & Design, Major Projects, and Public Works) continue to identify actions required to implement the suggested improvements. Consideration is given to benefit citizens, cost of implementation, and potential efficiencies to be gained following implementation. The teams have been making strides in improving the overall efficiency and effectiveness of roadways design, construction, and maintenance and have also made significant improvements in citizen satisfaction.

A CSR of Fleet Services was conducted on recommendation of the Roadways CSR. Improvements in the efficiency and effectiveness of Fleet Services CSR is also expected to have a resulting improvement in roadway maintenance efficiencies as well as a cost savings to the organization as equipment breakdowns and downtime are expected to be significantly reduced. The report on the Fleet Services CSR will be submitted to the Standing Policy Committee on Environment, Utilities and Corporate Services in December 2015.

The Roadways CSR Summary has highlighted several key findings that will improve efficiency within the design, construction, and maintenance operations of roadways. Many of the proposed findings will also have a positive impact on the citizens of Saskatoon. The action plans will assist in the business planning and budgeting process each year.

## **Opportunities to Improve Efficiency/Effectiveness and Address Challenges:**

### **1. Safety and Performance**

#### Current Process and Procedure

- An increased number of construction projects - has resulted in an increase in the number of work zone violations (i.e. people disobeying signage and barricades, driving dangerously through active work zones).
- Lack of a formalized process for pre-qualification of contractors - The contracts outline quality, performance, and safety expectations for contractors; however, the inspectors in Construction & Design as well as staff in Roadways, spend a significant amount of time dealing with contractor issues where these expectations are not being met.

#### Changes for More Efficient and Effective Service

- Collaboration with those involved in all aspects of roadways, including Transportation, Communications and Police Services to ensure that public, employee, and contractor safety are front of mind when working on roadways projects. Increased messaging through the media including personal messages from staff working in the field as well as improved training for staff, more rigorous safety inspection requirements throughout each stage of a job, and improved signage and site-marker tools are helping to improve safety for both the staff and public.
- Prequalification of contractors in the Request for Qualifications will help increase the chances of project success on many levels and is also an effective risk management tool.
- The City of Saskatoon is considering a process for pre-qualifying contractors to ensure contractors with the capabilities, capacity, and expertise to perform required services. The risk level of the contracted work will determine the specifications required to work for the City of Saskatoon.

## **2. Communication**

### Current Process and Procedure

- Saskatoon's recent high rate of growth and increased expectations from citizens have added significant pressure to the work within many civic divisions, especially those involved in roadways and resulted in a reduction in planning time and ineffective communication between divisions.
- Centralized communication hub is needed for customer complaints and inquiries, work order completion, and project status reports. The length of time Call Centre staff currently spends on a call varies with the nature and complexity of the call. It is not uncommon for the staff to have to reach out to multiple divisions in order to identify what work may be occurring in an area or to get a status update on a project affecting a roadway.
- The current process for addressing emergency or same-day issues is smooth; the work is dispatched as soon as it is received by Public Works Customer Service and the crews report directly back upon completion, allowing the Customer Service Team to close the call. In the case of non-emergency or routine maintenance, there have been times where multiple crews attend to an area that has been flagged for maintenance and delays in reporting back on completion of work have been experienced, impacting the timeliness of communication in responding to citizens.
- Lack of communication around documented defined levels of service has the potential to result in a lack of confidence in Roadways and promotes a culture of reacting to complaints in an effort to increase citizen satisfaction rather than working within an active plan that the public understands.

### Changes for More Efficient and Effective Service

- With the acquisition of Civic Square East, the Major Projects, Neighbourhood Planning and Construction & Design teams were moved into the same building, creating an opportunity for increased communication, formally and informally.
- The CSR team recommended an Optimization Team for every major project involving key stakeholders that would be involved throughout the project; increasing cohesion between all divisions, with a common goal of equal accountability between all divisions in roadways for the entirety of a project's lifespan.
- Optimization Teams ensure the impact of design on long-term maintenance is considered at the planning stage for new roadways infrastructure and reflected in the operating budget. They also act as a clearinghouse for any issues that arise throughout the project and ensure that all pieces of an application for approval are in place before submission, reducing the time delay and rework associated with resubmissions.
- Changes made during later stages of detailed design occur on an estimated 30% of projects resulting in hundreds of hours of additional design technologist time, and engineering time. As this information is not currently tracked, accurate estimates of

loss are difficult to provide but may be as high as 3,000 hours of design time at an estimated cost of approximately \$100,000.

- Teams are now meeting monthly to discuss planning, scheduling, and any issues arising pertaining to the maintenance and preservation of roadways infrastructure. These meetings will increase efficiency and improve citizen satisfaction through the coordination of work scheduling. Joint communication strategies such as “Pain in the Asphalt”, “Building Better Roads”, “Report-a-Pothole” and other interactive web-mapping apps, provide information for citizens on all of the construction activity taking place across the city and provide an opportunity for citizens to plan an alternate route to minimize travel delays.
- Scheduling has also been adjusted for the Roadways crews; there are two crews as opposed to four. The change has improved cross-communication between crews; improving accuracy in reporting of work completion and reducing the incidents of multiple crews attending the same issue.

### Service Saskatoon

- Work is underway with Service Saskatoon in 2015 to streamline IT systems for the Public Works Call Centre will reduce the amount of time staff spend searching for information, improve the response time to citizens and allow staff to address a greater number of inquiries or complaints within the same timeframe.
- On average staff spend 2.5 minutes per call searching for information; longer if the information is not on their system and they have to reach out to another division. Each staff member takes approximately 85 calls per day which translates into a minimum of 3.5 hours searching for information. The staff time has a value of approximately \$165,000.
- Streamlining the IT systems will improve communication between the Public Works Call Centre and field crews, resulting in improved response time and accuracy of issue and location. Moving from manual to online management of work orders in the field will improve the accuracy in reporting delays and/or work completion.
- Process optimization, improved programming and service delivery, and improved communication and engagement with citizens have resulted in a reduction in the number of inquiries for the Transportation and Utilities Department. Using one channel as an example, there has been a 30% reduction in the number of email inquiries in 2015 as compared to the same time in 2014. The reduction in inquiries results in a reduction in staff time spent on follow up and allows staff to focus on programming and service delivery. The staff time has a value of approximately \$50,000.
- The increased collaboration and communication along with the increased investment in roadways have increased the effectiveness of project planning and implementation and improved productivity; citizens are noticing the difference.

### **3. Standards**

#### Current Process and Procedure

- In the last five to ten years, and in an effort to meet the increasing demands of the City's municipal land development division and private sector land developers, there has been less stringent conformity to process and standards from design and construction. This results in inconsistent application of design, construction, and maintenance standards in roadways.
- As an example, the City's current pavement design standards needed to be improved in order to better accommodate existing soil conditions, water table issues and serviceability in the urban environment as Saskatoon expands, and to ensure the most cost-effective product is delivered to its citizens

#### Changes for More Efficient and Effective Service

- Roadways design specifications have been improved and the City is now designing roads to a higher standard; they are more of an industry standard best practices design methodology that is used throughout North America.
- This new roadway standard will provide higher quality roadways that require less expensive treatments over their lifecycle to maintain their good condition. Investing more up front will result in savings in the future.
- Reviewing and updating corporate design and construction standards regularly will help ensure consistency between crews, private contractors doing work for the City, and inter- departmental work. New staff, especially engineers and planners need to become familiar with the standards and where possible, mentorship opportunities should be created through the pairing of a senior engineer or planner with the new staff members.
- The teams identified the need to create a process and standards manual for project management in all departments and work has begun on this manual. This will help improve consistency across all projects and reduce frustration for new staff that may be unclear or unfamiliar with the City standards.

## 4. Operational Planning

### Current Process and Procedure

- The current design and construction process has not formally considered maintenance impacts until after the roadways have been constructed.
- The current lifecycle of roadways involves at least three divisions with overlap at several phases. This overlap has potential to create inefficiencies through duplication of work and lack of coordination of planning which could result in a road being preserved or maintained that should really be replaced.

### Changes for More Efficient and Effective Service

- At the start of a project, the Optimization Team identifies checkpoints for stakeholders throughout the process through the creation of a Project Charter; allowing more time for planning on the front end, reducing the amount of rework required and associated costs.
- Allowing for more lead-time for planning and design on projects will help teams anticipate issues before they arise with more time for geotechnical engineering and consultation with stakeholders early on; ideally changes occur during the front-end design process, reducing the potential for construction delays.
- Using a standard engineering design/construction cost factor, it is estimated that if a problem can be identified and solved for \$1 in the planning phase, then it would cost \$10 to solve in design, \$100 in construction phase, and \$1,000 if solved after construction is complete.
- The following example, illustrates the impact of this design/construction cost factor on operational planning for roadways:
  - Changes that are required to be made during construction stages occur on an estimated 25% of projects and can result in hundreds of hours of additional inspection, survey, design technologist and engineering time. As this information is not currently tracked, accurate estimates of loss are difficult to provide but may be as high as 3,750 hours of City of Saskatoon staff time estimated cost of approximately \$115,000 plus the incremental contractual costs estimated to cost on average approximately \$1.3 million. Total annual estimate for design changes being required during late detailed design and construction phases is \$1.5 million.
- Changes on an engineering and construction project can be expected, but will likely impact the cost and could result in schedule delays that should be considered. The earlier changes are made in a project, the less costly the change.
- The Construction and Design Division is developing a rigorous tracking methodology from project inception to completion, similar to a consultant model which will provide a more accurate representation of the impact of changes and true project costs.



## **5. Budget Process**

### Current Process and Procedure

- The budgeting process is a complex process that runs concurrently through all phases of roadways design, construction, and maintenance. Capital projects identify the operating impact when they are brought forward for approval; however, it is unclear as to where that operating impact is reflected in the operating budget and if it is adequate to fund the expected level of service.
- Budgets do not account for the entire arterial infrastructure required downstream, such as overpasses at soon-to-be-busy intersections that will have to support increased traffic from new neighbourhoods coming online.
- Lifecycle analysis has not been an upfront consideration in the budgeting process. Maintenance of new roadways or assets is not always factored into the budget for the appropriate year.
- Previous funding levels only allowed for reactive maintenance and rehabilitation, if budgets continue to be maintained at an appropriate level and increases due to network growth and inflation are received the proactive measures required to extend the lifecycle of our roadways can be realized as we continue to move forward.
- The roadways group will continue to report and update on condition and financial requirements of the program to ensure the most sustainable lifecycle methods can be utilized on our roadway infrastructure. While working on the backlog phase of the roadway plan a mix of proactive and reactive work will continue to need to be utilized.

### Changes for More Efficient and Effective Service

- As outlined in the Operational Planning section above, key civic stakeholders need to be involved in a project early on so they are aware of timing and impact to their work-unit or division and can plan accordingly. Formalizing turnover of finished projects between Construction & Design and Public Works Roadways Maintenance will ensure completed roads are added into inventory and that the operating costs of maintenance are allocated to the appropriate cost centre.
- Funding plans for capital projects (i.e. interchanges) need to be in place in advance of pre-work (including lifecycle cost analysis) and to ensure funding is allocated for appropriate years to ensure the money is available in the year it is needed.
- Determining cost per unit for roadways (design, construction, maintenance, and preservation) will improve accuracy in job costing and future funding requests.
- Overall, the cost per unit on design and construction costs are well defined, as the scope of work recently increased some cost efficiencies have been identified due to economies of scale and an increased number of service providers that deliver roadway work. Although a portion of these costs can be attributed to lower oil pricing, economies of scale is also playing an important role in providing further efficiencies towards the roadway construction programs.

## **6. Training and Education**

### Current Process and Procedure

- Traditionally, the City has had the advantage of longer-term employees who typically had several years of experience in design, construction, or operating heavy equipment. Training and education were not as comprehensive as many new hires had previously worked in a similar industry and were generally more experienced or if they were less experienced, they were able to learn on the job under the guidance of long-term employees.
- The economic boom in Saskatoon, competition from the private sector, and an increase in retirements as a result of an aging workforce have contributed to increased turnover among City employees. Therefore, less experienced project management, Construction & Design, and maintenance employees find themselves working under significant pressure to meet the needs of a rapidly growing city with less mentorship than their predecessors, resulting in mistakes and re-dos. Occupational Health and Safety regulations have also evolved during this time, further complicating the situation.
- Equipment operators are younger and less experienced, contributing directly to damaging roadways, breaking equipment, downtime, motor vehicle incidents, and expensive repairs.
- Public and employee safety improves as training and ability of employees increases. Therefore, it is important to invest more into preparing new employees, and improving the knowledge, skills and competency of employees as the City and civic services continue to expand.
- It was identified that training for the operators of heavy maintenance equipment needs to improve. The lack of adequate training for new, inexperienced equipment operators leads to “learning on the job”, where equipment can be damaged as a result of mistakes.

### Changes for More Efficient and Effective Service

- New hire orientation should include cross training between divisions and jobs, a combination of field and office experience for future office workers so they understand how operations functions in the field and a mentorship program. Where possible, balance the number of new and experienced employees working on a project to help maintain consistency in process.
- In 2015, the team built a SharePoint site containing this information which has proved beneficial to the employees working in Construction & Design as well as others they work with.
- In 2014, Public Works started to re-vamp their Powered Mobile Equipment training to improve our operator competency and ultimately reduce the number of incidents.
  - Go-Pro cameras were utilized to film the operation of various pieces of equipment; speed plow, grader, sweeper, excavator, ditch witch. These

have been incorporated into the classroom sessions to help the new trainees have a better understanding of the operation of the equipment and the conditions they will be operating in.

- Further, education was given to the field trainers on how to document their observations of the trainees to assist in identifying areas to focus on for each individual. Frequency of evaluations of our operators by the training department has also been increased. This improved training has resulted in a significant reduction in the number of motor vehicle incidents and reduced associated costs.
- Environmental factors must be considered in contributing to the reduction in the number of incidents, but improved training has played a significant part in a 36% reduction in motor vehicle collisions in 2015 as compared to the same time in 2014.
- Based on 2014 statistics, eliminating total loss incidents (where a vehicle is written off) and reducing damage resulting in payment of a deductible to SGI would have saved approximately \$171,000 in costs related to deductibles and vehicle/equipment replacement in 2014.

## **7. Levels of Service**

### Current Process and Procedure

- While citizen satisfaction implies that expectations have been met, the lack of a documented, defined level of service means that residents do not have a benchmark against which to measure their satisfaction with roadways project management, Construction & Design, and maintenance services.
- The Public Works Roadways Maintenance section is unable to communicate a defined level of service; not knowing the level of service to expect leads to customer complaints based on individual perceptions or expectations.
- Without service levels, individuals come to their own conclusions about what is appropriate roadway service and react according to those perceptions. In an effort to enhance citizen satisfaction without a defined level of service, staff are more reactionary to individual complaints and need to improve on an overall planned approach to achieve approved service levels.

### Changes for More Efficient and Effective Service

- The Public Works Roadways section is actively working on defining service levels for roadways activities as well as defining unit costs which will allow them to accurately track and report out on productivity as well as efficiency gains following each season. As these are developed, reports will be submitted to City Council for approval.
- Once the operational costs and tracking systems are defined and finalized, more information will be in place to realize additional life cycle cost savings by making better informed decisions on roadways that can no longer be maintained in a cost effective manner.
- By approving the Service Level, citizens will know what they can expect for this service. Defined levels of service assist in providing a business case to support funding requirements and future investments.
- The Administration will be submitting a report on Levels of Service for Winter Activities in Roadways maintenance to the Standing Policy Committee on Transportation. The Winter Road Maintenance - Level of Service document identifies the specific tasks and measures for the following winter activities:
  - Snow grading
  - Snow removal
  - Snow storage site management
  - Sidewalk and pathway grading
  - Roadway Ice Management

## **Building Better Roads**

The Building Better Roads program started in 2014 after the 2013 Civic Services Survey identified road conditions as the single most important issue affecting our city. In addition to those identified in the Roadways CSR, several other improvements to roadways have been implemented as a result of the increased focus and investment.

### Utility Cuts and Road Restoration Improvements

- Public Works and Asset Preservation are working together to develop a consistent process across all applicable divisions and to increase the quality of the utility cut road restoration repair. Increased collaboration, elimination of redundancies in the process and duplication of efforts combined with increasing the longevity of the road infrastructure through proactive planning and restoration has the potential to achieve savings in the millions of dollars and improve the ability for citizens to move around the city with ease.

### De-icing Product and Application

- A new de-icing product, Caliber M1000, was tested using two application techniques and determined to be more efficient and cost-effective than previous de-icing programs. When mixed with sand/salt at temperatures below -15°C, it lowered the working temperature of the salt, helping the sand stick to the road for traction. Using Caliber M1000 as a pre-wetting application technique with sand/salt mixture improved the effectiveness even more. Roadway conditions were significantly improved where these processes were applied.
- A new de-icing product improves the effectiveness of salt at colder temperatures, reducing the amount of sand applied to roads and resulted in an overall reduced cost of \$250,000 in de-icing aggregate compared to the previous winter.

### Standardized Roadways Contracts

- The Public Works division in conjunction with the Materials Management division standardized the tender process and tender for all roadways contracts. The contracts now all have general conditions and standard layouts in addition to standardized maps and guidelines.
- Additionally, the two former contract maintenance areas were divided into four and tendered separately. This change created a more competitive bidding process. Tighter time requirements, the removal of a retainer fee and an implemented penalty clause, ensured quality and timely response when contractors were activated.
- The new structure for Area Snow Maintenance Contracts, including the removal of a retainer and smaller maintenance areas resulted in reduced costs of over \$715,000 when compared to 2014 reducing the average contractor cost per snow event by 27%.

### Organizational Structure and Scheduling Changes within the Public Works Division

- In order to alleviate some of the administrative pressures experienced by the Roadways section which resulted in reduced time spent in the field, the Public Works division brought two temporary engineering technicians on board as a resource for the Roadways Superintendents. The focus of the engineering technicians is quality control and program delivery. This has allowed the Roadways Superintendents to spend more time in the field managing the operational staff and ensuring work is being completed as scheduled. The addition of the engineering technicians has also allowed the engineers to spend more time on program review and development as well as definition of service levels for the Roadways programs.
- The organizational changes to date and considerations for future changes, allow the Roadways section to operate on a contractor model which will increase the overall effectiveness and efficiency in the roadways maintenance operations by ensuring the right people are doing the right job at the right time.

### Continued Improvement in the Fall Street Sweeping Program

- In preparation for the Fall Sweep Program, the Parks division and Public Works division collaborated on the cleaning of medians. This increased collaboration resulted in a better product, less disruption for citizens and contributed to the overall success of the program.
- Additionally, the Fall Sweep Program saw an over 50% reduction in the number of tickets issued as a result of vehicles parked on sweeping routes. This program continues to improve year over year with improvements resulting in a significant reduction in the number of complaints received by Public Works Customer Service.

### Increased Funding will Result in Continued Improvement to Saskatoon's Road Network

- The Building Better Roads program is expected to continue bringing improvements to Saskatoon's road network, by slowly reducing the backlog of work required on poor to failed roadways, and performing enough rehabilitation work that the network does not deteriorate. 2016 is year 3 of the 4 year plan to fully fund it to 2013 levels. The program will rely on being continued fully funded with adjustments for inflation and growth yearly. Increased funding will contribute to improve the condition, safety and longevity of the roads.
- The previous roadways funding level guaranteed that the complete network of streets would reach failure condition and have to be rebuilt. The replacement cost for the total road network is approximately \$2.4 billion. The increase in preservation and maintenance activities through the Building Better Roads program with an annual investment of roughly \$30 million per year will yield unmeasurable amounts of savings because the roads will be kept in a reasonable state of repair.

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## **Bylaw No. 8880, Private Sewer and Water Service Connection Bylaw, 2010 - Update Request**

### **Recommendation**

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

That the City Solicitor be instructed to draft the necessary amendments to Bylaw No. 8880, Private Sewer and Water Service Connection Bylaw, 2010 for consideration by City Council as outlined in this report.

### **Topic and Purpose**

The purpose of this report is to request changes to Bylaw No. 8880, Private Sewer and Water Service Connection Bylaw, 2010. Changes are recommended to help streamline the administrative process for managing water and sewer service inspection rates and to provide consistency across the current Construction and Design division practices regarding water and sewer service inspections, and utility cut patching rates.

### **Report Highlights**

1. Costs for inspection services associated with water and sewer inspections were fully cost recovered over the past year.
2. Updating Bylaw No. 8880, to remove the rate setting process from the bylaw, will bring the process for adjusting water and sewer service inspection rates in line with rate adjustments for utility cut patching, and will provide consistency across current Construction and Design practices.

### **Strategic Goal**

The information presented in this report supports the Strategic Goal of Continuous Improvement.

### **Background**

The Construction and Design division coordinates the inspection of all water and sewer service connections and installations, and ensures compliance with construction standards. This ensures the integrity of the public utility remains intact. The City provides and charges for these connection inspections and other services at predetermined rates.

In 2008, City Council approved a recommendation that the Administration be authorized to phase in a full cost recovery of inspection services with respect to the water and sewer connection inspection program. From 1985 until City Council's decision in 2008, water and sewer connection inspection rates had remained unchanged. The water and sewer inspection rates have seen annual increases since 2008 in order to reach the 100% cost recovery goal. The inspection rates were changed from a fixed rate per



connection basis to a per hour basis in 2014, and the target of 100% cost recovery has now been reached.

### **Report**

Historically, the water and sewer service inspection rates have been included in Bylaw No. 8880 as “Schedule A – Inspection and Tapping Fees and Refundable Deposits”. Currently, a report to City Council is required for approval of rate changes through Bylaw No. 8880. In contrast, rates for utility cut patching are contained within the City of Saskatoon Standard Specification Section 14001- Roadway Restoration for Shallow Buried Utility Construction (COS Standard Specification). The utility cut patching rates are updated in the COS Specification by the Administration as necessary to recover costs. Updating the utility cut patching rates does not require the Administration to submit a report to City Council.

It is recommended that Bylaw No. 8880 be amended to remove “Schedule A – Inspection and Tapping Fees and Refundable Deposits”. Removing the water and sewer service inspection rates from Bylaw No. 8880 and placing them in the appropriate COS Standard Specification will have several benefits which include providing consistency across the Construction and Design division administrative practices, and will streamline the administrative process to adjust the water and sewer inspection rates.

### **Options to the Recommendation**

An option is to leave “Schedule A – Inspection and Tapping Fees and Refundable Deposits” in Bylaw No. 8880. This would mean that each time inspection rates need to be adjusted to maintain the 100% cost recovery target, Administration would submit a report for City Council approval.

### **Other Considerations/Implications**

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

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

Complete Bylaw update by Spring 2016.

### **Public Notice**

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

### **Report Approval**

Written by: Caleb Ripley, Project Engineer, Construction & Design  
Reviewed by: Sohab Khan, Senior Project Engineer, Construction & Design  
Reviewed by: Celene Anger, Director of Construction & Design  
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities  
Department

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## Wastewater Treatment Plant – Odour Monitoring System Update

### Recommendation

That the report of the General Manager, Transportation & Utilities Department, dated November 9, 2015, be forwarded to City Council for information.

### Topic and Purpose

The purpose of this report is to provide an update on the Odour Abatement Project at the Wastewater Treatment Plant (WWTP), and provide information regarding the permanent odour monitoring system being installed.

### Report Highlights

1. The completed detailed design, submitted by Stantec Consulting Ltd. (Stantec), adhered to the preferred recommendation of the *2012 City of Saskatoon Wastewater Treatment Plant Odour Source and Mitigation Study (2012 Study)*.
2. Construction commenced in May 2015 and is currently 25% complete.
3. An odour monitoring system is currently being installed at the site by Odotech Inc. and is expected to be collecting data by the end of November 2015.
4. The installation of a cover to capture the foul air generated in the Waste Activated Sludge Stripping (WASSTRIP) tank was completed in December 2014.

### Strategic Goals

This report supports the Strategic Goals of Continuous Improvement, Environmental Leadership, and Quality of Life, through the implementation of a permanent odour monitoring system to measure the effectiveness of the permanent odour abatement system, which is expected to significantly reduce odour emissions generated by the wastewater treatment process.

### Background

At its meeting held on July 17, 2013, City Council considered, Clause 3, Report No. 11-2013 (Wastewater Treatment Plant – Long-Term Capital Development and Expansion Plan) and adopted, in part:

- “3) that the Administration implement the recommended odour abatement strategies, which are expected to reduce the odour emitted from the plant by 76%; and
- 4) that the Administration bring forward a report to Administration and Finance Committee outlining what a permanent odour monitoring system would entail.”

Phase I of the odour abatement system, completed in 2009, consisted of improvements to the Grit and Screen Facility. Phase II, initiated in 2011, resulted in the July 2012 Study. The study identified odour sources, ranked them from greatest to lowest contribution to odour emissions from the facility, and listed alternatives for treating odours.

At its meeting held on June 24, 2013, City Council awarded to Stantec Engineering a contract for engineering services to design, tender, oversee construction management, and commission an odour abatement system at the WWTP. The detailed design followed the recommendations of the 2012 Study and focused on capturing and treating the high concentration odour sources and implementing changes to plant processes.

The construction project was tendered in January 2015, and was awarded on March 12, 2015 to Gabriel Construction Ltd. for a net cost to the City of \$8,188,983. A provisional item for continuous monitoring of odours at the plant was included in the contract.

### **Report**

#### Detailed Design

The completed detailed design adhered to the preferred recommendation of the 2012 Study. Plant process changes include converting the two existing complete mix fermenters to single stage fermenters and abandoning the practise of adding fermenter sludge to the primary clarifiers. Foul air treatment will be handled through the existing bioreactors, which was finalized after proof of concept testing at a Calgary facility. The project objective is a 76% reduction in total odour emission from the plant.

#### Construction

Construction commenced in May 2015 and requires detailed planning to integrate new work in an actively operating plant. The need for the plant to remain in operation requires close cooperation between the contractor and plant operating staff. At the date of this report, construction is approximately 25% complete and advancing according to schedule. The changes are expected to be operational by February 2017.

#### Odour Monitoring System

The odour monitoring system is currently being installed at the site by Odotech Inc. The system is expected to start collecting data by the end of November 2015. The system consists of a weather station and seven sensors strategically located near odour emission sources.

The system generates a map of the odour plume overlaid onto the site in real-time, and utilizes existing weather conditions. This will help to identify the actual odour sources allowing staff to modify plant processes to reduce emissions. The data log and odour dispersion history will provide a detailed record showing the strength of the odour emission.

Installation of the system, before project completion, will yield a before and after comparison of odour emission and provide a measure of the project's impact.

#### Waste Activated Sludge Stripping Tank

The initial component of the odour abatement strategy was to cover the WASSTRIP tank. A tender for the work was awarded to VCM Construction Ltd. in May 2014, at a total cost of \$399,052. The work was completed in December 2014. The cover encapsulates the foul air and provides a conduit for treatment subsequent to completion of the main project.

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

Prior to the final design review, WWTP staff presented the project to nearby neighbourhoods, with more than 20 people in attendance. Feedback about the initiative was very positive.

#### **Communication Plan**

Project information was provided to nearby neighbourhoods by mail, with the invitation to the open house. Supporting social media and website information was used to invite other interested residents. Upon completion of the construction, City Councillors, Leadership Team, participating staff, and news media will be invited to tour the facility and learn about the innovative processes implemented for the benefit of the community.

#### **Environmental Implications**

The Odour Abatement Project will lead to an improved quality of life for adjacent residents by reducing odour emissions from the plant by 76%. The odour monitoring component will provide a comparison of existing conditions and those after implementation of the project. The monitoring system will provide real time information on odour levels, which allows plant operations to modify processes that contribute to excessive odour emissions.

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

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

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

The completion of the construction activities and the commissioning for the Odour Abatement System Upgrade Project is planned for January 2017.

#### **Public Notice**

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

#### **Report Approval**

Written by: Krystyna Kotowski, Senior Project Management Engineer  
Reviewed by: Larry Schultz, Engineering Services Manager  
Reviewed by: Reid Corbett, Director of Saskatoon Water

## Wastewater Treatment Plant – Odour Monitoring System Update

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Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities  
Department

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