



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

Monday, May 9, 2016, 2:00 p.m.

Council Chamber, City Hall

Committee Members:

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

Pages

1. CALL TO ORDER

2. CONFIRMATION OF AGENDA

Recommendation

1. That the requests for extension to the The Noise Bylaw be added to Item 6.1 as 6.1.12 and 6.1.13 and be approved subject to any administrative conditions;
2. That the letter from Alison Murawsky, Marketing Director, Remail Modern, dated May 6, 2016 requesting Mr. Gregory Burke, CEO, Remail Modern to speak and submitting comments be added to Item 7.1.2;and
3. That the agenda be confirmed, as amended.

3. DECLARATION OF CONFLICT OF 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 April 11, 2016 be adopted.

5. UNFINISHED BUSINESS

6. COMMUNICATIONS (requiring the direction of the Committee)

6.1 Delegated Authority Matters

Recommendation

That the requests for extension to The Noise Bylaw as outlined in 6.1.1 to 6.1.13 be approved subject to any administrative conditions.

- | | | |
|--------|---|---------|
| 6.1.1 | Noise Bylaw Extension, Bikes on Broadway, May 23, 2016, 7:00 a.m. to 4:00 p.m., Broadway District, Janice Matus, Bikes on Broadway Race Organizer [File CK. 185-9] | 6 - 6 |
| 6.1.2 | Noise Extension, Capital One Race for Kids, Boys & Girls Clubs of Saskatoon, May 28, 2016, 9:00 a.m. to 2:00 p.m., River Landing, Diane Reaser, Event Coordinator, Boys & Girls Clubs of Saskatoon [File CK. 185-9] | 7 - 8 |
| 6.1.3 | Noise Bylaw Extension, Crohn's and Colitis Canada charity fundraising event, June 5, 2016, 11:00 a.m. to 1:00 p.m., North Kiwanis Park, Alex Ryback [File CK. 185-9] | 9 - 9 |
| 6.1.4 | Noise Bylaw Extension, Hope Fellowship Church service, June 12, 2016, 8:30 a.m. to 1:00 p.m., River Landing, Dianne [File CK. 185-9] | 10 - 10 |
| 6.1.5 | Noise Bylaw Extension, Greater Saskatoon Catholic Schools Traditional Pow Wow, June 17, 2016, 10:00 a.m. to 3:00 p.m., Thornton Park, Delvin Kanewiyakiho [File CK. 185-9] | 11 - 11 |
| 6.1.6 | Noise Bylaw Extension, Wedding - RSVP Event Design & Rentals Ltd., June 25, 2016, 3:00 p.m. to 1:00 a.m., River Landing Market Square, Crystal MacLeod, RSVP Event Design [File CK. 185-9] | 12 - 13 |
| | **Please note immediately following the dance, tear down of the event will commence until 5:00 a.m. on the morning of June 26, 2016. | |
| 6.1.7 | Noise Bylaw Extension, E Y River Run Classic, July 10, 2016, 6:00 a.m. to 1:00 p.m., River Landing, R. Neil MacKay, Race Director [File CK. 185-9] | 14 - 14 |
| 6.1.8 | Noise Bylaw Extension, Saskatoon Dragon Boat Festival, July 22-23, 2016, 8:00 a.m. to 6:00 p.m., Rotary Park, Scott Walker [File CK. 185-9] | 15 - 15 |
| 6.1.9 | Noise Bylaw Extension, Holy Family Cathedral Outdoor Movie night, July 24, 2016, 9:00 p.m. to 12 Midnight, Holy Family Cathedral and parking lot, Mike Cey [File CK. 185-9] | 16 - 17 |
| 6.1.10 | Noise Bylaw Extension, Taste of Saskatchewan Festival, July 12 to 17, 2016, 11:00 a.m. to 10:30 p.m., Kiwanis Park, Scott Ford, Executive Director, SaskTel Centre [File CK. 185-9] | 18 - 18 |
| 6.1.11 | Noise Bylaw Extension, Rock the River, Aug. 19, 2016, 5:00 p.m. to 10:30 p.m., Aug. 20 & 21, 2016, 2:30 p.m. to 10:30 p.m., | 19 - 19 |

Delta Bessborough Hotel Bess Gardens, Scott Ford, Executive Director, SaskTel Centre [File CK. 185-9]

6.1.12 Noise Bylaw Extension, Walk to Fight Arthritis, June 5, 2016, 8:30 a.m. to 1:00 p.m., Deb Donaldson [File CK. 185-9] 20 - 20

6.1.13 Noise Bylaw Extension, Art in the Park, June 12, 2016, 11:00 a.m. to 5:00 p.m., Ashworth Holmes Park, Raeanne Van Beek, Festival Coordinator, Caswell Community Association [File CK. 185-9] 21 - 22

6.2 Matters Requiring Direction 23 - 30

A letter has been received from Lynne Saas, Coordinator of Member Services, The Provincial Association of Resort Communities of Saskatchewan (PARCS), dated April 22, 2016 regarding the threat to communities on the North/South Rivers and the Qu'Appelle lakes posed by aquatic invasive species.

Recommendation

That the direction of Committee issue.

6.3 Requests to Speak (new matters)

7. REPORTS FROM ADMINISTRATION

7.1 Delegated Authority Matters

7.1.1 Environmental Education Initiatives (Files CK. 7550-1 and CP. 7550-001) 31 - 51

Recommendation

That the report of the General Manager, Corporate Performance Department, dated May 9, 2016, be received as information.

7.1.2 Remail Modern Construction Update (Files CK. 620-5, CC.4130-2 and CS. 4130-3) 52 - 61

A request to speak and submitting comments has been added to this item from Alison Murawsky, Marketing Director, Remail Modern on behalf of Gregory Burke, CEO, Remail Modern.

Recommendation

That the report of the General Manager, Transportation & Utilities Department, dated May 9, 2016, be received as information.

| | | |
|--------------|--|-----------|
| 7.1.3 | Saskatoon Water 2015 Annual Report (Files CK. 430-37 and WT. 430-2) | 62 - 111 |
| | Recommendation | |
| | That the report of the General Manager, Transportation & Utilities Department, dated May 9, 2016, be received as information. | |
| 7.1.4 | Long-Term Lead Service Line Replacement and Water Main Capacity Improvement Strategy (Files CK. 7820-5, x 7780-1 and IS. 7820-0) | 112 - 121 |
| | Recommendation | |
| | That the Administration be directed to prepare the preliminary 2017 Business Plan and Budget based on the lead service line replacement and water main capacity improvement strategy outlined in the report of the General Manager, Transportation & Utilities Department, dated May 9, 2016. | |
| 7.2 | Matters Requiring Direction | |
| 7.2.1 | Integrated Waste Management Annual Report 2015 (Files CK. 0430-78 and CP. 430-004) | 122 - 174 |
| | Recommendation | |
| | That the report of General Manager, Corporate Performance Department, dated May 9, 2016, be forwarded to City Council for information. | |
| 7.2.2 | Budget Adjustment Request - Capital Project 625-22 - Trunk Sewer - NE Sector - Lift Station to Central Avenue Trunk (Files CK. 7820-4, x 1702-1 and TS. 7820-1) | 175 - 177 |
| | Recommendation | |
| | That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council: | |
| | <ol style="list-style-type: none"> 1. That the Administration be given approval for Contract #14-0058, Central Avenue and Fedoruk Drive to exceed 25% of the contract value; and 2. That a budget increase of \$868,000 for additional funding from the Trunk Sewer Reserve for Capital Project #625-22 – Trunk Sewer – Northeast Sector – MI – Force Main – UH2 – Lift Station to Central Avenue Trunk be approved. | |
| 7.2.3 | Smart Grid System - Award of Contract (Files CK. 2000-1, x 261- | 178 - 180 |

1 and SLP. 2006-1)

Recommendation

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

1. That a contract with Survalent Technology Corporation for the supply of a Smart Grid Control System for Saskatoon Light & Power at a cost of \$281,778 (including GST) be approved; and
2. That the City Solicitor be requested to prepare the appropriate agreement and that His Worship the Mayor and the City Clerk be authorized to execute the contract under the Corporate Seal.

8. MOTIONS (NOTICE PREVIOUSLY GIVEN)

9. GIVING NOTICE

10. URGENT BUSINESS

11. IN CAMERA SESSION (OPTIONAL)

Recommendation

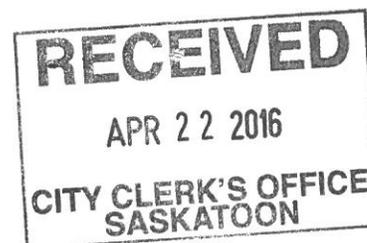
That the Committee move In Camera to consider item 11.1.

11.1 Utilities Strategy (Files CK. 7820-5, x 7780-1 and IS. 7820-0)

[In Camera - Policy Options/Advice]

12. ADJOURNMENT

From: Janice Matus <fjmatus@sasktel.net>
Sent: April 22, 2016 4:26 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Friday, April 22, 2016 - 16:25
Submitted by anonymous user: 167.74.219.2
Submitted values are:

Date: Friday, April 22, 2016
To: His Worship the Mayor and Members of City Council
First Name: Janice
Last Name: Matus
Address: Box 726
City: Martensville, SK
Province: Saskatchewan
Postal Code: S0K 2T0
Email: fjmatus@sasktel.net

Comments:
April 22, 2016

Dear His Worship the Mayor and Members of City Council:

RE: Bikes on Broadway Circuit Race City of Saskatoon Noise Bylaw No. 8244 Extension Request
Cycledelia Racing Club of Saskatoon is hosting Bikes on Broadway, a provincial cycling event sanctioned by the Saskatchewan Cycling Association, in the Broadway District and is requesting an extension of the Noise Bylaw No. 8244 for Monday, May 23, 2016 (a statutory holiday) from 7:00 AM to 4:00 PM.

Bikes on Broadway is a one of the oldest, most established bicycle stage races in Western Canada (celebrated 25 years in 2015) and attracts many participants from Alberta and Manitoba, in addition to local participants from Saskatchewan. This is the 3rd stage, a Criterium (circuit race), of a 3 day road cycling event. We would like to have a PA system announcing riders as they race around the circuit, to thank our sponsors and play music between the races (7 races in total). This event attracts approximately 150 riders, many from out of province, 40 volunteers and over 100 spectators who give back to the community. There is also local TV and newspaper coverage of the event. The Bikes on Broadway Committee has been working with the Broadway Business Improvement District to foster a relationship with the community and gain their support. The City of Saskatoon has approved the road closures for our event. We will endeavor to reduce the inconvenience to businesses and residents as much as possible by maintaining sound levels as recommended.

Thank you for your consideration of our request.

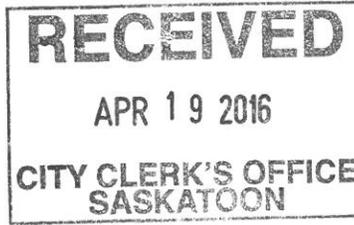
Contact Janice Matus, Bikes on Broadway Race Organizer at fjmatus@sasktel.net or 306-222-4725 if there are any questions or concerns.

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/87349>

185-9



Boys & Girls Clubs of Saskatoon



April 19, 2016
Office of the City Clerk
222 3rd Avenue North
Saskatoon SK S7K 0J5

Dear Office of the City Clerk;

Re: Request for Noise Bylaw Extension

Boys & Girls Clubs of Saskatoon would like to request an extension to The Noise Bylaw for Saturday, May 28th from 9:00 a.m. to 2:00 p.m. for the *Capital One Race for Kids*. Our event starts and finishes at River Landing. We will be using a microphone and speaker to address the participants, volunteers and spectators. We will also be playing music during the participant warm-up.

Capital One Race for Kids is an urban adventure race in which teams of four compete in a series of 10 themed checkpoints in a race to the finish line. The race is much like Amazing Race or Minute to Win It. Challenges are not based on athletic prowess or mental superiority; rather they are designed for fun and team-building. Teams will be provided with a map to determine their routes and 10 clues as to the location of each checkpoint. A post-event celebration and awards ceremony will take place at the end of the race for all participants and volunteers.

Boys & Girls Clubs of Saskatoon feels that this event will not only be a means to raise additional funds to support the programs that we offer Saskatoon's children and youth, but that it will also help to raise awareness of Boys & Girls Clubs of Saskatoon in our great city and province!



Boys & Girls Clubs
A good place to be

105 - 135 Robin Cres.
Saskatoon, SK S7L 6M3
(306) 244-7820
www.bgcsaskatoon.com



A little bit about Boys & Girls Clubs of Saskatoon

Boys & Girls Clubs of Saskatoon is one of this city's best-kept secrets. We are a growing non-profit organization that has been in Saskatoon since 1974. We are dedicated to serving children and youth in Saskatoon. In 2015 we served just under 4000 of Saskatoon's children and youth at 41 different sites by offering a variety of programming in Saskatoon and area. Our 4 neighbourhood based Clubs and our 6 Mini Club programs are free to the children and youth that need our help the most.

Boys & Girls Clubs of Saskatoon offers initiatives that support children and youth, helping them develop into healthy and confident adults. We strive to offer children and youth from all economic, cultural and social backgrounds access to the resources, supports and opportunities that will enable them to overcome barriers and achieve their positive potential in life. Our programs attract children and youth who often don't participate in traditional community programs because of a lack of resources or a lack of family support. Our programs are open to all kids who want to participate regardless of circumstances.

Boys & Girls Clubs of Saskatoon knows that every kid has potential and with your support we will be able to continue to deliver community-based programs and services to enable children to fulfill their potential. All children and youth deserve the opportunity to discover and achieve their dreams and to grow up to be healthy, successful and active participants in society. Your support will help to ensure that the needs of vulnerable children and youth in our community are met.

Thank you for considering this request and for believing in the children and youth in your community. After all, our kids are worth it!

Sincerely,

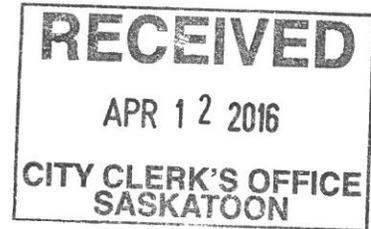
Diane Reaser
Event Coordinator
Boys & Girls Clubs of Saskatoon



105 – 135 Robin Cres.
Saskatoon, SK S7L 6M3
(306) 244-7820
www.bgcsaskatoon.com



From: Alex Ryback <alex.ryback@gmail.com>
Sent: April 12, 2016 2:03 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Tuesday, April 12, 2016 - 14:03
Submitted by anonymous user: 216.65.182.66
Submitted values are:

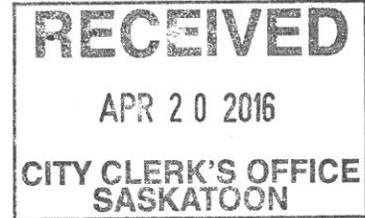
Date: Tuesday, April 12, 2016
To: His Worship the Mayor and Members of City Council
First Name: Alex
Last Name: Ryback
Address: 550 Delayen Cres.
City: Saskatoon
Province: Saskatchewan
Postal Code: S7N 2V2
Email: alex.ryback@gmail.com

Comments: I would like to request an extension to the noise bylaw for a charity fundraising event for Crohn's and Colitis Canada on Sunday June 5th. Our event takes place in North Kiwanis Park, at the end of 22nd Street. We would like to have amplified music during the hours of 11AM to 1PM, which is outside of the noise bylaw hours. The music will not be very loud, only to serve those in the immediate vicinity within the park, aimed North. This is the 20th year this event has taken place in Saskatoon. It is a national event serving to raise funds to find a cure for Inflammatory Bowel Disease.

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/84928>

185-9

From: Dianne @ Hope <dianne@hopefellowshipchurch.ca>
Sent: April 20, 2016 12:50 PM
To: Web E-mail - City Clerks
Subject: noise bylaw extension



Hello City Clerk

Once again we are planning and have received permission to have our church service at River Landing on Sunday June 12, 2016.

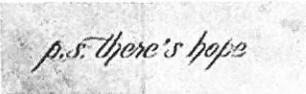
We have booked the venue from 8:30 am to 1pm however we are requesting an extension to the noise bylaw from 10 am to 12 noon.

Thank you for your service to us
Dianne

Dianne at Hope

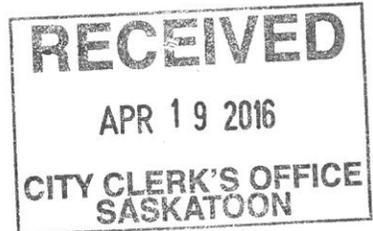


809 32nd Street West
Saskatoon, SK S7L 0T5
306-384-4673
dianne@hopefellowshipchurch.ca



185-9

From: Delvin Kanewiyakiho <dkanewiyakiho@gscs.sk.ca>
Sent: April 19, 2016 3:49 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Tuesday, April 19, 2016 - 15:49
Submitted by anonymous user: 204.83.241.139
Submitted values are:

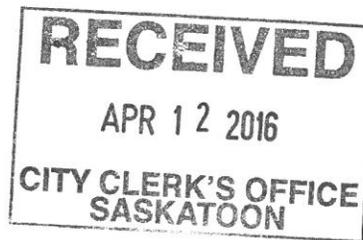
Date: Tuesday, April 19, 2016
To: His Worship the Mayor and Members of City Council
First Name: Delvin
Last Name: Kanewiyakiho
Address: 420-22nd Street East
City: Saskatoon
Province: Saskatchewan
Postal Code: S7K 1X3
Email: dkanewiyakiho@gscs.sk.ca

Comments:
Greetings Mayor and City Council of Saskatoon,
My name is Delvin Kanewiyakiho. I work for Greater Saskatoon Catholic Schools. I am a consultant with the FNME unit. I am writing you to ask for a noise by-law extension because we are having our GSCS Traditional pow wow once again at Thornton Park over by McPherson Avenue just across the street from St Frances school. Our pow wow will be held on June 17th, 2016. It will start at 10 am and end at 3 pm. I will be getting a hold of Allocations asap to rent the park from the city for that day, for the pow wow. You had given us the extension last year when we had our pow wow at Thornton park. Thank you for your help!!!

Truly,
Delvin Kanewiyakiho

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/85892>

RSVP Event Design Décor & Rentals Ltd.
#229 – 120 23rd Street East
Saskatoon, Saskatchewan S7K 0K8
306.384.6044



The City Clerk's Office
c/o City Hall
222 3rd Avenue North
Saskatoon, Saskatchewan S7K 0J5

VIA E-MAIL

April 8, 2016

To Whom It May Concern,

I am requesting a Noise Bylaw Amendment for the purpose of a wedding held at the River Landing Market Square from June 25th, 2016 at 3:00p.m. until 5:00a.m. on June 26th, 2016.

There will be a tent on the River Landing Market Square directly outside the main doors of the Saskatoon Farmer's Market that will be used as a dance floor. The Saskatoon Farmer's Market has agreed to this endeavor, in which we have obtained the applicable insurance, and license agreements for this event. The dance portion of the event will be held from 9:00p.m. to 1:00a.m. at which time there will be noise around the Saskatoon Farmer's Market and Riversdale area, but will be completed at 1:00a.m. Immediately following the dance, tear down of the event will commence until 5:00a.m. on the morning of June 26, 2016.

Please find enclosed the Recreation Facility and Parks Usage Agreement signed and dated on the 19th of February 2016, and a sample of the poster that will be shared with the community surrounding the Saskatoon Farmer's Market.

If you require anything else from our office, please feel free to contact us.

Regards,

Crystal MacLeod
RSVP Event Design

ATTENTION: RESIDENTS OF RIVERSDALE COMMUNITY

JUNE 25, 2016
5:00PM - 1:00AM

EVENT AT SASKATOON FARMER'S MARKET

Please be aware that on June 25, 2016 there will be a private event held at the Saskatoon Farmer's Market.

There will be music playing in the River Landing Market Square from 8:00pm until 1:00am (Sunday, June 26). All guests will be gone from the venue at 1:00am. Please note: Immediately following the dance music, the event strike will take place.

If you have any questions or concerns about this event, please email Crystal at crystal@rsvpeventdesign.ca



E Y RIVER RUN CLASSIC

c/o Neil MacKay
MacPherson Leslie & Tyerman LLP
#1500 – 410 – 22nd Street East
Saskatoon, SK S7K 5T6

nmackay@mlt.com

April 6, 2016

Office of the City Clerk
c/o City of Saskatoon
City Hall
222 – 3rd Avenue North
Saskatoon, SK S7K 0J5

Dear Sir/Madam:

Re: Special Event – EY River Run Classic
- Application for Extension of Noise By-Law

I am the Race Director for the EY River Run Classic, which is scheduled for Sunday, July 10, 2016. The race consists of a 5 k, 10 k and half marathon, starting at River Landing and running north along the riverbank.

We will be using some amplification equipment for the race at the start/finish area at River Landing. Accordingly, I would like to apply for an extension of the Noise By-Law, permitting such amplification equipment to be used during the hours from 6:00 a.m. to 1:00 p.m., Sunday, July 10, 2016.

I look forward to hearing from you in response. Thank you.

Yours truly,

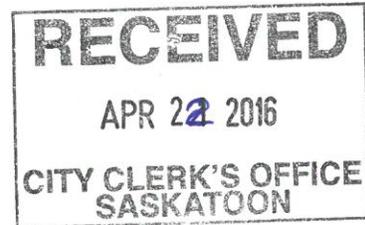
R. Neil MacKay

RNM:slw

Encl.

From: Scott Walker / Saskatoon Dragon Boat Festival <fmg@fmgdragonboat.com>
Sent: April 22, 2016 9:01 AM
To: City Council
Subject: Form submission from: Write a Letter to Council

Submitted on Friday, April 22, 2016 - 09:01
Submitted by anonymous user: 208.114.165.165
Submitted values are:



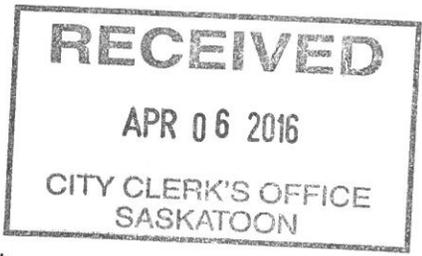
Date: Friday, April 22, 2016
To: His Worship the Mayor and Members of City Council
First Name: Scott
Last Name: Walker / Saskatoon Dragon Boat Festival
Address: Suite 392 - 23, 845 Dakota Street
City: Winnipeg
Province: Yukon
Postal Code: R2M 5M3
Email: fmg@fmgdragonboat.com

Comments:

FMG has been producing the Saskatoon Drsgon Boat Festival for 24 years and again this year will be producing the event July 22,23 2016 at Rotary Park on the South Saskatchewan River. The Parks Use Application for this event has been approved by City of Saskatoon Allocations. The Saskatoon Dragon Boat Festival annually raises over \$200,000.00 for community charities, this year our charities are Children's Wish and Ronald McDonald House Saskatoon. The event occurs July 22,23 at Rotary Park between the hours of 8am - 6pm, as in the past there will be announcements made during the day over the public address system calling teams to participate. There will be no live amplified entertainment or beer garden. FMG is requesting a Noise Permit for the Saskatoon Dragon Boat Festival based on the dates, times and information outlined herein.

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/87163>

185-9



April 4, 2016

Noise Bylaw Extension request:

Made on behalf of;

Holy Family Cathedral
123 Nelson Road
Saskatoon, SK
S7S 1H1
Mike Cey
Phone: 306-371-0265
Email: mike.cey@sasktel.net

Greetings;

We would like to apply for a noise bylaw extension for the following event

Holy Family Cathedral Outdoor Movie night

Sunday July 24, 2016

9:00 PM – 12 Midnight

Location: 123 Nelson Road, we would set up screen on our own property and use our parking lot for seating.

The event would involve a movie screening using a giant inflatable screen (Contract services provided by Fresh Air Cinema of a first run movie).

This will be a free community event, concessions, parking and washroom facilities will be provided from the Cathedral.

There are no businesses or residences within a 2 block radius of this event.

Regards,


Mike Cey

THE FAMILY EVENT OF THE SUMMER! - DOUBLE FEATURE!!
SUNDAY JULY 24, 2016

AT CATHEDRAL OF THE HOLY FAMILY (123 NELSON ROAD)
IN SUPPORT OF THE PERU YOUTH MISSION 2016



CATHEDRAL OF THE
HOLY FAMILY

We are Holy Family

"ZOOTOPIA" IN THE HALL - 8:00 PM
"MIRACLES FROM HEAVEN" OUTDOORS 9:30 PM
FOLLOWED BY A FIREWORKS SPECTACULAR!

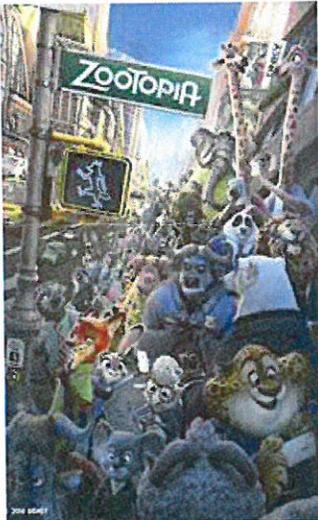


FREE



BRING YOUR LAWNCHAIRS AND BLANKETS!

ZOOTOPIA



MIRACLES FROM HEAVEN



&

8:00 PM (HALL)

FOLLOWED BY SPECTACULAR LOW LEVEL FIREWORKS!

9:30 PM (OUTDOORS)

THANK YOU TO OUR COMMUNITY AND SPONSORS FOR YOUR SUPPORT!
FABULOUS CONCESSIONS! - POPCORN - COTTON CANDY - DRINKS

185-9

From: Ford, Scott (SaskTel Centre)
Sent: May 02, 2016 6:46 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Monday, May 2, 2016 - 18:45
Submitted by anonymous user: 142.165.166.13
Submitted values are:

Date: Monday, May 02, 2016
To: His Worship the Mayor and Members of City Council
First Name: Scott
Last Name: Ford
Address: 101-3515 Thatcher Avenue
City: Saskatoon
Province: Saskatchewan
Postal Code: S7R 1C4
Email: sford@sasktelcentre.com
Comments:

SaskTel Centre respectfully requests an extension to the Noise Bylaw for the July 12 to 17, 2016 A TASTE OF SASKATCHEWAN FESTIVAL held in Kiwanis Park. For this festival we would like permission to extend the time for amplified sound to 10:30pm. City Council has graciously approved this request in the past for A TASTE OF SASKATCHEWAN.

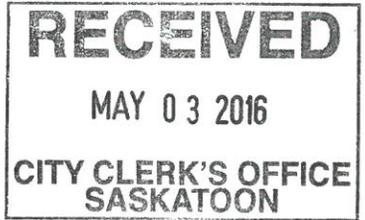
(11:00 am - 1030 pm)

Thank you for your consideration,

Scott Ford
Executive Director
SaskTel Centre

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/90000>

From: Ford, Scott (SaskTel Centre)
Sent: May 02, 2016 7:01 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Monday, May 2, 2016 - 19:00
Submitted by anonymous user: 142.165.166.13
Submitted values are:

Date: Monday, May 02, 2016
To: His Worship the Mayor and Members of City Council
First Name: Scott
Last Name: Ford
Address: 101-3515 Thatcher Avenue
City: Saskatoon
Province: Saskatchewan
Postal Code: S7R 1C4
Email: sford@sasktelcentre.com

Comments:
SaskTel Centre respectfully requests an extension to the Noise Bylaw for the August 19 to 21, 2016 ROCK THE RIVER Festival in the Delta Bessborough Hotel Bess Gardens. Like the 2014 and 2015 ROCK THE RIVER performance times our classic rock entertainment is scheduled to perform until 10:00pm but occasionally the last band will do a short encore. We request an extension to 10:30pm on August 19, 20, & 21, 2016 for this festival.

Aug 19 - 5:00 pm to 10:30 pm
Aug 20 - 2:30 pm to 10:30 pm
Aug 21 - 2:30 pm to 10:30 pm

Thank you for your consideration to our request.

Sincerely,

Scott Ford
Executive Director
SaskTel Centre

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/90003>

185-9

From: Deb Donaldson <ddonaldson@arthritis.ca>
Sent: Wednesday, May 04, 2016 11:41 AM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Wednesday, May 4, 2016 - 11:40
Submitted by anonymous user: 174.2.91.215
Submitted values are:

Date: Wednesday, May 04, 2016
To: His Worship the Mayor and Members of City Council
First Name: Deb
Last Name: Donaldson
Address: #22 - 1738 Quebec Avenue
City: Saskatoon
Province: Saskatchewan
Postal Code: S7k 1V9
Email: ddonaldson@arthritis.ca

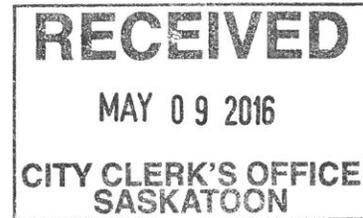
Comments: The Arthritis Society is planning on holding it's 7 annual Walk to Fight Arthritis on June 5, 2016 at Victoria Park in Saskatoon from 8:30am (set up) till 1pm (clean up). The Walk plans to start at 10am till 12pm. Since the Walk is scheduled to take place outside the noise bylaw for Sunday's we were hoping to get permission to hold the event outside of the noise bylaw. There will be approximately 60 - 80 people at the event, so it is really a small Walk. I hope the City will allow us to continue with the Walk at 10am.

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/90643>

185-9

May 8, 2016

His Worship the Mayor
And Members of City Council
222 Third Avenue North
Saskatoon, SK S7K 0J5



Dear Mayor Atchison and Members of Council:

Re: Noise Guidelines for Park Special Events

The Caswell Community Association will be hosting our 15th annual arts festival, Art in the Park, noon-5 pm on June 12, 2016 in Ashworth Holmes Park. As this event occurs on a Sunday we are requesting permission to perform sound checks at 11:00 a.m. and begin performances at 12 p.m., outside of the Noise Bylaw hours.

Thank you for your consideration.

Sincerely,

Raeanne Van Beek
306-280-1886
Festival Coordinator
Art in the Park Committee

live
music

artist
village

kids
artsfest

art
making

food
fest

& you

Call for Artists: Register now for your free spot at caswellartsfestival.com

15th Caswell Arts Festival
June 12, 2016
12 – 5 pm
Ashworth Holmes Park
Ave E North & 31st St W
Free Admission

Art in the Park

caswellartsfestival.com





AIM to STAB

Aquatic Invasive Mussels - Stop Them at the Border

A coalition of Saskatchewan Communities supported by:

- SUMA (Saskatchewan Urban Municipalities Association)
- SARM (Saskatchewan Association of Rural Municipalities)
- SAW (Saskatchewan Association of Watersheds)

From: Lynne Saas, Coordinator of Member Services
 The Provincial Association of Resort Communities of Saskatchewan (PARCS)
parcs@sasktel.net, (306) 630-9698

Date: April 19, 2016

To: Administrator

Re: The threat to communities on the North/South Sask Rivers and the Qu'Appelle lakes

The Provincial Association of Resort Communities (PARCS) with the support of SUMA, SARM and SAW is undertaking an initiative to inform many Saskatchewan communities about the threat posed by aquatic invasive species, in the hopes of persuading the government to implement border inspections to stop this threat.

Please distribute a copy of our letter and the enclosed informational material to your Mayor and Council. We urge them to support our position both by motion and with a letter to our Premier.

Thank you for your assistance in forwarding this material to your Mayor and Council.



277-1

AIM to STAB

Aquatic Invasive Mussels - Stop Them at the Border

A coalition of Saskatchewan Communities supported by:

- SUMA (Saskatchewan Urban Municipalities Association)
- SARM (Saskatchewan Association of Rural Municipalities)
- SAW (Saskatchewan Association of Watersheds)

From: The Provincial Association of Resort Communities of Saskatchewan (PARCS)
parcs@sasktel.net, (306) 630-9698

Date: April, 2016

To: Mayor Don Atchison & Council
City of Saskatoon
Box 222-3rd Ave N.
Saskatoon, SK, S7K 0J5

Re: The threat to communities on the North/South Sask Rivers and the Qu'Appelle lakes

If your community is one of the many communities in the province that draw their **drinking water** from the North Saskatchewan or South Saskatchewan Rivers¹, you need to closely examine the enclosed AIM to STAB document.

Since lakes in Ontario became infected with Zebra and Quagga mussels, the annual cost for managing those mussels has been estimated at \$75 to \$90 million a year². The **majority of those costs are born by municipalities annually having to clean their clogged intake pipes for their municipal water systems.**

These same mussels have now travelled from the east and infected Lake Winnipeg and smaller lakes at our eastern doorstep in Manitoba. The Manitoba government has recently announced plans to spend a million dollars annually on a boat inspection program. Alberta has a comprehensive border inspection program to stop these mussels at their border. Last summer their inspectors stopped and decontaminated 11 infected boats that had travelled across our province. Had one of those boats put into the North or South Saskatchewan, or into the Qu'Appelle chain, your municipality would now be facing huge costs for maintaining your water system.

During the recent provincial election, PARCS member communities wrote to candidates asking them to describe their party's plan for dealing with this threat. While the Green Party announced its support for an inspection program, the NDP and Liberals were silent, and the Sask Party, in a letter signed by Premier Brad Wall, stated that their government would "stand on its record". An examination of page 3 of the attached document details how our province has been the only western province to fail to take a stand to stop these mussels at the border

The coalition of PARCS, SUMA, SARM and SAW are pledged to raise this matter to the new government when it next sits. We are asking you to send a letter expressing your concerns about the threat of an infestation of these mussels into the waters that feed your municipal water supply. We are asking that **your letter go forward as soon as possible before the new government is called to sit.**³

We need to stand together to protect our drinking water infrastructure from costly infection.

¹ These river systems include Lake Diefenbaker and Tobin Lake. The South Sask feeds into Buffalo Pound Lake, Last Mountain Lake and the Qu'Appelle chain. One mussel in this system will ultimately contaminate the entire interconnected waterways.

² <http://news.nationalpost.com/news/canada/why-are-zebra-mussels-in-lake-winnipeg-such-a-calamity-when-theyve-been-in-the-great-lakes-for-decades>

³ Address your letter to Premier Wall at Room 226, 2405 Legislative Drive, Regina, SK, S4S 0B3, or fax 787-0885, or email premier@gov.sk.ca

AIM to STAB

Aquatic Invasive Mussels - Stop Them at the Borders

BACKGROUND

1. What is STAB?

STAB is a group of individuals, communities and organizations sharing a belief that the only way to save our Saskatchewan lakes and rivers from aquatic invasive mussels is to stop those mussels at the border before they enter the province. Although initiated by PARCS, STAB includes membership from many other groups and organizations across the province.

2. What is PARCS?

PARCS is the Provincial Association of Resort Communities of Saskatchewan. ⁱ

3. What are aquatic invasive mussels?

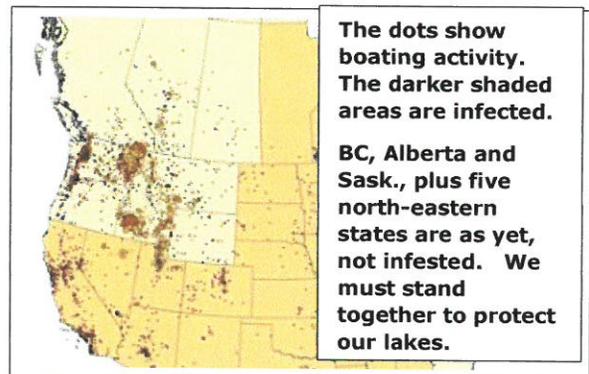
These tiny Zebra and Quagga mussels (as small as a grain of rice, as large as a fingernail) are much smaller than our Saskatchewan mussels (or clams as they are often called)ⁱⁱ. Also, unlike native mussels which bury into the bottoms of lakes and rivers, these foreign mussels attach themselves to hard surfaces like the hulls of boats, docks, motors, anchors, and most dangerous of all, to the insides of the intake pipes leading to water treatment plants, to hydroelectric generators and to irrigation systems. Any mussel seen attached to a hard surface is a foreign mussel.

4. How did these mussels get into Canada?

It is believed that they arrived in the USA in 1986 via the ballast water of cargo vessels. The species spread from the eastern USA into Canada's eastern waterways. In 2009 zebra mussels were found in Saskatoon on a recreational vehicle from the USA. The boat was decontaminated. In 2011 these mussels were detected in the Red River, in North Dakota. In 2012 officials in the State of Utah intercepted a contaminated boat returning from Lake Mead, Nevada, and heading for Saskatchewan. It was quarantined and decontaminated. By 2013 Lake Winnipeg, Cedar Lake and the Red River in Manitoba were infected.

5. Why are these mussels so dangerous?

"Once introduced it is virtually impossible to eradicate them making prevention key to stopping their spread to the west". ⁱⁱⁱ The north western states (shown on the right) have implemented aggressive prevention programs that have been successful to date.



6. How do these mussels reproduce?

An adult mussel will spawn up to a million eggs which thrive in temperatures of 10 to 17 degrees C in depths of 4 to 7 metres. They can live up to 30 days out of water, which enables them to hitchhike from other provinces and states, attached to infested boats.

7. How far west have these mussels travelled to date?

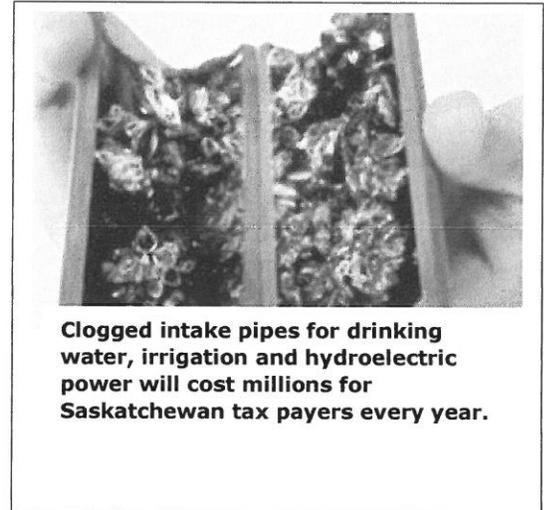
The mussels have spread from the east toward the west. BC, Alberta, Saskatchewan and the five north-western states have been called upon to adopt aggressive practices to prevent the spread of these destructive mussels into the north-west part of the continent. In 2015, 11 mussel boats were stopped on the Alberta border and decontaminated. ALL OF THESE BOATS HAD TRAVELLED FROM EASTERN CANADA THROUGH SASKATCHEWAN.^{iv} ***Saskatchewan is very vulnerable.***

IMPACTS

8. What are the major economic impacts of an invasive mussel infestation?

In 2013, the **Alberta** Department of Environment and Renewable Resources estimated that the **ANNUAL COST** of an invasive mussel infestation would be **\$75 million:** ^v

| | |
|------------------------------------|-----------------------------|
| Power generation | \$ 5,938,487 |
| Drinking water systems | \$ 20,839,921 |
| Boat maintenance | \$ 390,600 |
| Recreational fishing | \$ 21,830,892 |
| Water management structures | \$ 8,841,373 |
| Water diversion intakes | \$ 3,910,000 |
| Property value | <u>\$ 13,789,500</u> |
| Total annual cost estimated at | \$ 75,540,773 ^{vi} |



Clogged intake pipes for drinking water, irrigation and hydroelectric power will cost millions for Saskatchewan tax payers every year.

The largest part of these costs would come from an infestation on Alberta’s water-operated infrastructure due to:

- Filling intake pipes, irrigation lines, dam operations,
- Clogging screens,
- Requiring new capital and maintenance costs,
- Increased costs to users,
- Costs of crop & food production; drinking water and waste water.

An impact study in Ontario shows that they are spending \$75 to \$91 million annually as a result of the mussel invasion. ^{vii} A study conducted by the Okanagan Basin Water Board estimated a cost of at least \$43 million each year in lost revenue and added maintenance of aquatic infrastructures. ^{viii}

9. What is the impact of these mussels on fish populations?

An infestation causes an increase in fish species such as yellow perch that feed on shallow-bottom organism and a decrease in fish that feed on deep water organisms, such as northern Pike and native trout. Mussels eat plankton, causing rapid changes to the food web and physical environment of fish.

10. Will these mussels like it in Saskatchewan?

Biologists feel that the ecological risk is high. We have the correct water quality for mussels to survive and a growing number of boats both leaving and coming into our province. Most of Saskatchewan is classified as having “a very high probability of invasion”. ^{ix}

11. Which Saskatchewan lakes are most at-risk?

While all lakes are at risk, the Fisheries Branch^x have stated that the Boundary Dam Reservoir, the South Saskatchewan (Lake Diefenbaker) system, the Qu’Appelle Lakes and Tobin Lake are most likely to be visited by out-of-province boats. Saskatchewan boats leaving our province also pose a risk.

12. How many Saskatchewan people would be affected by an infestation of foreign mussels?

We know that about half of Saskatchewan’s drinking water comes from the fresh waters flowing into our province through the South Saskatchewan River, flowing north out of Gardiner Dam, through Saskatoon and on to Tobin lake, and flowing south through Buffalo Pound which provides water to Moose Jaw and Regina, into Last Mountain Lake and into the Qu’Appelle Chain of lakes. All of these people could face higher utility bills for drinking water. The effect on the hydroelectric power could have a similar effect on electrical bills. Consider the impact on the irrigation industry, the decrease in property values for cottage owners, and the loss of tourism and fisheries. A mussel infestation would be devastating on any lake and mean significant costs for all the tax payers of Saskatchewan. ^{xi}

PREVENTION

13. What have the Prairie Provinces been doing to prevent the infection of their lakes?

This chart summarizes the initiatives undertaken taken by the Prairie Provinces to date. ^{xii}

| Program | Description | Effect | Alberta | Manitoba | Sask. |
|---|--|--|--|--|--|
| CLEAN / DRAIN / DRY EDUCATIONAL PROGRAM | <ul style="list-style-type: none"> An informational program to train boaters to act responsibly. Posters at boat launches, marinas Aimed at effecting behavior change | <ul style="list-style-type: none"> Most useful in areas that are already infected, to prevent spread of infection Not really applicable to stay-at-home boaters in Sask | ✓ | ✓ | ✓ |
| MONITORING | <ul style="list-style-type: none"> Volunteers taking samples from lakes to check for adults (substrates) and/or juveniles (veliger) | <ul style="list-style-type: none"> BUT - If the samples come back positive – it's TOO LATE TO DO ANYTHING BY THAT TIME | ✓ 73 lakes in 2015 | ✓ 30 lakes in 2015 | ✓ 5 lakes in 2015 |
| HOTLINE | <ul style="list-style-type: none"> 24/7 response to send out decontamination unit | <ul style="list-style-type: none"> Works best in combination with an inspection program | ✓ 1-855 336-BOAT | ✓ 1-877- 667-2470 | ✓ 1-800 667-7561 |
| LEGISLATION | <ul style="list-style-type: none"> Recent Alberta Ministerial Order gives authority to fishery officers | <ul style="list-style-type: none"> Necessary in order to implement border inspections | ✓ | ✓ New regulations recently announced | ✗ |
| DECONTAMINATION UNITS | <ul style="list-style-type: none"> Portable hot-water sprayers used to clean contaminated boats | <ul style="list-style-type: none"> A necessary part of border of border inspections | ✓ BC has units at its highway & entrances to parks | ✓ Alberta has 1 at each of 9 highway stations plus 4 roving units | ? Sask has only 2 units in the province |
| BORDER INSPECTIONS | <ul style="list-style-type: none"> Based on the model used in the western states Focus is on major highways Seasonal wage staff Focus on adult mussels | <ul style="list-style-type: none"> The only way to keep infected boats out of the province! | 4000 inspections in 2014 2 fouled boats 20+ washes | \$1 million pledged ^{xiii} | ✗ |

THE SASKATCHEWAN GOVERNMENT HAS BEEN THE ONLY WESTERN PROVINCE TO REFUSE TO PASS THE NECESSARY LEGISLATION AND REGULATIONS OR TO ALLOCATE THE FUNDS FOR IMPLEMENTING BORDER INSPECTIONS.

14. If many of these boats are coming in from the US and Manitoba for our fishing derbies, could the province not enact mandatory inspections of boats at these derbies?

Organizers of major fishing derbies are quick to explain that many of the out-of-province competitors arrive several days or even a week prior to the tournament and 'practice fish', checking out the best spots on the lake prior to the tournament. Inspections on the day of the tournament are, for a large part, too little too late.

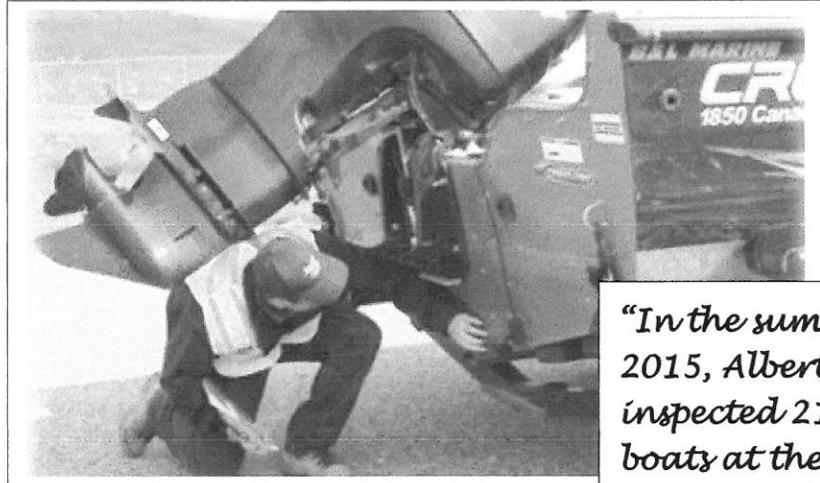
WHAT WE NEED FROM OUR GOVERNMENT

The members of STAB urge that the government of Saskatchewan¹:

1. Continue and expand the building of **AWARENESS** via the Clean/Drain/Dry program and the **MONITORING** of our lakes, **plus**
2. Adopt new legislation, new regulations and new funding to implement **border checks**, along with **PENALTIES** to ensure **ENFORCEMENT**.

Stop them at the borders.

Can we afford not to?



Keep Saskatchewan lakes free from these dangerous mussels.

Can we afford not to?



“In the summer of 2015, Alberta inspected 21,000 boats at their border with Sask and found 11 mussel boats which were then decontaminate. All of those boats travelled from Ontario across Saskatchewan.”²

*How long can we dodge the bullet?
Can we afford not to act?*

² *Kate Wilson*

¹ Kate Wilson, Alberta Department of Environmental and Sustainable Resources, states that a typical AIS program has four components: 1) education and outreach, 2) monitoring, 3) enforcement response, 4) policy and legislation

REFERENCES

- ⁱ PARCS members include resort villages, hamlet cottage communities, rural municipalities with cottage communities and cottage owner associations.
- ⁱⁱ Adults are 1 to 3 cm in size. Young zebra and quagga mussels (called veligers) are so tiny that they can look and feel like sandpaper.
- ⁱⁱⁱ After the infection of Lake Winnipeg, Manitoba officials claimed that infusions of potash would kill the mussels. However subsequent reports from scientists state that "the problem is irreversible".
<http://globalnews.ca/news/2266803/lake-winnipeg-is-a-lost-cause-due-to-zebra-mussels-expert/>
- ^{iv} Kate Wilson, Alberta Department of Environmental and Sustainable Resources, "Provincial Aquatic Invasive Species Prevention Program".
- ^v Neupane, A. "An Estimate of Annual Economic Cost of Invasive Dreissenid Mussels to Alberta", Alberta ESRD, Nov. 2013
- ^{vi} It should be noted that a predicted annual cost of \$75 million is for approximately 100 lakes in Alberta. There are 100,000 lakes in Saskatchewan!
- ^{vii} See number IV above.
- ^{viii} Okanagan Basin Water Board, pamphlet "Spread the Message, Not the Mussel", 2012.
- ^{ix} Just google Department of Fisheries and Oceans and Dreissenid mussel risk to read about it.
- ^x Fisheries Branch of Saskatchewan Environment.
- ^{xi} <http://www.southsaskriverstewards.ca/water-quality-assessment.html>
- ^{xii} Early in 2016, the Manitoba Minister of Conservation and Water Stewardship, Tom Nevakshonoff announced that the Manitoba Government will dedicated \$1 million toward the fight against invasive mussels in 2016.

Environmental Education Initiatives

Recommendation

That the report of the General Manager, Corporate Performance, dated May 9, 2016, be received as information.

Topic and Purpose

The purpose of this report is to provide information on environmental education initiatives provided by the City of Saskatoon (City) for the community and corporation.

Report Highlights

1. The City provides environmental education to encourage changes in behaviour that result in positive environmental outcomes including the reduction of greenhouse gas (GHG) emissions through water conservation, waste diversion, and energy conservation. Additional environmental protection benefits are also achieved through these programs.
2. Utility-funded education efforts focus on supporting civic utility services while mill-rate-supported education programs provide information about civic initiatives that help citizens reduce their own environmental footprint.
3. All education initiatives use a multi-faceted approach to reach a wide audience; programs range from mass marketing using traditional and online tools, to targeted one-on-one programs.

Strategic Goal

This report supports the Strategic Goal of Environmental Leadership and responds to the priorities to implement the Energy and Greenhouse Gas Reduction Plan and to promote and facilitate city-wide composting and recycling.

Background

City Council has approved various environmental education initiatives including:

- a report on the pesticide reduction awareness campaign (Be Pesticide Free) was provided on October 7, 2013, and described how the City partnered with the Saskatchewan Environmental Society (SES) to deliver education on pesticide reduction from 2006 - 2014, at which time the SES decided to proceed separately.
- at its March 3, 2014, meeting, City Council endorsed the 12 city-related recommendations of the Food Strategy;
- on March 23, 2015, City Council approved the 2015 Composting Programs report that outlined a number of home composting initiatives;

Environmental Education Initiatives

- a report on additional funding for the Household Hazardous Waste (HHW) program outlined additional education and engagement initiatives to promote existing take-back programs on March 23, 2015;
- on October 13, 2015, City Council approved adding food waste to the Green Cart program for 2016 and the associated communications;
- a report on the Saskatoon Curbside Swap outlining the 2016 program plan on November 23, 2015;
- on November 23, 2015, City Council received a report on the status of the Education for Sustainable Development (Student Action for a Sustainable Future) program;
- an update on Recycling Communications and changes to the agreement with Loraas on January 25, 2016; and
- a report on water conservation awareness and the 'Be Water Wise' campaign was provided to the Standing Policy Committee for Environment, Utilities and Corporate Performance on April 11, 2016.

Report

Mill-Rate Supported Environmental Education Programs

The City supports education and awareness initiatives that encourage behaviour changes such as water conservation, waste reduction, active transportation, and energy conservation in order to achieve the environmental outcomes described in the Strategic Plan. Most programs are delivered through partnerships with the community to leverage resources, including:

- the Student Action for a Sustainable Future program (SASF, see Attachment 1);
- the Healthy Yards Campaign (see Attachment 2);
- the Saskatoon Curbside Swap program (see Attachment 3); and
- and other environmental awareness initiatives (see Attachment 3);

The partners involved with the City in SASF have provided several letters of support regarding the future of the program.

Education Programs funded through Utilities

a. Recycling Education and Awareness

Recycling education is a contractual obligation within the City's agreements with Loraas and Cosmo and the activities are largely funded through utility fees. Communications efforts attempt to generate excitement in order to increase participation, provide information to reduce incorrect use of the programs and remove barriers to using the programs. Tactics are outlined in Attachment 4.

b. Electricity and Energy Reduction Programs

Saskatoon Light & Power (SL&P) provides education on the electrical system and energy reduction by providing ten in-home monitors to interested residents and by

Environmental Education Initiatives

accommodating school tours. Funding for these programs is available through the electrical utility. More information is available in Attachment 5.

Options to the Recommendation

Committee may choose not to continue support for the SASF program.

Financial Implications

Mill-rate-supported Initiatives

There is a total of \$112,000 available for environmental education and awareness expenditures from the Environmental Programs Service Line.

The cost to continue the SASF program in 2017 is \$60,000. The pilot had been funded from the capital budget. In 2017, funding will be allocated from operating leaving \$34,000 available for remaining initiatives.

Utility-funded Initiatives

The funding allocation for recycling communications in 2017 is \$309,000 for Curbside Recycling and \$156,000 for Multi-unit Residential Recycling. In addition, the Waste and Recycling Calendar is expected to cost \$140,000; funded by the mill-rate Service Lines of Environmental Programs (\$30,000) and Waste Handling (\$55,000). The remaining \$55,000 is provided by the Curbside Recycling Utility.

Environmental Implications

Environmental Implications are reported within the attachments where applicable.

Other Considerations/Implications

There are no policy, privacy or CPTED implications or considerations and a communication plan is not required.

Due Date for Follow-up and/or Project Completion

No follow-up report is expected at this time.

Public Notice

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

Attachment

1. Student Action for a Sustainable Future
2. Healthy Yards
3. Other Civic Environmental Education Programs
4. 2015 Education and Promotion Results for Civic Recycling Programs
5. Energy Reduction Programs

Report Approval

Written by: Amber Weckworth, Manager of Education & Environmental Performance

Environmental Education Initiatives

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

Environmental Education Initiatives.docx

Student Action for a Sustainable Future

The Student Action for a Sustainable Future (SASF) program engages teachers and students in sustainable action and learning. A pilot program was launched in 2013 to provide support, resources and professional development to approximately 12 grade 5 - 8 classrooms from both the Catholic and Public School Divisions. Student learning, action, and inquiry is focused on one or more of the program's six topic areas: energy, waste, water, food, biodiversity, and transportation. Projects lead to measureable greenhouse gas reductions, as well as other sustainability benefits in students' classrooms, schools, households, and the community.

SASF brings together diverse partners to deliver a program that leads to meaningful, lasting environmental and educational outcomes. The program is unique in that it links formal educators (Saskatoon Public School Division, Greater Saskatoon Catholic Schools, and educational consultants), non-formal educators (Saskatchewan Environmental Society, Sustainability Education Research Institute, community environmental organizations and businesses) and other environmental experts (City of Saskatoon and Saskatoon Light & Power). This partnership has not only contributed to the mandates of its many partners, but also students and teachers have benefited from the diverse knowledge and skills that each partner brings to the table. The program also has alignment with a number of priorities and strategies within the Corporate Strategic Plan, particularly the Strategic Goal of Environmental Leadership.

In 2016, the City provided \$60,000 to the Saskatchewan Environmental Society to deliver the project. Costs to continue the program in 2017 are expected to remain the same.

Program Reach

Over the past three years of the program, 40 teachers and over 925 students from various schools in Saskatoon have directly participated in the program. Teachers who participated in 2015 stated that they engaged up to 250 additional people beyond their classrooms, with one stating they engaged an additional 450. An estimated 2,220 family members may also have been engaged through the household actions built into many of the projects. Given these estimations, the average cost/touchpoint is between \$13 and \$34 per person.

Participants communicate learnings and accomplishments to other students, teachers, family members, and community members through 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.

The year-end student showcases attracts over 100 stakeholder attendees, 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).

Program Results

Some of the activities that students have worked on include:

- Conducting energy and waste audits;
- Creating classroom compost systems;
- Growing food and gardens;
- Holding water conservation challenges;
- Going on field trips, such as touring the Saskatoon Landfill, visiting Saskatoon Light and Power, and viewing Saskatoon’s recycling facilities;
- Increasing school-wide recycling;
- Creating garbage art;
- Developing lights out campaigns;
- Lowering school thermostats and holding “sweater days”; and
- Learning about the relationships between humans and nature from Elders and Knowledge Keepers.

Many initiatives also lead to lasting environmental and educational impacts in their schools, even after students 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 implementing food-share boxes, all contribute to ongoing environmental and educational benefits.

Teachers work with the Saskatchewan Environmental Society to audit and measure their environmental impacts, while additional financial savings are also realized. If the students and the other action-project participants maintain their activities for a full school year, the annual estimated savings¹ are:

| | 2013-14 School Year | | 2014-15 School Year | |
|------------------------|---------------------|---------|---------------------|---------|
| | | | | |
| Electricity | 17,000kWh | \$1,160 | 18,600kWh | \$1,270 |
| Gas | 88 GJ | \$230 | N/A | N/A |
| Water | 700 m ³ | \$50 | 350 m ³ | \$25 |
| Fuel (gas) | 230 L | \$230 | 500 L | \$500 |
| Waste | 8,000 kg | N/A | 2,210 kg | N/A |
| GHG (CO ₂) | 28,850 kg | N/A | 18,660 kg | N/A |

Results of the 2015-16 program are not yet available.

¹ Taxes and municipal charges are not included.

Most electricity projects led to savings at school. Electricity is calculated at the commercial run-off rate of 6.85¢/kWh.

Most gas projects led to savings at home. Gas savings are calculated at the residential rate of 10¢/m³ (\$2.653/GJ).

Most water projects led to savings at home. Water savings are calculated at the “next 600ft³” residential rate of \$7.181/100 ft³.

Fuel (gasoline) savings are calculated at \$1/litre.

SASF Letters of Support

Date: Wednesday, April 06, 2016

To: His Worship the Mayor and Members of City Council

First Name: Marlene

Last Name: Flaman Dunn

Address: 310 21st St. E.

City: Saskatoon

Province: Saskatchewan

Postal Code: S7K 1M7

Email: flamandunnm@spsd.sk.ca

Comments:

Hello Mayor Atchison and Council members,

On behalf of Saskatoon Public Schools, I want to thank the City of Saskatoon for their ongoing support of our fantastic SASF (Student Action for a Sustainable Future) environmental sustainability projects Program. Through this wonderful partnership between the City of Saskatoon - Environmental Services Branch, the SES, SERI on the U of S campus and other agencies interested in the protection of our fragile natural environment, our SPS students have been provided with life-changing experiential learning opportunities in sustainability that would otherwise have never been possible.

If you have the chance to attend the SASF "Student Showcase" , where our students will be displaying (and boasting about!) their sustainability projects at the WDM on April 19, between 9:00 am - 12:30 pm., you will be able to see for yourself how engaged and excited these students are in their learning about and actually DOING something about protecting our environment for this generation and those of the future. In a variety of ways to reduce greenhouse gas emission, you will see everything from water and energy conservation projects, recycling projects, to projects that protect our air and water quality, just to name a few. These students are SO eager to share their new knowledge about these environmental concerns, but what's even more impressive, is their commitment to taking action, right here and now, to make a difference in their homes, schools and extended communities.

Thank you again, to the City of Saskatoon, for your wonderful financial and in-kind support of this amazing learning and action-project opportunity for Saskatoon Public Schools students. To date, 46 teachers, and 35 schools have benefitted from the SASF partnership. We sincerely hope that we can count on your continued support for the SASF Program for years to come, so that more and more teachers and students - and thus more broader Saskatoon communities - can benefit from the knowledge and action that comes from this amazing and impactful sustainability partnership.

Yours,

Marlene Flaman Dunn

Coordinator for Career Education and Education for Sustainable Development

Saskatoon Public Schools

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/83637>



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MAR 18 2016

**CITY CLERK'S OFFICE
SASKATOON**

March 16, 2016

His Worship the Mayor and Members of City Council
222-3rd Avenue North
Saskatoon SK S7K 0J5

The Saskatchewan Environmental Society (SES) congratulates the City of Saskatoon on its vision to reach their sustainability goals through the strong partnerships created by the Student Action for a Sustainable Future (SASF) program. Together with the City of Saskatoon, Greater Saskatoon Catholic Schools, Saskatoon Public Schools, and the Sustainability Education Research Institute we are reaching more students, connecting to new sustainability partners, and building an energy aware community. The SASF is a highly effective program, having created a strong base of partners, and expanded its goals and vision each year since its inception. The Student Action for a Sustainable Future program is in the last of its 3-year pilot, and as we celebrate its success, we seek continued support of this successful program.

The SES congratulates the City of Saskatoon on its vision to strengthen community leaders. Forty-six teachers, 35 schools and hundreds of students have had the opportunity to develop action and inquiry based projects. The SASF program has provided these future leaders the knowledge, financial assistance, and time to focus on the City's goal to reduce greenhouse gas emissions. Each year the program runs, the team grows and becomes stronger. It is our goal to reach every school in the city, to have a sustainable leader encouraging Saskatoon students to be responsible stewards of our resources.

The SES congratulates the City of Saskatoon on its vision to reach the goal of sustainability by believing in our youth. The SASF program works its way from classrooms into households, as students involve their families in creating a healthy community. The program connects everyday people to the City of Saskatoon's goals by bridging the Saskatchewan curriculum with a desire to be environmentally responsible citizens.

We thank councilors and administration for encouraging teachers and students, for connecting SASF participants to the City's strategic plan, and for believing and showing us that the City of Saskatoon supports their citizen's. Investment in an authentic and action based education program like SASF allows our citizens the opportunity to be a part of our sustainable future.

Sincerely,

Bert Weichel, President

www.environmentalsociety.ca

-----Original Message-----

From: Tressa Kokonas [<mailto:tkokonas@gscs.sk.ca>]

Sent: Monday, March 21, 2016 4:27 PM

To: City Council <City.Council@Saskatoon.ca>

Subject: Form submission from: Write a Letter to Council File CK 7550-1

Submitted on Monday, March 21, 2016 - 16:26

Submitted by anonymous user: 70.76.88.175

Submitted values are:

Date: Monday, March 21, 2016

To: His Worship the Mayor and Members of City Council

First Name: Tressa

Last Name: Kokonas

Address: 2134 William Ave

City: Saskatoon

Province: Saskatchewan

Postal Code: S7J 1A5

Email: tkokonas@gscs.sk.ca

Comments:

Greater Saskatoon Catholic Schools has been in partnership with the City of Saskatoon, Saskatchewan Environmental Society and Saskatoon Public Schools in supporting the Student Action for a Sustainable Future 3-year pilot. SASF has been a very rewarding learning experience for our students and teachers that have taken part over the years, along with the broader school communities that have benefited from the sustainability projects in our elementary schools.

Greater Saskatoon Catholic Schools would like to thank the City of Saskatoon on its vision to reach their sustainability goals through strong partnerships created by the SASF program. Together with the City of Saskatoon, the Greater Saskatoon Catholic Schools, the Saskatoon Public Schools, and the Sustainability Education Research Institute we are reaching more students, connecting to new sustainability partners, and building an energy aware community. The SASF program is operating at high efficiency. We are building on our strong base of partners and we are expanding and improving each year.

The Student Action for a Sustainable Future program is in the last of its 3-year pilot, as we celebrate its success we ask for continued funding. Greater Saskatoon Catholic schools believes in the values and goals set forth by SASF, and appreciate the opportunity to engage our students and teachers in being action-oriented citizens that exemplify what good stewardship looks like in our local, national and global community.

Forty-six teachers and 35 schools have had the opportunity to develop action and inquiry based projects. Our communities have been empowered with knowledge, blessed with financial assistance, and allocated time to focus on the City's goal to reduce Greenhouse Gas Emissions. The team is strong and growing. It is our goal to reach every school in our city, to have a sustainable leader encouraging our students to be responsible stewards of our resources.

Lastly, thank you to our councillors for encouraging our teachers and students, for connecting SASF participants to the City's strategic plan, and for believing and showing us that the City of Saskatoon financially supports their citizen's. Investment in education allows our citizens the opportunity to naturally take an active role in our sustainable future.

As committee members of the SASF program, we thank you for your consideration in continuing to support Student Action for a Sustainable Future.

Sincerely,

Tressa Kokonas - Learning Services Coordinator, Greater Saskatoon Catholic Schools
Darryl Bazylak - Superintendent, Greater Saskatoon Catholic Schools

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/77698>

Healthy Yards

The Healthy Yards Program teaches residents how to make changes in their own yards and gardens by incorporating messaging from civic programs on home composting, water conservation, pesticide awareness, biodiversity, local food, healthy lawns, and boulevard gardening. The program was developed in 2014 in partnership with other groups to cross-promote our shared environmental goals and leverage the resources provided by each partner.

The campaign partners include the University of Saskatchewan Master Gardeners, Saskatchewan Waste Reduction Council Compost Coaches, Saskatoon Food Bank and Learning Centre, the City of Saskatoon, and other community organizations. Together, the partners offer accurate, relevant information on healthy gardening practices for the prairies through various tactics.

Program Delivery

The Healthy Yards program is delivered primarily through its program partners. The Saskatchewan Waste Reduction Council provides home composting services including composting workshops, rain barrel and compost bin rebate administration, composting hotline management, home visit coordination, community garden support, and outreach at community events, tradeshow, and retailers. The University of Saskatchewan Master Gardeners provide communications, marketing, and educational support, while the Food Bank and Learning Centre provides support and staffing for the Healthy Yards demonstration garden. Partners also provide expert advice and communications content for the key areas of the Healthy Yards program.

In 2016, the Healthy Yards program is expected to cost \$46,500. In 2017, the program could cost up to \$40,000 (cost-shared between the Environmental Programs mill-rate service line and water utility): \$27,000 of this is for contracted services provided by the SWRC, \$4,000 is for compost bin and rain-barrel rebates, and \$9,000 is for updated materials and marketing.

Environmental Implications

The Healthy Yards program addresses a number of environmental areas, such as:

- Waste diversion: Home composting is a successful strategy for diverting organics from the landfill. Approx. 40-50% of household waste is compostable.
- Decreased greenhouse gas emissions: Composting at home prevents the need to collect, transport, and manage waste at the landfill, which leads to a reduction in fuel and greenhouse gas emissions. Furthermore, when organics slowly decompose in an airless environment in the landfill, they produce a greenhouse gas called methane; therefore, keeping organics out of the landfill reduces greenhouse gas emissions.
- Storm water management: Gardens and green spaces with high amounts of organic matter (e.g. compost, mulch, vegetation) can absorb and slow down storm water better than impermeable surfaces, hardscaping, and compacted soils. Rain barrels also reduce the impact on the City's storm water system.
- Reduced peak water demand: Low-water gardening techniques and the use of rain barrels reduce the requirement for outdoor watering. This is particularly important when conditions are hot and dry, as decreasing peak water demand reduces the strain on our Water Treatment Plant. Furthermore, because treating and distributing potable water is

very energy intensive, capturing rain water and reducing outdoor water use reduces energy use and greenhouse gases.

- Water quality protection: Pesticides and chemicals from residential use end up in our ground water and river due to absorption and run off. Reducing the use of these substances will improve the quality of our water, air, and soil.
- Biodiversity: Healthy gardening practices can support biodiversity by providing habitat that is important for insects, wildlife, micro-organisms, and plants.

2015 Impact and Results

The Healthy Yards campaign reached 25,337 residents in 2015 through the tactics listed below. Communications for the program cost \$0.12/person, while the hands-on and in-person educational components cost \$7.85/person.

- 22 inquiries were made to the Compost Hotline.
- 24 compost support Home Visits were conducted.
- 58 compost bin and 60 rain barrel \$20-rebates were distributed.
- 9 new Master Composters were trained.
- 2,325 residents were reached at the 9 community events attended by the Master Composters, including: Seedy Saturday; Garden Experience; Gardenscape; SK Living Green Expo; Potash Corp Fireworks Festival (SGI Safety Fair); YXE Street Food Fair; Prairie Paladin Medieval Market & Faire; Gone Wild for Wildlife; and Planting Seeds.
- 176 people were reached at the Master Composters' 11 compost presentations.
- 147 people were reached at the Healthy Yards displays that were set up at 5 Home & Garden Centres.
- 58 residents attended the Compost 101 course during Hort Week.
- 57 people attended the City-sponsored Chemical Free Gardening 101 course.
- 1,000 people visited the Healthy Yards demonstration garden at the Garden Patch after its launch on August 20.
- 3 media interviews were carried out on how to compost at home.
- 19,300 'how-to' guides distributed on the follow topics: composting; rain barrels; pesticide free gardening; mulch; and tips for new gardeners.
- 2,219 people visited the City's website to find information on Healthy Yards, Home Composting, Be Pesticide Free and Be Water Wise.
- 3 Masters' students from the U of S School of Environment and Sustainability conducted research for the City on biodiversity and pesticide reduction.

2016 Program

In addition to maintaining the services and programming offered in 2015, the Healthy Yards program has been expanded in 2016 to include:

- Release of the results of the Saskatchewan Waste Reduction Council's 'Dishing the Dirt' research. The research highlights how over 20 home composting systems perform in our climate and includes helpful recommendations for people who are considering composting at home.
- 5 new Healthy Yards How-To Guides have been developed to address the following topics: growing food; low-water gardening; healthy lawn care; creating biodiversity; and small space gardening.

- The City is working with a number of partners including the Native Plant Society of Saskatchewan to develop a Saskatoon Master Naturalists program similar to the one offered in Edmonton.
- Numerous divisions worked together in 2015 to develop Boulevard Maintenance and Gardening Guidelines for Saskatoon. These guidelines were launched on the City's website in February 2016 to encourage more residents to garden on their boulevards. Residents will be encouraged to fill out the City's online Boulevard Garden Agreement so the number of boulevard gardens can be tracked. This initiative responds directly to recommendations from the Riversdale Local Area Plan and the Saskatoon Regional Food System Assessment.
- The Master Composters will increase promotion of the Home Visits service, as well as expand efforts with Community Associations and Community Gardens.

Comparative Municipal Initiatives

A number of other municipalities offer education and programming in the areas covered by Healthy Yards (outdoor water conservation, pesticide reduction, home composting, local food, and gardening). For example:

- The City of Edmonton's *Front Yards in Bloom* program recognizes and celebrates the efforts of residents who beautify their neighbourhood through natural front yards and edible gardens, while their award-winning *Master Naturalist* program trains residents to become stewards of natural landscapes;
- Calgary's *Yard Smart* program links healthy gardening practices with water quality and conservation, proper plant selection, and the use of compost, mulch and rain barrels;
- Winnipeg's Organic Lawn Care information outlines how to have a beautiful lawn while also reducing the use of chemical fertilizers and pesticides, improving biodiversity, and creating nutrient rich soil;
- Brampton boasts a Teaching Garden that includes drought-tolerant plants, as well as a butterfly garden, bird garden, herb garden, vegetable garden, and woodland garden. Compost produced by the Region of Peel's composting facility is used, while rain barrels and backyard composters are demonstrated; and
- Surrey's Yard & Garden campaign outlines ways to create wildlife habitat, avoid pesticides, plant native species, and grow food at home.

Home Composting:

Saskatoon's compost education programs are similar to those found in many municipalities across Canada. Incentives, such as subsidized backyard compost bins and the sale of affordable compost, are common.

Water Conservation:

Water conservation programs at the municipal level have been in effect in Canada since the early 1980s. For example, other jurisdictions have pursued initiatives that educate the public, reduce irrigated green spaces, promote water efficient landscaping, and focus on storm water management.

Pesticide Reduction:

More than 170 municipalities across Canada have enacted bylaws restricting the use of cosmetic pesticides. Most have done so due to health concerns. The City of Saskatoon does not currently restrict or regulate the residential use of pesticides.

Local Food:

Many places in Canada have Food Charters, such as: Saskatoon, Toronto, Prince Albert, London, Vancouver, Squamish, Thunder Bay, Medicine Hat, Kaslo, North Okanagan, Shuswap, North Island region, York region, Capital Region District, and Greater Sudbury region. Food Action Plans and committees are also becoming more common and are found in places such as: Toronto, Ottawa, Vancouver, Richmond, Calgary, Edmonton, and Kamloops.

Biodiversity:

The United Nations Decade for Biodiversity started in 2011 and will run until 2020. During this time, cities and countries from around the world are dedicating efforts towards preserving and establishing natural, diverse ecosystems. For example, over 1200 cities, towns, counties, and their associations are working with the International Council for Local Environmental Initiatives (ICLEI) to further biodiversity and sustainability in their regions. The City of Saskatoon is not currently a member of ICLEI.

Boulevard Gardening:

A number of municipalities allow boulevard gardening, such as: Winnipeg, Oakville, Guelph, St. Catherines, Pickering, Vancouver, Saanich, and Victoria. Saskatoon released its Boulevard Gardening and Maintenance Guidelines in February 2016 on Saskatoon.ca/Boulevards.



Other Civic Environmental Education Programs

Curbside Swap Program

Civic staff help coordinate and promote a number of neighbourhood-level as well as a city-wide swap event. A number of promotional tools are used, the most significant being social media. A program update and budget of \$15,000 was presented to Council in November of 2015. A similar program is planned for 2017.

| 2015 Reach | 2015 Impact | 2015 Cost/Person |
|---|--|------------------|
| <ul style="list-style-type: none"> • 50 homes with items on their curbs during Saskatoon's city-wide swap • 830 attendees on Facebook, with 61 posting their addresses • 5 communities held events in the spring and 12 communities promoted the event on September 12 • 6,073 webpage visits | Waste diversion from this program has not been determined. | \$1.97/person |

Our Environment Report and Dashboard

Our Environment is a snapshot of our environmental performance related to land, air, water and waste. It looks at the impacts of the City as a municipal government, and Saskatoon as a whole. The report and online dashboard highlights the actions and plans of the City, both to demonstrate environmental leadership in facilities and operations as well as foster environmental action by businesses and individuals.

The first edition of the report was published in 2014 with an update report to be published every third year (next in 2017). An online dashboard was launched in 2015 highlighting key indicators; this will be updated annually. The total cost over two years for the development of the dashboard and the report was approximately \$15,000.

In 2017, the report will be fully updated with additional indicators added to the online dashboard, the total cost may be up to \$15,000 for both components. However, administration will look for efficiencies in design and move to a digital-first approach to reduce costs and reach a wider audience.

Alternative Transportation

Coinciding with the Commuter Challenge and Canadian Environment Week, 10 side-mounted banners are installed along Spadina Crescent highlighting active modes of transportation – walk, bike and blade. Active transportation is a key focus area of the City's *Growth Plan to Half a Million*, with links to the strategic goals of Environmental Leadership, Moving Around and Sustainable Growth. The annual cost is \$850.

| 2015 Reach | 2015 Impact | 2015 Cost/Person |
|---|---|------------------|
| <ul style="list-style-type: none"> 10 banners reached approximately 1,350 vehicles | The impact of this program cannot be quantified | \$0.62/vehicle |

Civic Workplace Environmental Education

The City of Saskatoon is a large employer in the community and civic employees have a number of opportunities to make more environmentally-friendly choices and lead by example.

In 2016, employees of the City are being engaged to identify operational and process improvements, as well as individual opportunities to improve environmental performance. Initiatives could include increasing recycling, ensuring proper disposal of hazardous materials, planning waste-free events, reducing printing and paper use, finding 'lights off' opportunities, and encouraging employees to use public and active transportation options.

This initiative will continue into 2017 with funding requirements of \$3,000 for communications that encourage employee-led green initiatives.

| 2015 Reach | 2015 Impact | 2015 cost/person |
|---|--|------------------|
| <ul style="list-style-type: none"> 575 employee survey responses on 'healthy' transportation behaviour 6 meetings since September 2015, of cross-departmental Employee Transportation Steering Committee 3 'Working Together' newsletter submissions and 1 stand-alone email to all employees Direct engagement with superintendents and building operators at all civic facilities re: corporate recycling program | <ul style="list-style-type: none"> A shift toward healthy transportation as a preferred mode of commuting has both environmental (GHG reductions) and health impacts; these will be measured through future surveys and engagement. Civic recycling is collected. A total of 1,600 tonnes of waste was diverted, contributing 1% toward the City's total diversion rate. | No cost in 2015 |

Green Cart Program Education and Marketing

The program continues to accept new subscribers. Promotional efforts in 2015 were focused on encouraging additional subscribers using on-line and social media and cost \$16,000. The program is included in a number of other education efforts (e.g. Rolling Education Unit, 'Healthy Yards'). A promotional campaign is not planned for 2016 or 2017 as significant program growth is no longer a program goal.

In 2016, food waste was added to the materials accepted in the Green Cart program. 2016 communications are targeted at communicating this change. 2017 communications are expected to be operational in nature (i.e. reminders to subscribers/public on when to register and continuation of 'odour abatement' messaging) and could be included in the Waste Services Utility Service Line budget.

| 2015 Reach | 2015 Impact | 2015 Cost/Person |
|--|--|------------------|
| <ul style="list-style-type: none"> 69,000 households through the Waste and Recycling Collection calendar >350,000 online impressions with 1,000 click throughs >280,000 social media impressions and 11,000 engagements 26,112 webpage visits for both green cart and compost depots 11 newspaper ads and 3 PSA's | <ul style="list-style-type: none"> 5,752 subscribers (46% increase from 2014) 2,118 tonnes of compostable waste diverted through program contributing 1.5% toward the City's waste diversion rate. | \$0.05/person |

Household Hazardous Waste Program Education and Marketing

To control costs associated with Household Hazardous Waste events, the City promotes existing take-back programs across the community. In 2016, a program brochure is being developed that will be distributed with the Rolling Education Unit. The Saskatchewan Waste Reduction Council will continue engaging the private sector on take-back programs in 2016. Future awareness activities (such as reprinting brochures and a social media campaign) associated with the HHW program will be funded from the Household Hazardous Waste operating budget.

| 2015 Reach | 2015 Impact | 2015 Cost/Person |
|---|--|------------------|
| <ul style="list-style-type: none"> 10,391 webpage visits 2,381 participants 8 events | <ul style="list-style-type: none"> 76,176 kg hazardous waste diverted, contributing 0.08% toward the City's waste diversion rate. | \$0/person |

2015 Education & Promotion Results for Civic Recycling Programs

| Program Plan and Focus | 2015 Reach | Impact | Cost/Person |
|---|---|---|--|
| <p>Curbside Recycling Program Education and Marketing</p> <ul style="list-style-type: none"> • <i>\$0.37 per household per month is used for program education.</i> • <i>Programs aim to increase recycling by raising awareness through mass marketing on what and how to recycle, change behaviours, and establish recycling as a social norm.</i> • <i>Programs and tactics include marketing campaigns like 'Blue Approved', promoted through social media, web-site, and media relations; as well as in-person education such as neighbourhood blitzes, workshops for newcomers, a school program and the Rolling Education Unit.</i> | <ul style="list-style-type: none"> • >6 million impressions and StarPhoenix readers • 27,050 views of recycling web pages • Over 13,392 interactions with residents at community events • 3,000 participants in Loraas school program • 3,416 bylaw notices • 8,669 'Oops' correction notices • 1,250 carts checked resulting in 12% reduction in contamination • 5,000 utility flyers distributed | <ul style="list-style-type: none"> • The Curbside Recycling Program contributed 7.5% toward the City's waste diversion rate of 21.1% in 2015. • 10,600 tonnes of material was recycled through the curbside program • 84% of survey respondents indicated they were satisfied with information on what can and can't be recycled • 76% of survey respondents indicated they were satisfied with educational and informational materials | <p>Rolling Education Unit \$5.44/person</p> <p>Loraas Education Room \$20/person</p> <p>'Blue Approved' Campaign \$0.01/person</p> <p>EPO's and Education Blitzes \$3.81/person</p> <p>Mayfair Cart Blitz (pilot) \$3.60/person</p> <p>Videos \$4.27/person</p> <p>Social media, earned media, website, and utility bill stuffer \$0/person</p> <p>ESL Workshops (pilot) \$7.58/person</p> |

| Program Plan and Focus | 2015 Reach | Impact | Cost/Person |
|--|---|--|--|
| <p>MURR Program Awareness</p> <ul style="list-style-type: none"> • <i>\$0.37 per household per month is used for program education</i> • <i>Programs aim to inform building owners and managers on how the program works and encouraging them to work with their tenants and condo residents.</i> • <i>Programs include in-person education such as site visits, lunch and learns, workshops for newcomers and the Rolling Education Unit. Broader marketing campaigns, direct mail, social media, web-site, and media relations are also used as tactics.</i> • <i>The role of the City and Cosmo is clearly defined in the contract.</i> | <ul style="list-style-type: none"> • 2,279 posters placed in buildings • 11,491 brochures distributed to residents • 2,164 handbooks provided to building managers • 216 building managers and residents participated in presentations | <ul style="list-style-type: none"> • The MURR Program contributed 1.2% toward the City's waste diversion rate of 21.1% in 2015. • 1,600 tonnes of material was recycled through the curbside program • 63% of survey respondents indicated they were satisfied with information on what can and can't be recycled • 59% of survey respondents indicated they were satisfied with educational and informational materials | <p>The cost per person for the communications for this new program has not been identified. Program tactics have been updated for 2016 in an attempt to reach additional multi-unit residents.</p> |
| <p>Waste and Recycling Collection Calendars</p> <ul style="list-style-type: none"> • <i>69,000 calendars, customized by neighbourhood, are mailed to the occupants of each home having waste services provided by roll-out carts.</i> • <i>Surveys indicate the calendar has a very high retention rate.</i> • <i>Key messages focus on informing residents how to use carts to ensure successful collections and what items belong in each cart.</i> | <ul style="list-style-type: none"> • 69,000 calendars distributed by mail • 37,345 unique on-line address searches on City web pages • 8,996 collection reminders provided • 9,504 downloads of the calendar • 304,668 campaign-related e-mails • 3 million impressions during supporting campaign • 16 news releases, 6 interviews • 49,987 webpage visits | <ul style="list-style-type: none"> • 77% of residents recall getting a printed Collection Calendar and 82% still had it by the end of the year | <p>Print Calendar \$0.57/person</p> <p>Online Reminders and Campaigns \$0.10/person</p> |

Energy Reduction Programs

Saskatoon Light & Power runs an in-home display program and a school tour program.

| Program Plan and Focus | 2015 Reach | Impact | Cost |
|--|---|--|---|
| <p>Saskatoon Light & Power In-Home Display Program</p> <ul style="list-style-type: none"> • <i>Allows customers to borrow an In-Home Display for a one-month period to learn when and how much electricity they are using</i> • <i>In-Home Displays communicate directly with new smart meters to provide detailed metering data, such as graphs showing daily and hourly consumption</i> • <i>Metering staff educate customers on ways to conserve electricity at home, and how to monitor savings using the In-Home Display</i> | <p>There were 10 In-Home displays that are rotated between customers. An additional 20 displays were purchased in 2016 as a result of increased demand from residents. A total of 40 customers have participated to date.</p> | <p>Energy savings as a result of using In-Home displays are expected and have been noticed anecdotally from participants; however, they have not been quantified.</p> | <ul style="list-style-type: none"> • \$6,000 for equipment plus staff time |
| <p>Saskatoon Light & Power School Tour Program</p> <ul style="list-style-type: none"> • <i>20-30 school tours are conducted annually for elementary or high school students, aligning with the provincial science curriculum</i> • <i>Students learn how our electricity system can be safe, smart, and sustainable. Electrical safety is emphasised followed by a description of the economic, environmental, and social impacts of electricity use and ways to reduce those impacts. Participants also learn about career opportunities in the electricity industry.</i> | <ul style="list-style-type: none"> • 31 school tours with 848 students | <ul style="list-style-type: none"> • In some cases these tours are a part of the SASF program described above and may result in measurable action projects by students. | <ul style="list-style-type: none"> • Staff time to deliver the program; does not include materials or equipment. |

Remai Modern Construction Update

Recommendation

That the report of the General Manager, Transportation & Utilities Department, dated May 9, 2016, be received as information.

Topic and Purpose

The purpose of this report is to provide the Standing Policy Committee on Environment, Utilities and Corporate Services with an update on the Remai Modern.

Report Highlights

1. Construction of the EllisDon contract is approximately 90% complete.
2. Secondary contracts outside of the EllisDon scope include furniture, signage and lighting.
3. Contracts for the glass wall and security screen, shell gallery and restaurant fit-out are being managed by the Gallery.
4. The Contractor is estimating that the building construction will be complete in the fourth quarter of 2016, as long as the project does not experience delays going forward.
5. The Gallery is planning the move, transition, art preparation and opening of the Remai Modern.
6. Community program and public access to the building is being planned for when the building first opens in early 2017. Art exhibitions are scheduled to commence in mid-2017.
7. The Administration continues to do everything possible to prudently manage the contract with EllisDon and protect the City's interests.
8. The projected funding shortfall continues to be between \$2.5 and \$4.5 million considering all factors.

Strategic Goals

This report supports the Quality of Life Strategic Goal, relating to the implementation of the Municipal Culture Plan. It supports the four-year priority to enhance the quality of life in Saskatoon by directing expenditures toward amenities in neighbourhoods to enhance and protect property values and encourage private investment.

Background

City Council approved the construction of a new art gallery in Saskatoon. Smith Carter Architects and Engineers Inc. (now Architecture 49) were hired in 2010 to design, tender and manage construction. A construction contract was awarded in 2013 to EllisDon Corporation, with a target for completion in 2016.

Report

EllisDon Contract Status

Since the last report, construction progress has continued and the primary EllisDon contract is approximately 90% complete, including:

- Bronze-coloured metal panel cladding on the East, North and West sides is nearing completion.
- Interior atrium glass on levels three and four is 85% complete.
- Gypsum wallboard in the atrium is nearing completion.
- Walls and ceilings in the vault spaces are 95% complete.
- Wall finishes in level two and three Gallery spaces are 75% complete.
- Gallery ceilings are being framed, and gypsum, lighting and equipment installation will commence this month.
- Tiles in the level two washroom floors and walls are complete.
- Gypsum walls in the light well are complete.
- Preparation for the installation of the wood ceiling is underway. Final installation of the wood will occur late in the project, once environments are stable.
- Walls and the ceiling adjacent to Stair 2 are finished and painted.
- Level four floor surfaces have been prepared for the carpet installation.
- Theatre seating has been delivered to site for storage until installation at a later date.
- Elevator installation is complete and final finishing is underway.

Secondary Contracts Status

As construction reaches 90% complete on the primary contract with EllisDon, progress has been made on work relating to the secondary contracts for work outside of this contract.

Working with the Gallery, the City of Saskatoon (City) is responsible for preparation of the tenders for the furniture, gallery lighting, and signage. Furniture and gallery lighting tenders will proceed in the month of May, and it is anticipated that the materials will be on site before the end of the year. Signage is scheduled to be completed in early 2017.

The catering services contract, restaurant fit-out, shell gallery fit-out, and the glass wall and security screen installation are being led by the Gallery. The Gallery will provide updates on these contracts in the next reporting period.

Transition to Opening

The Gallery continues to refine a transition plan that outlines and schedules their tenant improvements, move details, and their approach to the art installation. Transition into the building for staff or public uses can begin once substantial completion, as defined by the provincial *Builders' Lien Act*, is achieved and the spaces meet life-safety requirements for building occupation. Goods or equipment delivery, or other construction work can occur in the building prior to substantial completion, under agreement with the contractor. The Administration is working with the Gallery and EllisDon to investigate the possibility of the Gallery gaining access to some completed rooms prior to full project Substantial Completion.

The Gallery has stated that moving and installing the art into the new building is only possible after a period of stable climate readings and this is a key driver for the timing of the art exhibition programming. The purpose of this period is to have confidence that the building can sustain stable conditions during very warm or very cold temperatures, and high and low humidity exterior conditions within the spaces dedicated to art exhibition and handling. The Gallery is considering a four-to-six-month period of stable environmental trending in the art spaces prior to the moving the collection into the new building.

A scan of other galleries in Canada finds that environmental trending timing for permanent collections varies. Some galleries that have significant pressure to open choose a shorter time period. Other galleries are more conservative and elect to wait six-months or longer before their own collection is moved. According to Michael Lundholm, a leading expert on the design and planning of collection-oriented institutions and creator of the Remai Functional Program, three-to-six months is common practice, and falls between the two extremes. In best practice, this period of stable readings covers the shoulder season when exterior conditions vary widely.

The precise timing for the building opening, public access to portions of the building, and activities within these open areas is currently in the planning stage. Should the current dates for building completion hold, the Gallery Administration plans to open for art exhibitions in mid-2017. The general public areas are not limited by the commissioning occurring in the art spaces, and therefore opportunities to open the building in early 2017 for public use and community programs are being explored further. The Administration and the Gallery will continue to update Committee and City Council on the opening date and plans.

Financial Status

The current approved Gallery project budget is \$84,634,160. Considering all factors, the cost projection at the time of this report estimates that the funding shortfall continues to be \$2.5 to \$4.5 million. This is presented as a range because there are a number of outstanding discussion points on cost and delay between the City and EllisDon, which have yet to be resolved and will impact the final status.

The following actions have been taken to address the budget overages and to manage the project according to prudent financial principles, while balancing the needs of a fully functioning gallery with the fiscal constraints facing the City:

- There continue to be many requests for information and change orders to clarify and correct the architect's Issued for Construction drawings. The project protocol allows only changes that are required to meet life safety and the building code. Requested changes related to non-critical operational requirements are not accepted.
- The Administration project team continues to make the full Consultant team and EllisDon aware of the general cost position of the project and involve them in addressing issues to ensure that corrections are managed with time and costs in mind.

- Last July, the project was reset to redefine and enforce the working methodology for change management. Follow up meetings to measure and manage this process have occurred over the last twelve months.
- Where practical, cost reductions through reduced scope or finishes have been implemented.
- Processes for sharing information and change management have been developed and implemented including weekly site reviews and formal processes to manage critical issues.
- The schedule is being closely monitored, as extensions have potential to impact contract administration costs.
- Some items - such as a portion of the furniture - will be funded by the Gallery's capital campaign.

Project Schedule – EllisDon Contract

The project is proceeding on notice from the Contractor that all work is essentially on the critical path at this point and there is little or no “float” left in the schedule. The Contractor is currently estimating total performance or full completion of the contract by the late 2016. Specifically, they report that Substantial Completion will be achieved on September 22, 2016, with Total Completion on October 27, 2016.

Communication Plan

All public project reports and updates are being posted to the City's Website.

Financial Implications

Capital Project #1813 Remai Modern (formerly #1786) has been approved for funding in the amount of \$84,634,160.

The funding is made up of the following components:

- \$22,095,160 – Remai Gallery Pre & Post 2013 Fundraising
- \$30,287,000 – City Contribution
- \$ 488,000 – Remai Board Loan from City for Kitchen Equipment
- \$ 4,093,000 – Provincial Funding – Building Communities
- \$12,651,000 – Provincial Funding – Building Canada
- \$13,020,000 – Federal Funding – Building Canada
- \$ 2,000,000 – Private Donation by the Ellen Remai Foundation for final fit out of the Shell Gallery and Main Floor Security Additions

\$84,634,160 – Total

In addition to the construction project costs above, the Remai Modern is funding transition and implementation costs required to open the building. The Administration continues to explore opportunities to address the projected shortfall of funding to complete this project. Opportunities for private funding are also being discussed with the Gallery Administration.

The Administration will continue to report on progress as construction continues.

Environmental Implications

Construction and operation of the new Remai Modern will result in the consumption of non-renewable resources and the generation of GHG emissions.

Other Considerations/Implications

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

Due Date for Follow-up and/or Project Completion

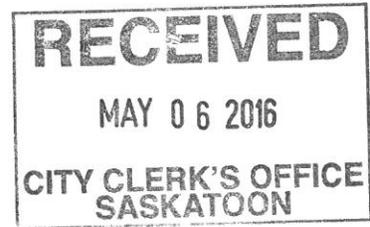
The next project update will be brought to the Standing Policy Committee on Environment, Utilities and Corporate Services in the late summer of 2016.

Public Notice

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

Report Approval

Written by: Jeanna South, Remai Project Director
Reviewed by: Dan Willems, Director of Major Projects
Reviewed by: Catherine Gryba, General Manager, Corporate Performance Department
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities Department



May 6 2016

ATTENTION: Joanne Sproule – City Clerk

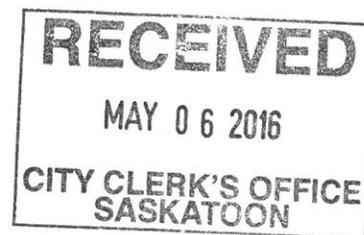
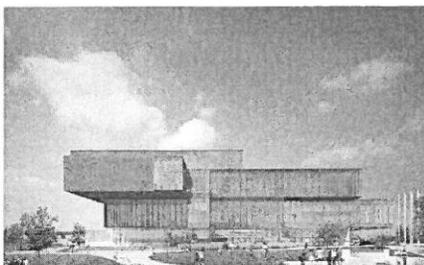
To Whom It May Concern:

Further to the city's construction update, Remail Modern would like to speak at the upcoming meeting of the Standing Policy Committee on Environment, Utilities and Corporate Services.

CEO Mr. Gregory Burke would like to be in attendance to update the city about Remail Modern's plans and progress as we get closer to opening the new art gallery, and to answer any questions the committee might have.

Sincerely,
Alison Murawsky
Marketing Director - Remail Modern

Backgrounder: Rемаi Modern Media Tour — Friday, May 6, 2016 at 4 p.m.



REMAI MODERN

- A direction-setting art museum AND a multi-purpose gathering place with varied spaces available for rent. Ample opportunities for themed events and performances, weddings, conferences, and receptions among the meeting rooms, 150-seat theatre, riverview rooms, atrium, and outdoor terraces. The beautiful spaces, flooded with natural light, feature breathtaking vistas and the inclusion of art throughout.
- Canada's modern art museum! The focus is modern art — the art of our time, from Saskatchewan's birth in 1905 onwards.
- Supported by civic, provincial and federal governments, and private fundraising.
- About 130,000 square feet on four levels — among the top art museums in the country — including 11 gallery spaces.
- Situated at River Landing and connected to Persephone Theatre.

THE ART

- Permanent collection of more than 8,000 works includes the world's largest collection of Picasso linocut prints, and a related collection of 23 ceramic works by Picasso. Many works of community, regional and national significance.
- With more than five times the space of the Mendel Art Gallery, Rемаi Modern will be able to showcase its collection in five collection galleries.

DETAILED PRE-LAUNCH PLANNING

- In preparation for the 2017 opening of Rемаi Modern, the artworks in the collection must be restored as necessary, crated, and systematically moved into the new space. Then they will be installed or placed in proper storage.
- As with museums and galleries worldwide, Rемаi Modern will rely on climate controls to prevent damage to the diverse objects in the collection, and to meet national and international standards.
- Upon "substantial completion" of the new building, when Rемаi Modern takes possession from the contractor, meticulous monitoring of climate controls will begin. It may take months of temperature and humidity readings to ensure that acceptable levels can be maintained to protect the artworks.
- Other preparations underway: ticketing and tours, event and space rentals, visitor experience programs, security systems, food services and audio-visual networks.
- Fundraising continues in order to fulfill the potential of Rемаi Modern. Much of the fundraising links to revenue generation, as with securing funds to outfit the restaurant.

COMMUNITY ENGAGEMENT

- Dynamic programming throughout the building, connecting art to the human experience.
- Free admission to ground-floor attractions.
- Excitement building through community engagement plan this summer, with announcements, events, and behind-the-scenes stories.
- We're building a lively and inclusive space, where everyone will feel welcome.
- Announcement on the gallery's visual identity is coming soon.

GALLERY PATRON

- Lead patron Ellen Remai generously donated \$16 million toward construction, \$15 million to support international exhibition programs, and a collection of 406 Picasso linocuts, valued at more than \$20 million.

ARCHITECTURE & CONSTRUCTION

- Award-winning modernist design by Bruce Kuwabara, KPMB.
- Lead contractor EllisDon began construction in early 2013.
- The building is about 90 per cent complete.

GALLERY FEATURES: GROUND LEVEL

Atrium generously supported by the McClocklin Family

- 4,090 square feet.
- Features a fireplace, reception area, and curving staircase to the second floor.

Connect Gallery generously supported by the Greg & Olivia Yuel Family

- Free admission for the frequently changing exhibitions and live programming in this gallery. Live programs will also animate the Atrium.
- Many shows will relate to exhibitions on view elsewhere in Remai Modern.

Remai Modern Store

- A bright and welcoming space stocked with a selection of art, exhibition, and gallery-related items.

Restaurant & Patio generously supported by the Vaughn Wyant Family

- The restaurant and kitchen comprise 2,529 square feet.
- Seating space for 71 (including 13 bar seats) comprises 968 square feet.
- The patio, nestled within River Landing, has sweeping views of the South Saskatchewan River.

Learning Centres generously supported by Cameco

- Designed for school programs and art workshops for all ages.
- Provides generous and flexible space to welcome groups of all sizes.

GALLERY FEATURES: SECOND LEVEL

Permanent Collection Galleries

- Five galleries, including those named for generous donors: the MLT Gallery and the Grit & Scott McCreath Gallery.
- Totalling more than 6,000 square feet, these galleries are dedicated to changing displays from Remai Modern's collection.

Theatre/Cinema generously supported by SaskTel

- 1,830 square feet.
- 150 seats; supporters have proudly purchased named seats.
- This cinema, performance and lecture theatre may be rented for corporate and private functions.
- Regular film screenings organized by the gallery and community groups.

Riverview Room and adjoining Reception Area

- 5,376 square feet, divisible into two separate spaces.
- Overlooking the South Saskatchewan River, this room will accommodate special events including weddings and conferences in an elegant space for up to 350 participants.

Outdoor Terrace (seasonal)

- 1,366 square feet.
- Overlooking River Landing.

GALLERY FEATURES: THIRD LEVEL

Picasso Gallery

- 2,055 square feet of exhibition space for changing exhibitions based on the world's largest collection of Picasso linocuts and a related collection of ceramics by Picasso.

Feature Gallery

- 5,435 square feet.
- This cantilevered space overlooking the river will showcase special, focused exhibitions and multidisciplinary works.

Marquee Gallery

- 7,456 square feet.
- This gallery, the largest in the building, comprises three, connecting spaces. One, the BMO Gallery, is generously supported by BMO Financial Group. It is more than 2,000 square feet.
- The changing exhibitions will include international touring shows.

Gallery Lounge

- 2,260 square feet with river views.
- Ideal for receptions and events for smaller groups.

GALLERY FEATURES: FOURTH LEVEL

Conference room generously supported by a bequest honouring former Board Chair Dr. Art Knight

- 904 square feet.
- Seating for 36, with a sweeping view of the river.
- Multimedia-enabled for meetings, etc.

Meeting Room generously supported by Wade and Betty-Anne Heggie

- 323 square feet.
- Seating for 10.
- Multimedia-enabled for meetings, etc.

Rooftop Terrace (seasonal)

- 1,774 square feet, off the conference room.
- This outdoor terrace offers stunning views and may be rented for receptions and special events.

Offices for Remai Modern staff

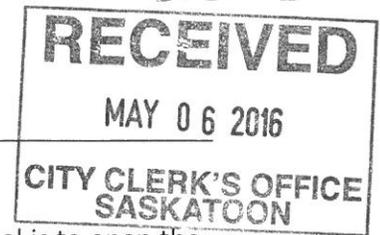
- Largely open-plan space.

Resource Library

- Open to the public and researchers by appointment.

REMAI MODERN UPDATE

May 6, 2016



Remai Modern is hard at work to prepare for the opening in 2017. Our goal is to open the Gallery as soon as practical after construction of the building is completed. Once open, Remai Modern will offer a dynamic and inclusive experience with art infused throughout the multi-purpose space. During this transition period, the staff is working meticulously through the transition plan to ensure everything is prepared for the opening. In addition, Remai Modern is working in consultation with many organizations to deliver a grand opening event that reflects the warmth and generosity of our community, and a public facility where everyone belongs.

Multi-purpose

Remai Modern will offer space and experiences for everyone.

- Programming will be dynamic and thought-provoking, including on the ground level, which will be offered free to the public. This will include large-scale art commissions, a changing gallery space, an active learning studio and open community gathering spaces.
- The facility will offer unique rental spaces for weddings, conferences, films, meetings, rooftop gatherings and additional revenue generation through the restaurant and gift shop. It will also allow flexibility for educational and cultural opportunities as well as various themed events.
- The RFP has closed for the restaurant and we hope to have more to say about that soon.

Artwork

Art will be infused through every space in Remai Modern, creating a multi-dimensional experience in engaging and dynamic space.

- There are **8 thousand** works of art. Space will allow Remai Modern to house the gallery's entire permanent collection for the first time.
- There are 5 permanent collection galleries and an international exhibition gallery.
- Films, performances and talks can be hosted in the 150-seat theatre.

Preparing the collection for its new home requires an extensive transition plan: restoring works of art, packing, shipping, storage, determining placement, installation, designing security and climate plans. As an example, the William Pehudoff murals are currently being restored and will be ready for the opening.

Engagement

Remai Modern belongs to the citizens. Programming will continually strive to be diverse, inclusive and relevant so that all may feel welcome.

- Guests will be welcomed throughout the building and around River Landing
- Remai Modern continues to offer programming at schools, hospitals, festivals, public gathering spaces

Programming is designed to educate and inspire. Don't be surprised to find Remai Modern in popular public places this summer, and watch for a steady reveal of key elements of the new Gallery and multi-purpose facility, as we countdown to the opening.

Saskatoon Water 2015 Annual Report

Recommendation

That the report of the General Manager, Transportation & Utilities Department dated May 9, 2016, be received as information.

Topic and Purpose

The purpose of this report is to present the Saskatoon Water 2015 Annual Report that outlines the performance and activities of the division in 2015, including a comparative analysis to previous years.

Report Highlights

1. Saskatoon Water oversees three self-funded public utilities: Water, Wastewater, and Storm Water.
2. In 2015, Saskatoon Water provided water and wastewater services to 260,900 Saskatoon residents and water to an additional 35,300 customers outside of Saskatoon through SaskWater. 2015 was Saskatoon's highest annual sales volume (37.4 million cubic meters) since 2007.
3. Saskatoon water, wastewater, storm water, and infrastructure levy bills are the lowest of major cities in Alberta, Manitoba, and Saskatchewan.
4. \$4.7 million was allocated to the Water and Wastewater Revenue Stabilization Reserve and to Capital Reserves.
5. Water and Wastewater Utilities provided \$8.48 million in Grants-in-lieu of Taxes to the City.
6. Saskatoon Water experienced two lost-time incidents, which is lower than the corporate average.
7. Saskatoon Water had 93 active capital projects as of December 31, 2015, budgeted at more than \$216.6 million.

Strategic Goals

This report supports the Strategic Goal of Asset and Financial Sustainability by reducing the gap in funding required to rehabilitate and maintain City infrastructure, establishing levels of service for rehabilitation of assets, identifying supporting financial strategies, and developing funding strategies for expenses related to new capital expenditures.

This report also supports the Strategic Goal of Economic Diversity and Prosperity by planning and investing in infrastructures needed to attract and support new businesses and skilled workers to the city by ensuring fees and permits are competitive with other jurisdictions within and outside the province.

Background

Saskatoon Water provides safe and reliable quality drinking water, wastewater treatment that meets health and environmental regulatory standards, and storm water management to minimize flooding.

Report

Saskatoon Water oversees three self-funded public utilities: Water, Wastewater, and Storm Water. The utilities fund all aspects of water services performed by Saskatoon Water and other divisions. Saskatoon Water is responsible for the operation and maintenance of the Water Treatment Plant, the Wastewater Treatment Plant, 28 sanitary sewer lift stations, the Meter Shop, and to provide engineering and planning services. The utilities also fund other divisions to deliver day-to-day operation and maintenance of the water distribution, wastewater collection, storm water drainage systems, asset preservation and construction, and billing services.

The Saskatoon Water 2015 Annual Report (Attachment 1) highlights information relating to our: Customers, Finances, People, Work, Environment, and Challenges.

Our Customers

In 2015, Saskatoon Water provided water and wastewater services to 260,900 Saskatoon residents. In addition, Saskatoon Water sold potable water to SaskWater who re-distributed to 35,300 customers outside of Saskatoon.

Saskatoon's 2015 spring was the fifth driest spring on record, in terms of rainfall. This resulted in the highest annual sales volume (37.4 million cubic meters) since 2007.

Saskatoon citizens ranked water treatment and wastewater treatment as two of the most important civic services, with drinking water quality being the most important service in the annual 2015 Civic Services Satisfaction Study. In 2015, average citizen satisfaction for water quality was 8.4 and sewage treatment was 7.4 out of 10.

Our Finances

The average residential Water and Sewer Utility Bill for Saskatoon (\$96.72/month) remains significantly lower than other major prairie cities. For example, the average bill in Winnipeg (\$106.22/month), the second lowest utility, was 9.8% higher than Saskatoon, and Calgary's bill (\$120.57/month) was 24.7% higher.

In 2015, the three utilities collected \$130.0 million in total revenues and had \$125.3 million in total expenses for a positive variance of \$4.7 million, which was allocated to the Water and Wastewater Revenue Stabilization Reserve and to Capital Reserves.

City policy states that the Grants-in-lieu of Taxes will equal 9% of budgeted metered revenue. In 2015, this totalled \$8.48 million. The utilities also transferred \$3.0 million to the Redevelopment Levy, \$4.0 million to the Roadway Levy, and \$4.72 million to Corporate Services.

Our People

Saskatoon Water had 160 employees as of December 2015. In 2015, Saskatoon Water participated in diversity programs, such as Gabriel Dumont Institute Work Experience for Aboriginal People, Women in Trades – Grade XII Girls, and Open House for New Canadians.

In 2015, the division experienced two lost-time incidents, which is lower than the corporate wide average. The lost-time incidents resulted in 106 lost-time days, which is above the division's five-year average of 74.6 days.

Our Work

The City's water and wastewater treatment, distribution, and collection systems are regulated by Permits to Operate issued by the Water Security Agency. In 2015, Saskatoon Water conducted a combined total of over 90,000 water quality tests at both treatment plants. The results of the tests showed that the quality of the drinking water and the wastewater effluent were well within the acceptable limits under the Permits to Operate.

Saskatoon Water had 93 active capital projects as of December 31, 2015, budgeted at more than \$216.6 million. In 2015, Saskatoon Water substantially completed its most significant Water Treatment Plant upgrade in over 50 years, with a total cost of \$77.0 million. This project included reservoir expansions and new pumphouses at the Avenue H and 42nd Street facilities, and an ultraviolet disinfection system at Avenue H.

Construction for the wastewater odour abatement project was 50% completed in 2015.

The Lakeview Sanitary Sewer Storage facility, funded by the Flood Protection Program, was the 11th 'superpipe' facility installed in the city to increase capacity and mitigate risk of sewer backup.

Saskatoon Water remains committed to continuous improvement through improved customer service and implementing innovations. In 2015, some continuous improvement initiatives included various optimization initiatives for the water and wastewater treatment processes, improved inventory management system, procurement process improvements, Advanced Metering Infrastructure, and storm water run-off assessment process improvement.

Our Environment

Protecting the river and its surrounding watershed is vital to the long-term sustainability of the water supply. Saskatoon Water is a member of the South Saskatchewan Watershed Stewards Incorporated.

The Wastewater Treatment Plant consistently meets or exceeds all regulatory limits for effluent discharged to the river.

Saskatoon water rates are designed to encourage water conservation in order to defer the need for high capital intensive capacity projects. Saskatoon Water collaborates with Environmental & Corporate Initiatives in the “Be Water Wise” campaign to encourage and educate the public on water conservation initiatives.

Our Challenges

Saskatoon Water has been proactive in anticipating and managing ongoing challenges, such as growth, infill development, aging infrastructure, climate change, bylaw enforcement, regulatory changes, and inflow/infiltration.

Communication Plan

A copy of the Saskatoon Water 2015 Annual Report will be posted on the City Website and shared with the staff.

Other Considerations/Implications

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

Due Date for Follow-up and/or Project Completion

This report is provided on an annual basis and no further follow-up is required at this time.

Public Notice

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

Attachment

1. Saskatoon Water 2015 Annual Report

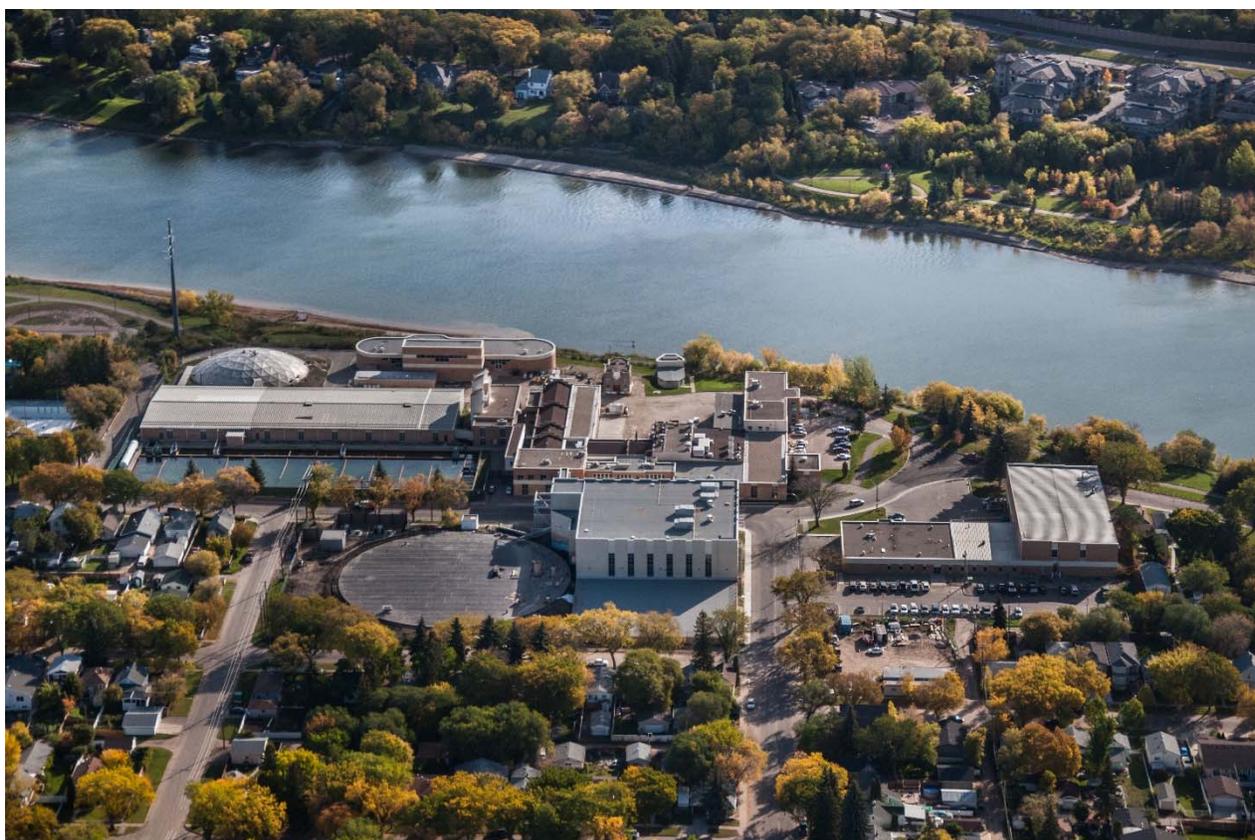
Report Approval

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

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Saskatoon Water

2015 Annual Report



Saskatoon Water 2015 Annual Report

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MESSAGE FROM THE DIRECTOR

Saskatoon Water's management and staff are committed to providing exceptional quality water, wastewater, and storm water management services in the most reliable and cost-efficient way for the citizens of Saskatoon. I am pleased to present our results in the *Saskatoon Water 2015 Annual Report* on behalf of our division.

The report describes our contributions to achieving the City of Saskatoon's Strategic Plan. We take great pride in receiving the highest citizen satisfaction rating of any City service for the quality of our water. Several initiatives have been completed and more are underway that will further enhance service to citizens, increase efficiencies, reduce costs, and strengthen our environmental leadership.

Our financial statements show responsible stewardship of the resources that Saskatoon citizens have entrusted to us. We continue to provide excellent value to our citizens as we maintain the lowest average water, wastewater, and storm water Utility Bill among major Western Canadian cities. Our utility rates are designed to fund the needed capital and operating costs for current and future water and wastewater services.

A key focus has been addressing growing demands and changing expectations for water-related services. In 2015, we completed the most significant Water Treatment Plant upgrade in over 50 years, resulting in further improved water safety and an increase in water storage capacity. Enhancements underway at the Wastewater Treatment Plant will significantly reduce odour emissions.

Our emphasis on safety has also paid off in 2015 through a reduction in employee injuries. Our lost-time frequency rate was lower than in previous years and lower than the City of Saskatoon average.

Saskatoon Water will continue to plan for the future and make needed infrastructure investments to address the challenges of growth, regulatory changes, and potential impacts of climate change.

Reid Corbett

Director

SASKATOON WATER

Executive Summary

Saskatoon Water contributes to our city's quality of life by providing safe and reliable quality drinking water, wastewater treatment that meets health and environmental regulatory standards, and storm water management to minimize flooding.

The division oversees three self-funded public utilities: Water, Wastewater, and Storm Water. The utilities fund all aspects of water services performed by Saskatoon Water and other divisions. Saskatoon Water's 160 employees operate the Water Treatment Plant, the Wastewater Treatment Plant, 28 sanitary sewer lift stations, the Meter Shop, and provide engineering and planning services. The utilities also fund other divisions to deliver day-to-day operation and maintenance of the water distribution, wastewater collection, storm drainage systems, asset preservation and construction, and billing services.

Saskatoon Water provides water services to over 72,000 residential and commercial customers. The Water Treatment Plant supplies water to almost 300,000 Saskatchewan residents. Average monthly residential water-related Utility Bills of \$96.72 remained the lowest among Western Canadian cities in 2015.

In 2015, the utilities collected \$130.0 million in revenues, incurred \$125.3 million in expenses, and contributed \$4.7 million to stabilization and capital reserves. Total revenues in 2015 increased by 13% compared to 2014, as a result of growth and development, rate increases, the phase-in of roadways and redevelopment levies, and increased water use for irrigation due to a dry spring. A 9.5% annual increase in water and wastewater rates was approved for 2014 through 2016 to ensure that the utilities can meet needs of current and future citizens.

In 2015, almost half of Saskatoon Water's revenues, or \$63.9 million, was allocated to capital to fund longer-term water-related infrastructure projects. Significant capital projects in 2014 and 2015 include the Water Treatment Plant expansion, new water reservoirs at Avenue H and 42nd Street, Spadina Sanitary Lift Station, Lakeview Sanitary Superpipe, East Riverbank Slope Stabilization at 17th Street, and construction started on the Wastewater Odour Abatement Project.

SASKATOON WATER

1.0 OVERVIEW

1.1 Introduction

Saskatoon Water is a division that oversees three self-funded utilities: Water, Wastewater, and Storm Water that fund the planning, designing, operating, maintenance, and capital for all water, wastewater, and storm water services for existing and future citizens and businesses. The utilities have assets with a replacement value estimated at over \$9.5 billion (Appendix 1).

The utilities also fund Public Works, which delivers the day-to-day operation and maintenance of the water distribution, collection, and drainage systems. Major Projects and Construction & Design manage infrastructure assessment and construction projects. Corporate Revenue provides customer billing, meter reading, and collection services. The following summarizes the responsibilities of Saskatoon Water's five sections.



The Water Treatment Plant (WTP) supplies all consumers with safe and reliable, high-quality drinking water. Core functions include operating and maintaining the South Saskatchewan River Raw Water Intake, the WTP, and three potable water storage reservoirs with a capacity of 114 million litres.

The Wastewater Treatment Plant (WWTP) ensures that wastewater is treated to meet high provincial and federal regulatory standards before being returned to the South Saskatchewan River. The wastewater's system includes the WWTP, 28 pumping stations, and the Biosolids Facility where solids from the treatment process are handled and disposed. Sales of the plant's slow-release fertilizer create additional revenues.



The **Meter Shop** is responsible for the purchase, installation, testing, repair, and replacement of water meters, as well as the installation and termination of water services. The Meter Shop also operates the Cross Connection Control program to ensure that proper backflow prevention devices on multi-unit residential, commercial, industrial, and institutional service connections protect the City of Saskatoon's (City) potable water.

Engineering & Planning is responsible for the planning and design of water and sewer servicing for new land development, as well as capacity analysis and improvement within existing neighbourhoods. A city-wide network of sewer and rain gauge monitors are operated and maintained by the system modeling group to assist with water-related planning and design activities.

Engineering & Planning manages the Storm Water Utility and provides storm water engineering expertise. The section also monitors and mitigates damage to public property from riverbank settlement and instability due to high ground water levels.

Engineering Services provides capital planning and feasibility studies, and project management services for Saskatoon Water's capital expansions and asset replacements.

1.2 Strategic Linkages

The City's [Strategic Plan 2013-2023](#) provides the direction that guides Saskatoon Water's activities. The following section outlines our Mission, Vision, and linkages to the Corporate Strategic Goals, Leadership Commitments, and Values.

Our Mission

Saskatoon Water delivers safe, reliable, and cost-effective water, wastewater, and storm water services that meet and exceed health and environmental regulatory standards.

Our Vision

Saskatoon citizens have exceptionally high-quality water, dependable wastewater handling, and effective storm water services that sustain people, property, and the environment.

Our Strategic Goals

Quality of Life: Provide citizens with affordable, reliable and high-quality water, wastewater treatment, and storm water services.

Continuous Improvement: Increase workplace efficiencies and improve services through implementing innovative approaches that maximize value.

Asset and Financial Sustainability: Implement capital preservation and expansion plans that provide the most cost-effective water-related infrastructure for current and future citizens and businesses.

Environmental Leadership: Implement leading-edge innovations for environmentally responsible water-related infrastructure and services.

Sustainable Growth: Work closely with other divisions to provide efficient and resilient designs for water, wastewater, and storm water infrastructure for new developments.

Moving Around: Collaborate with all stakeholders to minimize water-related transportation disruptions.

Economic Diversity and Prosperity: Provide competitively priced and reliable water-related services, and cost-effective water and sewer designs for new developments.

Our Leadership Commitments

Our employees support leadership commitments in our day-to-day work:

- Reliable and Responsible Service
- Strong Management and Fiscal Responsibility
- Effective Communication, Openness, and Accountability
- Innovation and Creativity

Our Corporate Values

Trust: We build trust with citizens and colleagues by providing accurate technical information, analysis, and responses in a timely manner.

Integrity: We lead by example, making the best decisions and striving to work beyond the scope of the position.

Respect: We build on each other's strengths; respectfully acknowledging individual beliefs.

Honesty: We are honest to each other, and encourage frank, honest discussions while being sincere, admitting mistakes, and learning from them.

Courage: We take smart risks, thinking through challenges, suggesting new approaches, and embracing change to enhance our level of service.

2.0 OUR CUSTOMERS

2.1 Number of Customers

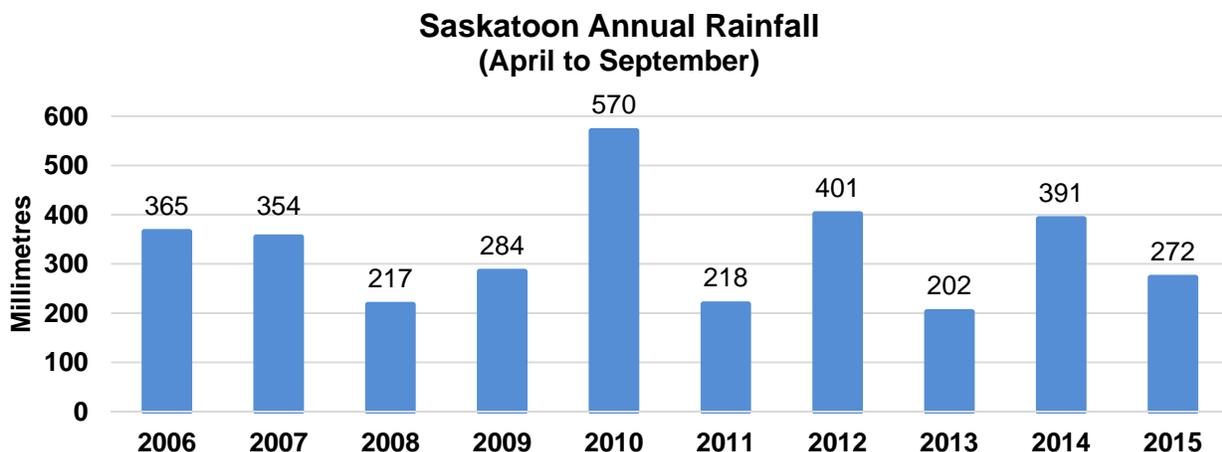
Water treatment and distribution, wastewater collection and treatment, and storm water management services are provided to Saskatoon's 260,900 citizens and to commercial, industrial, and institutional customers. Saskatoon Water also sells treated water to SaskWater, which receives this water at eight supply points around the city's perimeter and re-distributes it to 35,300 customers outside of Saskatoon.

In 2015, Saskatoon Water provided water services to over 72,000 residential and commercial water meters. Over the last five years, the average number of active water service connections increased by 10.8%.

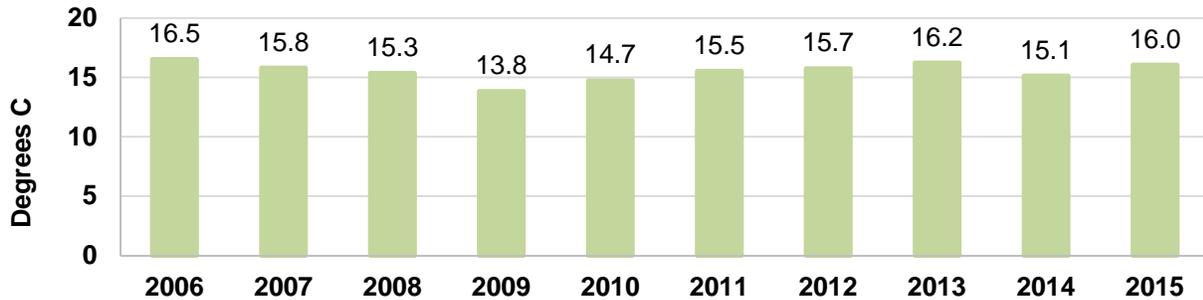
Storm water customers include residential properties with water meters and commercial, industrial, and institutional properties that generate storm water run-off. In 2015, storm water management charges were applied to over 67,000 total properties in the city. Agriculture-zoned property, roads, right-of-ways, and City-owned parks were exempted from storm water charges.

2.2 Rainfall and Temperature

Variations in annual water sales correlate closely with summer rainfall and temperatures, which show irrigation is a significant portion of total sales volume. Saskatoon's 2015 spring was the fifth driest spring on record, in terms of rainfall, while 2014 was the third wettest on record.

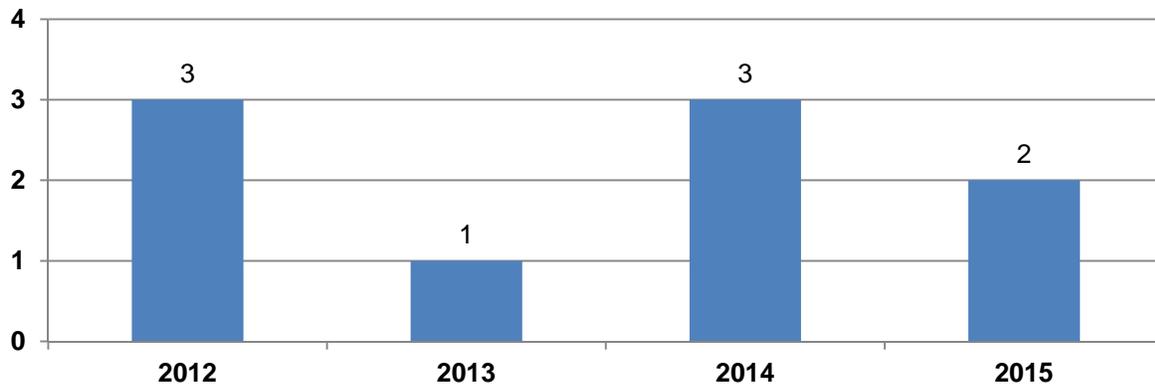


Saskatoon Seasonal Mean Temperature (May to August)



Average summer (May to August) temperatures in 2015 were 1° C warmer than historical summer averages. In 2014, summer monthly temperatures were an average 0.8° C cooler than normal.

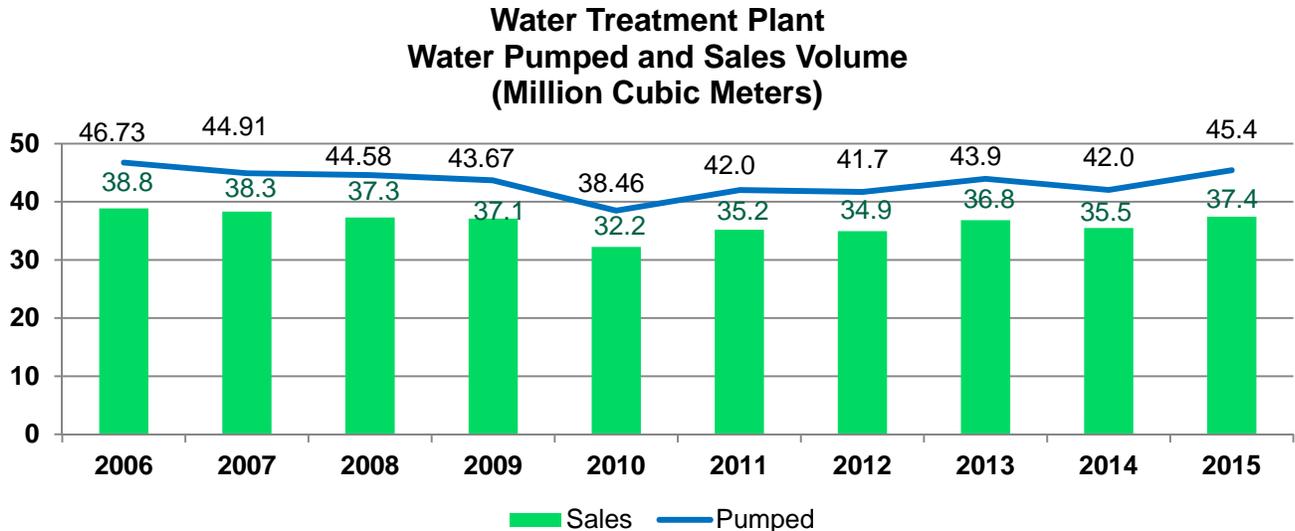
Intense Rainfall Events



Intense rainfalls place demands on the storm water infrastructure. Since 2012, Saskatoon has operated eight rain gauges. In 2015, an average of two rain events (minimum two-year return period) per gauge was recorded. Saskatoon had a maximum 24-hour rainfall of 63 mm on July 27 and 28, 2015. In eight of the last ten years, Saskatoon experienced maximum 24-hour rainfall levels that were higher than the historical 100-year average (37 mm).

2.3 Water Treatment Plant Volumes

Based on customer meter readings, 35.5 and 37.4 million cubic meters of water were sold in 2014 and 2015, respectively. In 2014, the volume of water sold decreased slightly from the 2013 level, mostly due to increased rainfall during May, July, and August, which reduced the need for irrigation. The dry spring in 2015 resulted in a higher demand for irrigation; however, even with population growth, the volume of water sold in 2015 was lower than volumes sold in 2006 and 2007.

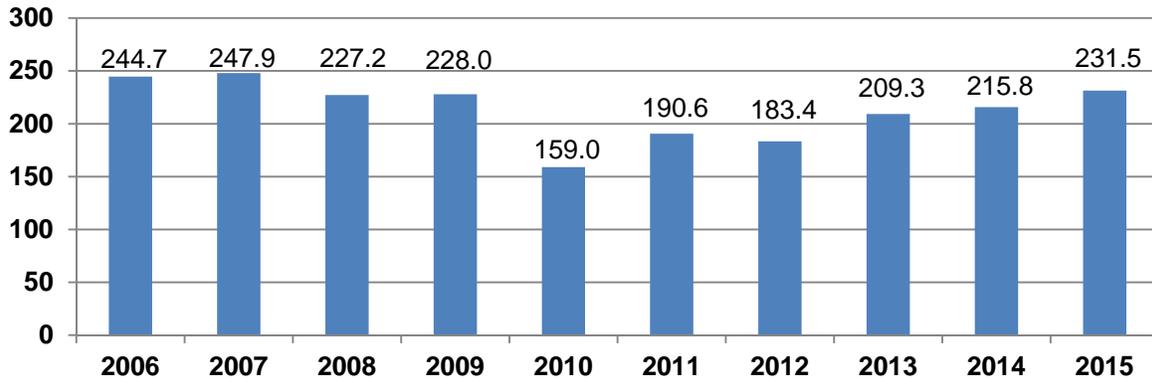


The above chart compares the annual volume of treated water pumped from the WTP into the distribution system and the volume of water sold. Due to a water meter failure, the pumpage was estimated from 2010 to 2013 based on an assumed water leakage rate of 16.2%. In 2015, unmetered water was 17.6% of total water pumpage. The difference between the volume of treated water pumped and sold was due to the following:

- Water loss through leaks
- Water main breaks
- Unauthorized water use
- Authorized but unmetered consumption (e.g. flushing water mains and fire flow)
- 2015 commissioning of two water reservoirs, which involved draining and refilling
- Estimated consumption and year-end unbilled volumes
- Water meter accuracy

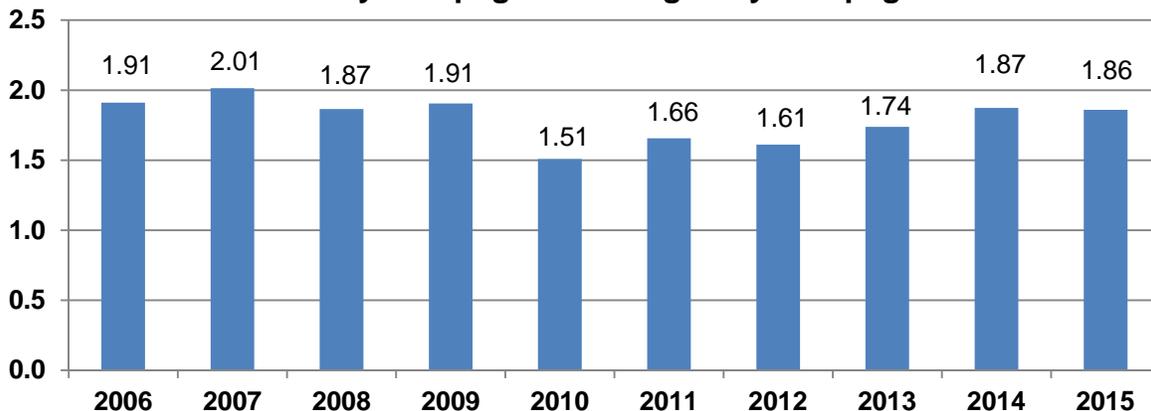
Maintenance and investment in the water distribution system will reduce water loss and lower water treatment operating costs.

Maximum Daily Pumpage (Thousand Cubic Meters)



The WTP’s capacity must be able to meet the maximum daily water demand. Maximum daily pumpage has increased over the last three years, with a maximum of 231,465 m³ in June 2015. The City’s population growth and the dry, hot spring impact the maximum daily pumpage. Conservation initiatives have helped to reduce maximum daily pumpage from the levels seen in 2006 and 2007, even with population growth.

Maximum Day Pumpage to Average Day Pumpage Ratio



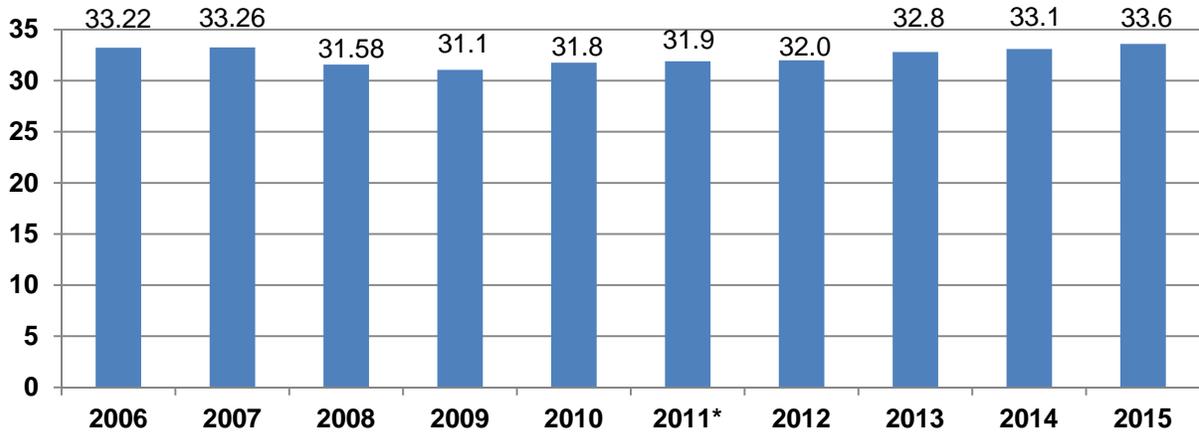
“Maximum Day Pumpage to Average Day Pumpage Ratio” reflects the extra capacity required for the maximum daily volume of water consumption at the height of summer irrigation relative to average daily water consumption.

The 2015 “Maximum Day to Average Day Pumpage Ratio” of 1.86 was similar to the ratio in 2014. As higher utility rates and customer education begin to impact consumer behaviour, conservation will increase and the ratio should fall. The ratio; however, is still expected to be higher during years of high summer temperatures and drought.

Over the next decade, as demand approaches plant capacity, construction of a new WTP can be deferred by reducing the peaking caused by irrigation during periods of hot, dry weather. The ratio can be significantly reduced through peak demand management initiatives such as implementing watering schedules.

2.4 Wastewater Treatment Plant Volumes

**Wastewater Treatment Plant Effluent Flow
(Million Cubic Meters)**



*2011 was estimated due to missing flow data. The monitoring instrumentation was replaced.

In 2015, WWTP effluent was the most it had been in the last 10 years. WWTP effluent flow increases as the population grows and decreases when households install water-saving appliances such as low-flush toilets. Wet weather or intense storm conditions also influence effluent flow due to inflow (e.g. weeping tiles) and infiltration (e.g. leaky pipe joints and manholes) into the wastewater collection system. Less effluent is expected in dry years.



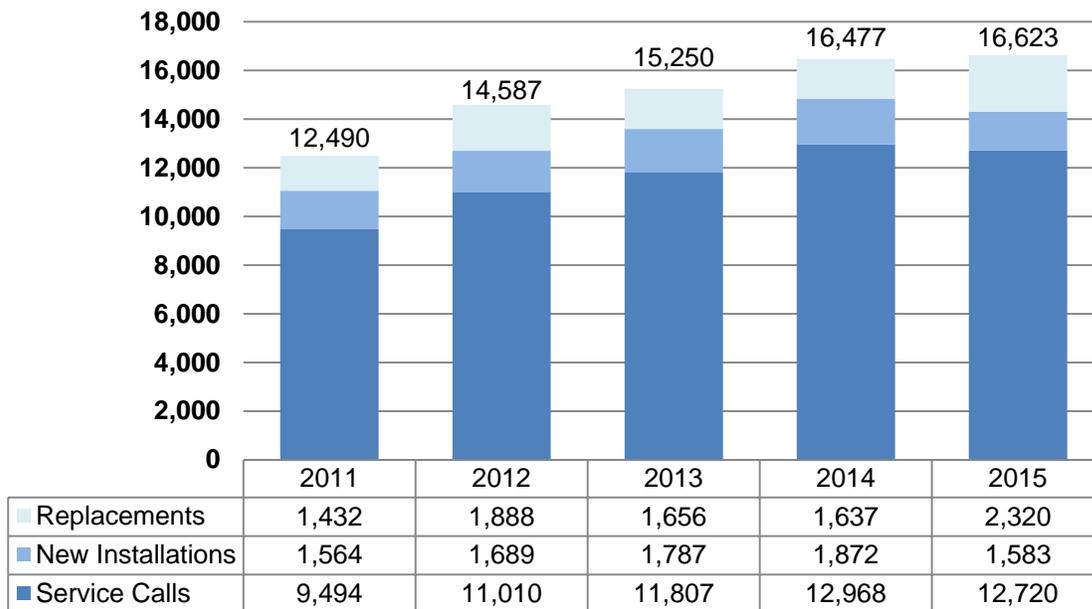
Waste Activated Sludge Stripping to Remove Internal Phosphorous (WASSTRIP) Tank
with cover to reduce odour

2.5 Meter Shop Customers



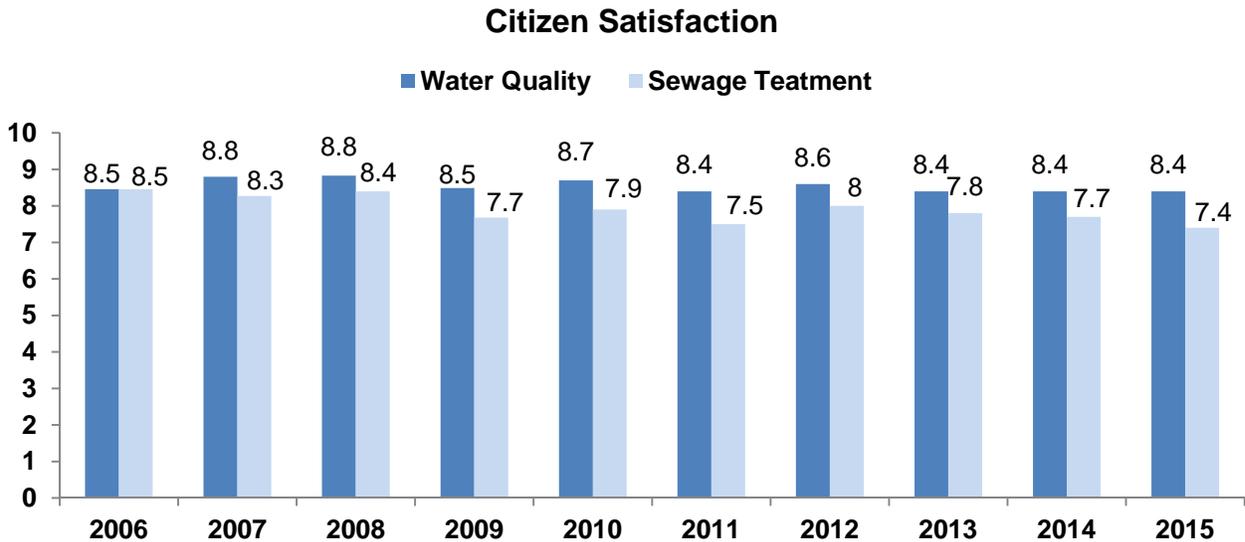
In 2015, the Meter Shop undertook 16,623 total jobs, an increase of about 33% since 2011 with the same number of employees – a significant increase in productivity. Jobs included 2,320 meter replacements, 1,583 new meter installations, and 12,720 service calls, which result from work orders generated by Corporate Revenue, to check malfunctioning meters or for cut-offs and reconnects. New meter installations were down while the number of meter replacements increased by 42%.

**Meter Shop
Service Calls, New Meter Installations and Replacements**



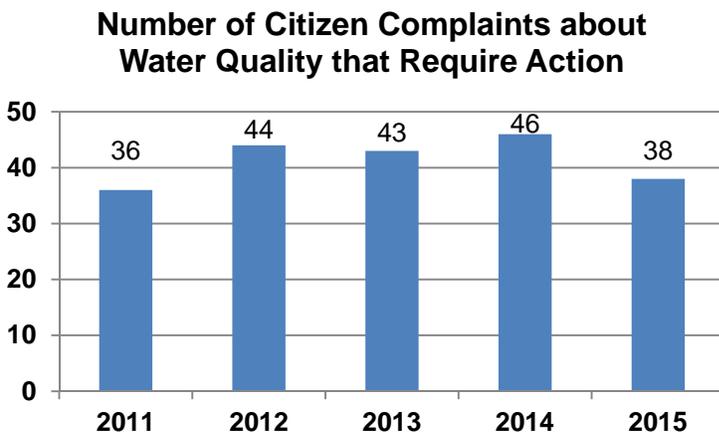
Presently, there are 7,085 active backflow prevention devices. In 2015, 606 new devices were installed and 94.0% of all devices were tested. Almost all of the 6.0% of devices not tested were inactive due to construction or City parks not completed on time.

2.6 Customer Satisfaction



Saskatoon citizens ranked water treatment and wastewater treatment as two of the most important civic services, with drinking water quality being the most important service in the annual [2015 Civic Services Satisfaction Study](#). A score of ten means “excellent” and five means “average”. In 2015, the average citizen satisfaction for water quality was 8.4 and sewage treatment was 7.4 out of 10. **Water quality has consistently received the highest Saskatoon citizen satisfaction rating of all civic services.** Satisfaction with sewer services is higher than the average satisfaction of 6.5 for all civic services.

2.7 Citizen Calls

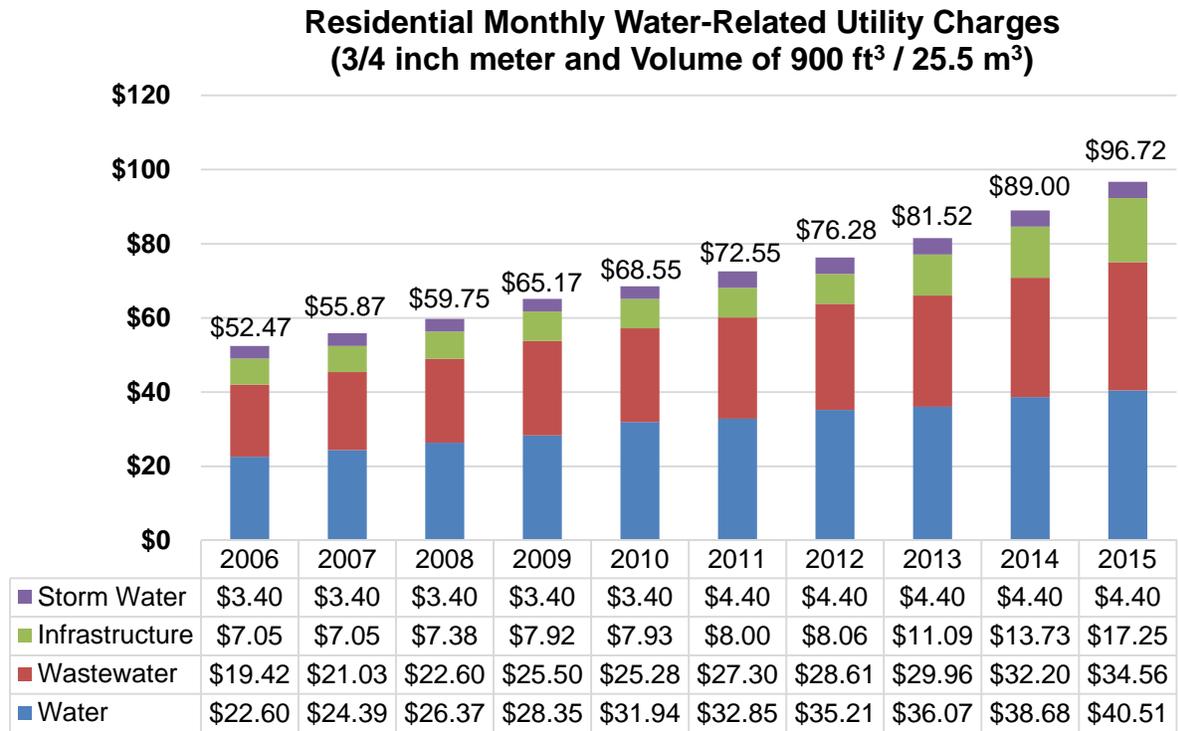


In 2015, citizen calls resulted in lab personnel making 38 on-site visits to conduct water quality testing for bacteria and inorganic material to ensure safe, high-quality water is maintained.

Two calls about WWTP odour were received in 2014 and none in 2015.

3.0 OUR FINANCES

3.1 Utility Bills

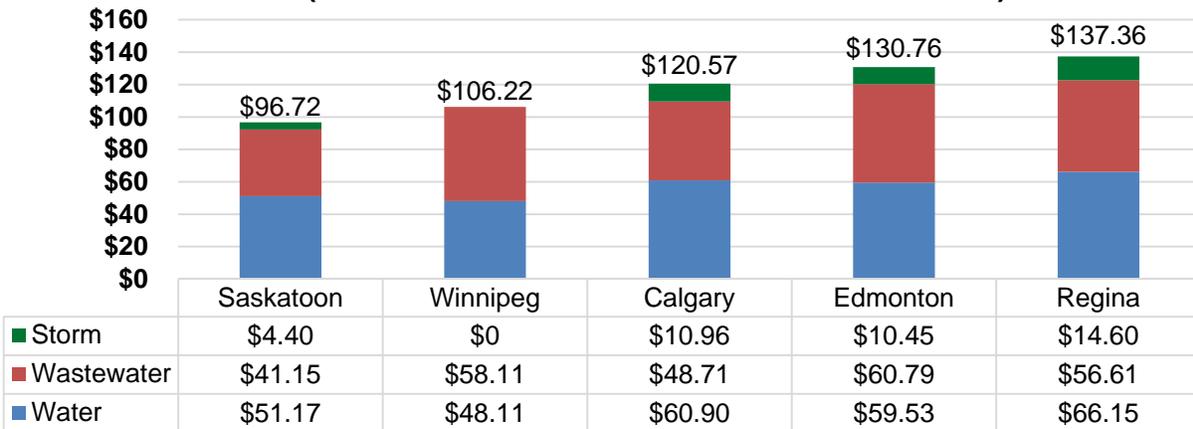


Total residential water-related utility charges were \$96.72 per month in 2015 based on a standard 3/4 inch meter connection and a monthly water volume of 900 ft³. Saskatoon residents with smaller 5/8 inch water meters, which are common in core neighbourhoods, pay \$8.72 less per month on the fixed portion of their Utility Bill. In 2015, 55% of meters for single residential homes were 5/8 inch and 45% were 3/4 inch. All new homes are fitted with 3/4 inch meters, which meet citizen expectations for higher water demand, for example: watering larger lawns.

Infrastructure Levies include the Roadways Levy and Redevelopment Levy, which are being phased in between 2014 and 2016, and its funding is split between the Water and Wastewater Utilities. See *Appendix 2: Understanding Your Utility Bill* for more information about Utility Bill charges.

Saskatoon’s total water, wastewater, and storm water Utility Bills remain significantly less than in other cities in Alberta, Manitoba, and Saskatchewan at average water volumes. Based on the standard water meter size and monthly water volume of 900 ft³, water bills in Saskatoon were about \$40 less than in Regina.

**2015 Water, Wastewater & Storm Water Monthly Charges by Utility
(3/4 inch meter and Volume of 900 ft³ / 25.5 m³)**



Under Saskatoon’s inclining block rate system, water and wastewater rates increase at volumes of 600 ft³ (17 m³) and 1,200 ft³ (34 m³). Of the western benchmark cities, only Winnipeg has lower charges for water volume, less than 600 ft³ (17 m³) per month.

The 2014 *Storm Water Utility Program Comparison* report compared the City’s storm water rates with 12 other cities for different property types on the basis of costs and “user-pay”. Saskatoon residential properties paid the third lowest storm water utility rate and commercial properties paid the fourth highest rate.

The “user-pay” assessment considered the degree to which properties were charged proportionally for the amount of storm water run-off they generated, ranging from charges based on area size and imperviousness for all types of properties (most “user-pay”) to a flat rate for all properties (least “user-pay”). Saskatoon is among the leading “user-pay” cities, ranking fourth among the 13 cities.

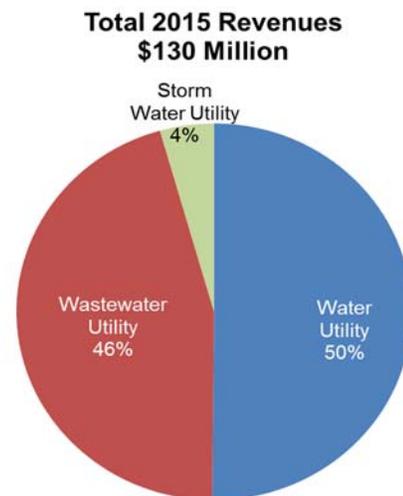
3.2 Financial Summary

The Water, Wastewater and Storm Water Utilities are based on a user-pay principal and are fully funded through their rates. In 2015, the three utilities collected \$130.0 million in total revenues and had \$125.3 million in total expenses for a positive variance of \$4.7 million.¹

| Water, Wastewater and Storm Water Utilities Statement of Revenues and Expenditures (\$1,000s) | | | | | |
|---|-------------------|-----------------------|------------------------|-------------------|-------------------|
| | Water Utility | Wastewater Utility | Storm Water Utility | Consolidated | Consolidated |
| | 2015 | 2015 | 2015 | 2015 | 2014 |
| Total Revenues | \$ 65,198 | \$ 59,065 | \$ 5,741 | \$ 130,005 | \$ 115,046 |
| Expenditures | | | | | |
| Utility Operations | \$ 12,339 | \$ 10,879 | \$ 418 | \$ 23,650 | \$ 21,185 |
| Public Works Operations | 11,108 | 6,370 | 2,120 | 19,597 | 19,842 |
| Administration & General | 3,259 | 1,688 | 14 | 4,961 | 4,205 |
| Corporate Services & Billing | 2,752 | 1,843 | 172 | 4,766 | 4,249 |
| Capital Charges | 19,927 | 14,902 | 2,921 | 37,750 | 34,731 |
| Flood Protection Charges | | 3,841 | | 3,841 | 3,769 |
| Infrastructure Services Capital Reserve | 9,367 | 12,935 | | 22,302 | 16,920 |
| Grants-in-lieu of Taxes | 4,838 | 3,642 | | 8,479 | 8,326 |
| Total Expenditures | \$ 63,589 | \$ 56,099 | \$ 5,644 | \$ 125,347 | \$ 113,226 |
| Revenues less Expenditures | \$ 1,609 | \$ 2,967 | \$ 97 | \$ 4,658 | \$ 1,821 |
| | | | | | |
| (To)/From Stabilization/Capital reserves | \$ (1,609) | \$ (2,967) | \$ (97) | \$ (4,658) | \$ (1,821) |

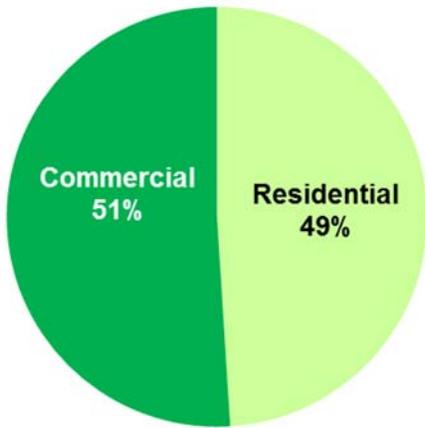
Total utility revenues increased by 13% in 2015 as a result of the infrastructure levy phase-in, rate increases, population growth, and increased demand for water due to a dry spring.

The Water Utility accounts for 50.2%, Wastewater for 45.4%, and Storm Water for 4.4% of revenues.

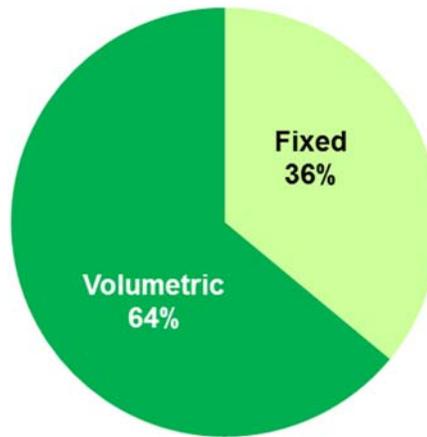


¹ Positive Water and Wastewater variances fund the Water & Wastewater Revenue Stabilization Reserve which is utilized in years when there is an operating deficit. The Stabilization Reserve has a maximum balance of 5% of the current year's budgeted metered revenue and Infrastructure Levy. Any amount that exceeds the maximum is transferred to the Waterworks Capital Projects Reserve, the Sewage Treatment Capital Reserve, or the Infrastructure Replacement Reserve.

Water and Wastewater Revenue by Customer Class



Water and Wastewater Revenue by Rate Type



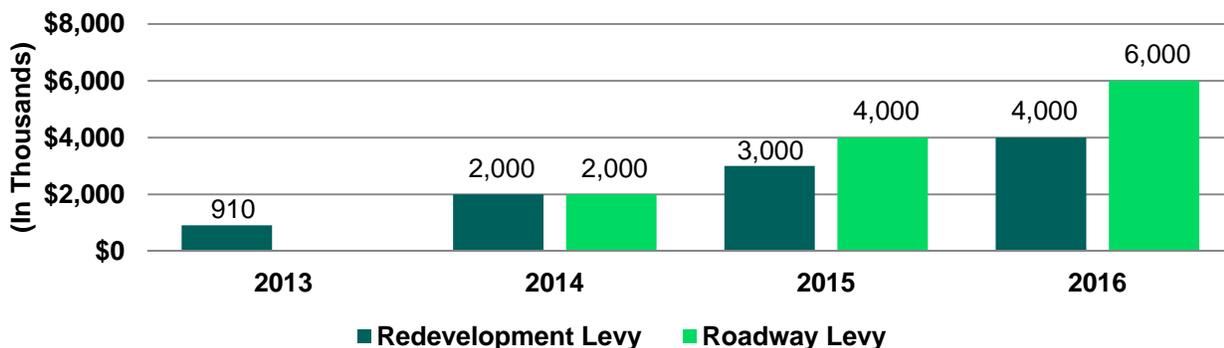
Commercial customers account for just over half of Water and Wastewater's total revenues.

About 64% of revenues are based on volumetric charges and 36% are from fixed charges.

In 2015, total expenditures increased by 11% due to growth, inflation, additional water treatment processes to meet higher standards, and increased contributions to the Infrastructure Services Capital Reserve. In 2014, actual revenue was below budget due to the cool, wet weather. As a result of the reduced revenue, a discretionary spending order was implemented to defer expenditures, which also accounts for a significant portion of the 11% variance between 2014 and 2015 expenditures.

Funding to Public Works to deliver the day-to-day operation and maintenance of the water distribution, collection, and drainage systems accounted for 16% of total expenditures. Funding for the Infrastructure Services Capital Reserve accounted for another 18% of expenditures.

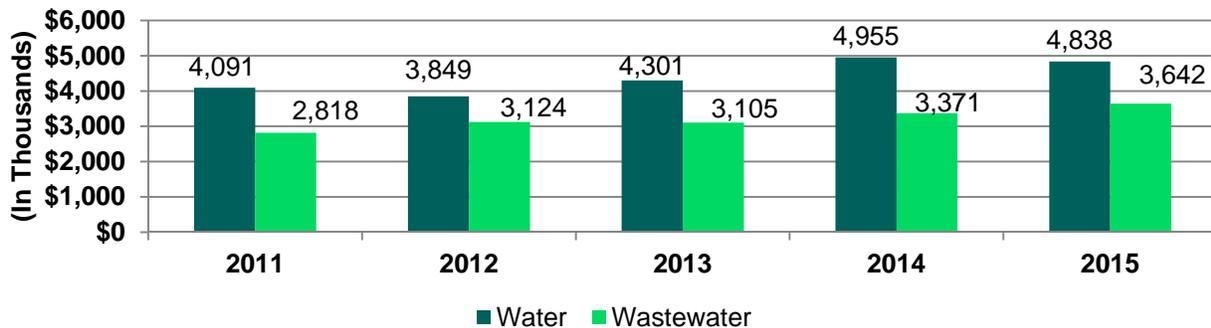
Redevelopment and Roadway Levy Phase-In Budget (In \$1,000s)



The Infrastructure Levy was originally implemented to fund the Infrastructure Services Capital Reserve for water distribution and wastewater collection system rehabilitation and replacement projects needed to address aging infrastructure (e.g. eliminate the water main replacement backlog to meet current service levels). In 2013, a

Redevelopment Levy was added to the Infrastructure Levy, with a four-year phase-in period to generate \$4.0 million annually by 2016. In 2014, a Roadway Levy was added to the Infrastructure Levy with a three-year phase-in period to generate \$6.0 million annually by 2016. The new levies accounted for about \$7.0 million in 2015, representing 64% of the increase in Infrastructure Levy revenue.

**Water and Wastewater Utility Grants-in-Lieu of Taxes
(In \$1,000s)**



The Water and Wastewater Utilities paid \$8.3 million and \$8.5 million in 2014 and 2015, respectively, to the City as a Grant-in-lieu of Taxes.

The Water and Wastewater Utilities had a positive variance of \$4.6 million, of which, \$544,975 was allocated to maximize the allowable balance in the Water and Wastewater Revenue Stabilization Reserve and the remainder was transferred to Capital Reserves to support capital projects and reduce debt requirements.

3.3 Water Utility

Revenues

The Water Utility's 2015 total revenues of \$65.2 million were \$1.5 million or 2.3% more than budgeted, mostly due to a drier than normal spring, which increased water demand for irrigation. Total revenues were \$6.9 million or 12% more in 2015 than in 2014. Infrastructure Levy revenues, a volumetric charge, increased by 31.8% in 2015.

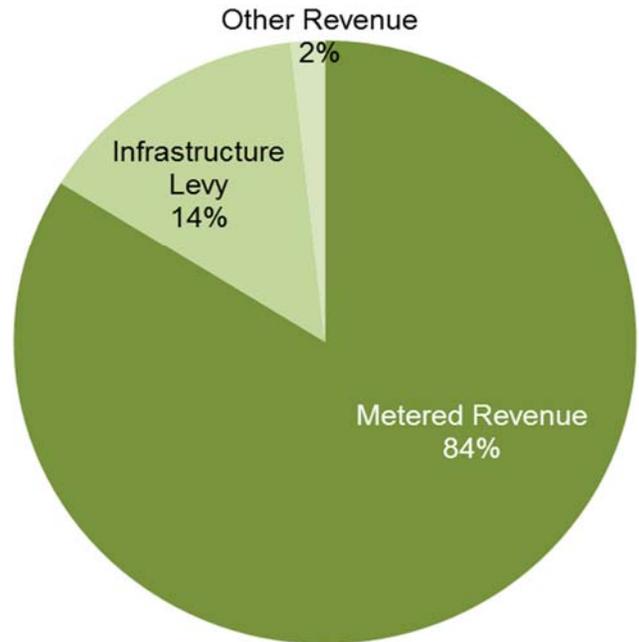
Other revenues included the fire protection charge, late payment penalties, and some miscellaneous revenue.

Expenses

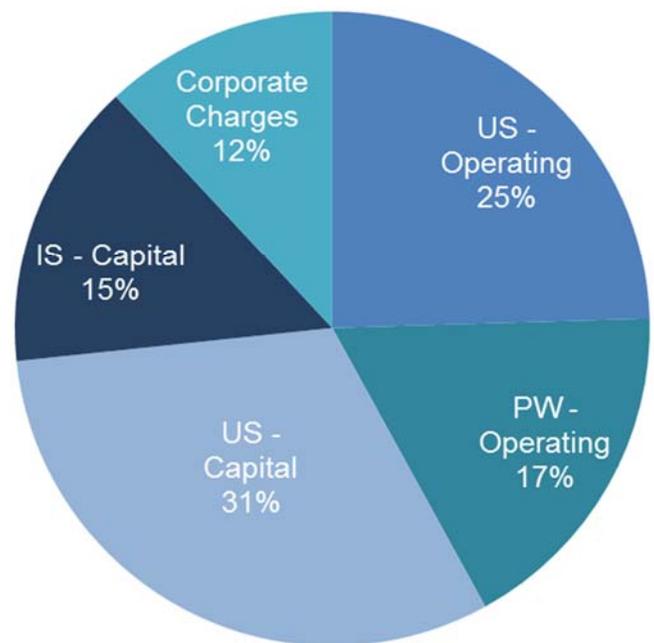
The Water Utility's \$63.6 million expenses in 2015 included the following:

- Utility Services (US) Operating expenses of \$15.6 million include water treatment, pumping, storage, Meter Shop, administration, and general expenses incurred by Saskatoon Water.
- Public Works (PW) Operating expenses of \$11.1 million include funding to Public Works to operate and maintain the water distribution system.
- Utility Services (US) Capital of \$19.9 million funds all capital work related to the WTP and reservoirs, including debt servicing costs.
- Infrastructure Services (IS) Capital of \$9.4 million (funded by the Infrastructure Levy) includes capital replacement of the water distribution systems, roadway damage associated with the utility, and water upgrades for core area developments.
- Corporate Charges of \$7.6 million include the Grant-in-Lieu of taxes, cross-charges for customer billing and collections, and corporate administration.

**Water Utility
2015 Revenues
\$65,197,936**



**Water Utility
2015 Operating Expenses
\$63,589,072**



The Water Utility's 2015 total expenses were approximately as budgeted and were 9% more than in 2014, reflecting the 2014 discretionary spending order, inflation, higher costs for additional new treatments, increase in the volume of treated water, increased maintenance, and increased contribution to the Infrastructure Services Capital Reserve. The 2015 expenses under the control of Saskatoon Water were under budget by \$0.4 million and were \$2.5 million (18.7%) more than in 2014.

Financial Statement

| Water Utility | | | |
|---|------------------------|------------------------|------------------------|
| Operating Revenues and Expenses | | | |
| (\$1000s) | | | |
| | 2015 Budget | 2015 Actual | 2014 Actual |
| Revenues | | | |
| Metered revenue | \$ 53,752 | \$ 54,676 | \$ 50,035 |
| Infrastructure Levy | 9,007 | 9,367 | 7,106 |
| Other revenue | 987 | 1,156 | 1,118 |
| Total Revenue | \$ 63,746 | \$ 65,198 | \$ 58,259 |
| Expenses | | | |
| Water Treatment, Pumping, Storage | \$ 11,061 | \$ 10,736 | \$ 9,000 |
| Water Meters | 1,533 | 1,603 | 1,454 |
| Administration & General | 3,375 | 3,259 | 2,688 |
| Corporate Services | 2,757 | 2,752 | 2,412 |
| Distribution (Public Works) | 11,280 | 11,108 | 11,811 |
| Capital Charges | 19,895 | 19,927 | 19,166 |
| Provision to Infrastructure Services Capital | 9,007 | 9,367 | 7,106 |
| Grants-in-lieu of Taxes | 4,838 | 4,838 | 4,955 |
| Total Expenses | \$ 63,746 | \$ 63,589 | \$ 58,591 |
| Revenues less Expenses | \$ - | \$ 1,609 | \$ (332) |
| (To)/From Stabilization/Capital Reserves | \$ - | \$ (1,609) | \$ 332 |

The positive balance of \$1.6 million was allocated to the Water & Wastewater Revenue Stabilization Reserve and to Capital Reserves.

3.4 Wastewater Utility

Revenues

The Wastewater Utility's 2015 revenues of \$59.1 million were about 2.8% more than budgeted.

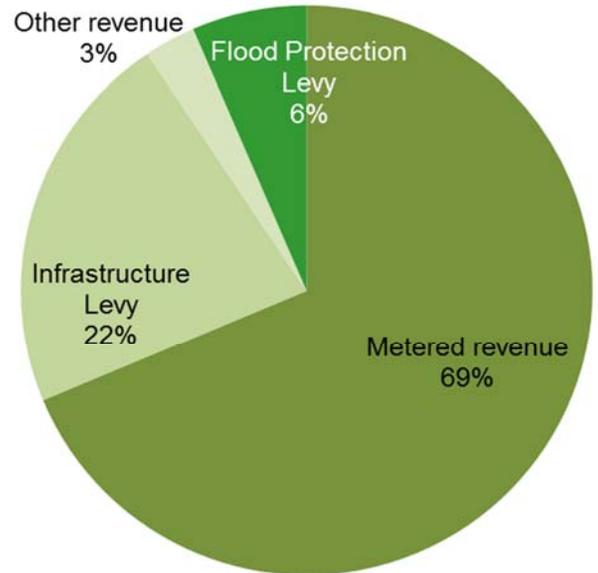
Revenues increased by 15% from 2014 due to growth, rate increases including the Roadways and Redevelopment Levies, and the higher demand. The plant also received more revenues from liquid waste haulers, which are increasingly bringing septic waste to the plant in anticipation of provincial regulatory changes restricting land spreading of septic tank waste after 2017.

Expenses

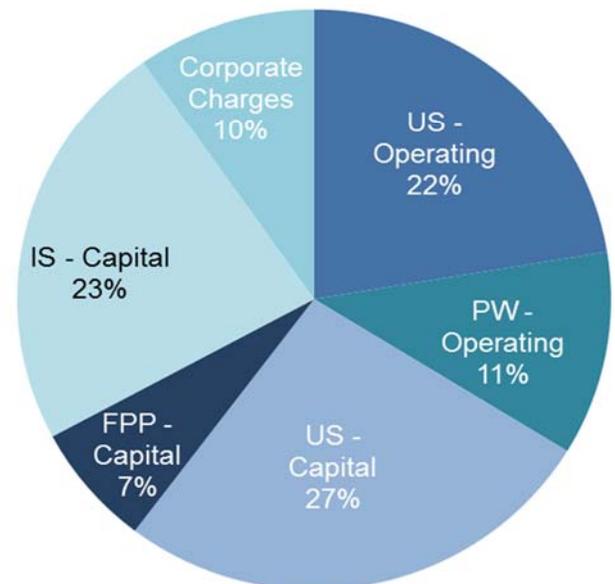
The Wastewater Utility's 2015 expenses of \$56.1 million included the following:

- Utility Services (US) Operating expenses, of \$12.6 million, include wastewater treatment, pumping, sludge handling and disposal, administration, and general expenses incurred by Saskatoon Water.
- Public Works (PW) Operating expenses, of \$6.4 million, include funding to Public Works to operate and maintain the wastewater collection system.
- Utility Services (US) Capital, of \$14.9 million, funds capital work related to the WWTP.
- Flood Protection Program (FPP) Capital, of \$3.8 million, funds projects that reduce sewer back-ups during major storms.
- Infrastructure Services (IS) Capital Reserve, of \$12.9 million, funds capital replacement of the wastewater collection systems, roadway damage associated with the utility, and wastewater upgrades for core areas.
- Corporate Charges of \$5.5 million include the Grant-in-lieu of Taxes, cross-charges for customer billing and collections, and corporate administration.

**Wastewater Utility
2015 Revenues
\$59,065,370**



**Wastewater Utility
2015 Operating Expenses
\$56,098,864**



The Wastewater Utility's 2015 expenses were 2.4% less than budgeted and about 15% more than in 2014, which reflected the 2014 discretionary spending order, the increase to the Infrastructure Services Capital Reserve, inflation, and increased volume. The 2015 expenses under control of Saskatoon Water were under budget by \$0.4 million and were \$0.7 million (6.2%) more than in 2014.

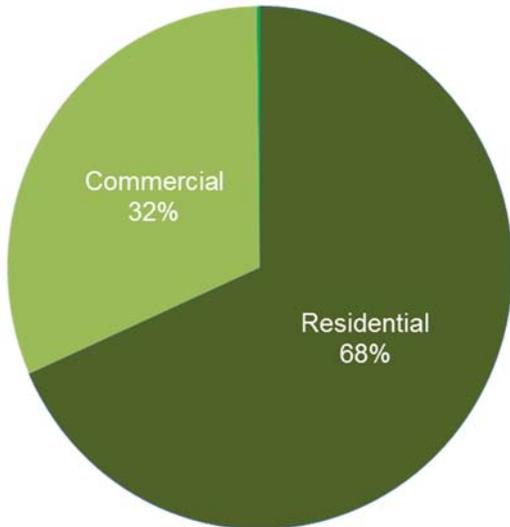
Financial Statement

| Wastewater Utility Operating Revenues and Expenses (\$1000s) | | | |
|---|--------------------|--------------------|--------------------|
| | 2015 Budget | 2015 Actual | 2014 Actual |
| Revenues | | | |
| Metered revenue | \$ 40,461 | \$ 40,566 | \$ 36,114 |
| Infrastructure Levy | 12,438 | 12,935 | 9,813 |
| Other revenue | 870 | 1,723 | 1,713 |
| Flood Protection Levy | 3,697 | 3,841 | 3,769 |
| Total Revenues | \$ 57,466 | \$ 59,065 | \$ 51,409 |
| Expenses | | | |
| Wastewater Treatment | \$ 7,695 | \$ 7,418 | \$ 7,038 |
| Wastewater Lift Stations | 1,396 | 1,750 | 1,763 |
| Wastewater Sludge Handling & Disposal | 2,002 | 1,710 | 1,591 |
| Administration & General | 1,841 | 1,688 | 1,445 |
| Corporate Services | 1,848 | 1,843 | 1,669 |
| Collection (Public Works) | 7,968 | 6,370 | 5,903 |
| Capital Charges | 14,941 | 14,902 | 12,547 |
| Flood Protection Program | 3,697 | 3,841 | 3,769 |
| Provision to Infrastructure Services Capital | 12,438 | 12,935 | 9,813 |
| Grants-in-lieu of Taxes | 3,642 | 3,642 | 3,371 |
| Total Expenses | \$ 57,466 | \$ 56,099 | \$ 48,909 |
| Revenues less Expenses | \$ - | \$ 2,967 | \$ 2,500 |
| (To)/From Stabilization/Capital Reserves | \$ - | \$ (2,967) | \$ (2,500) |

The positive balance of \$2.97 million was allocated to the Water & Wastewater Revenue Stabilization Reserve and to Capital Reserves.

3.5 Storm Water Utility

**Storm Water Utility
2015 Revenues
\$5,741,293**



Revenues

The Storm Water Utility’s revenues include single-family residential charges (\$52.80 per year), multi-residential, commercial, industrial, and institutional charges, which are proportional to the storm water generated based on property size and surface imperviousness. A seven-year phase-in of commercial rates started in 2012, with a maximum charge of \$2,904 per property in 2015.

The Storm Water Utility’s revenues in 2015 were \$5.7 million, an increase of 6.7% from 2014. Residential customers accounted for about two thirds of revenues while commercial customers accounted for one third of revenues.

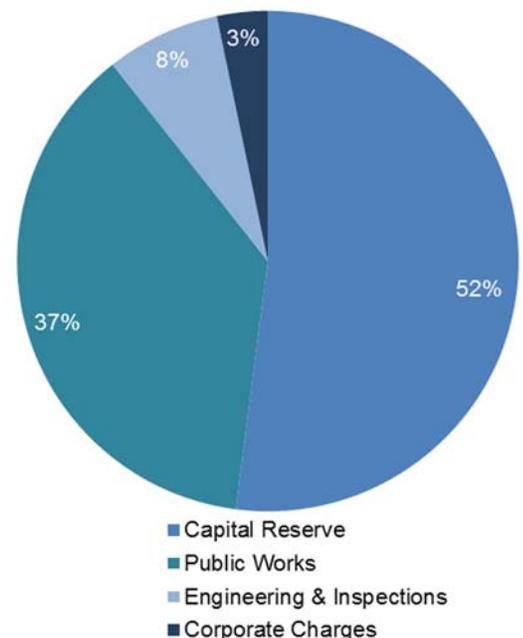
The Storm Water Utility’s revenues were less than budgeted because City-owned parks became exempt from charges in 2015 and the process to assess run-off changes to commercial and multi-residential properties did not capture all new developments.

Expenses

The Storm Water Utility’s 2015 operating expenditures were \$5.6 million, which was about the same as in 2014. Operating expenditures in 2015 were 8.9% lower than budgeted because of the dry spring and staff vacancies.

- Engineering and inspections, of \$0.4 million, included drainage inspections and overall utility management by Saskatoon Water.
- Over half of expenditures (\$2.96 million) was an allocation to the Capital Reserve to fund storm water infrastructure rehabilitation and the east riverbank slope stabilization.
- Public Works received \$2.1 million to operate and maintain the storm water system, including handling citizen drainage calls, keeping storm drains clear, the fall street sweep, and replacing and repairing the infrastructure.
- Corporate Charges, of \$0.2 million, included billing services by Corporate Revenue and financial and administration services from Business Administration, Transportation & Utilities Department.

**Storm Water Utility
2015 Operating Expenses
\$5,644,485**



The Storm Water Utility's positive variance of \$97,000 was allocated to the Stabilization Reserve, which the utility can draw on in years when there is a negative annual operating balance. The Stabilization Reserve balance was almost \$1.2 million at the end of 2015.

Financial Statement:

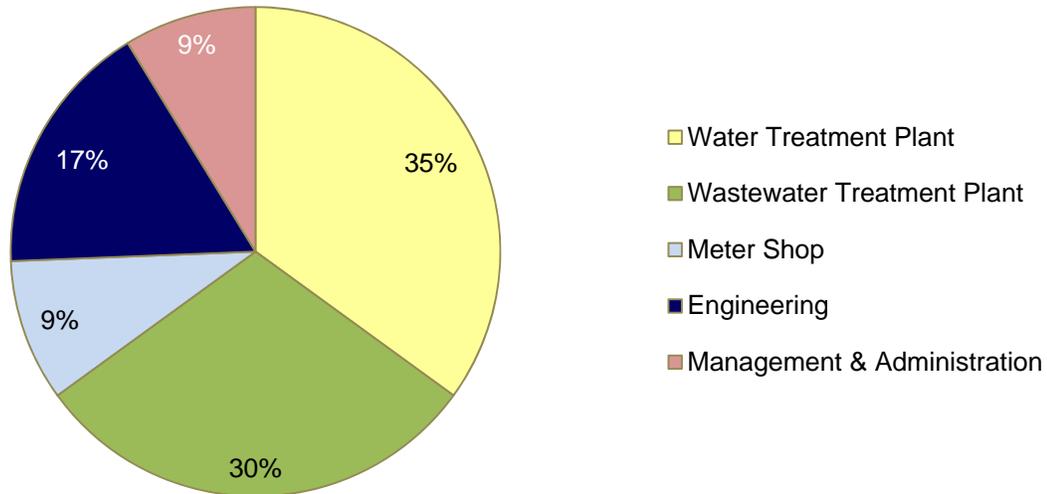
| Storm Water Utility Operating Revenues and Expenses (\$1000s) | | | |
|--|------------------------|------------------------|------------------------|
| | 2015 Budget | 2015 Actual | 2014 Actual |
| Revenues | | | |
| Storm Water Charges | \$ 6,184 | \$ 5,729 | \$ 5,369 |
| Late Charges | 10 | 12 | 9 |
| Total Revenues | \$ 6,194.30 | \$ 5,741.29 | \$ 5,378.31 |
| Expenses | | | |
| Engineering & Inspections Operations | \$ 407 | \$ 418 | \$ 269 |
| Maintenance (Public Works) | 1,831 | 1,449 | 1,314 |
| Drainage (Public Works) | 789 | 671 | 813 |
| Customer Billing | 121 | 122 | 114 |
| Corporate Services | 50 | 50 | 49 |
| Licenses & Insurance | 76 | 14 | 76 |
| Interest Expense/(Revenue) | (35) | (35) | (10) |
| Provision to Capital Reserve | 2,957 | 2,957 | 3,028 |
| Total Operating Expenses | \$ 6,194 | \$ 5,644 | \$ 5,654 |
| Revenues Less Expenses | \$ - | \$ 97 | \$ (276) |
| (To)/From Stabilization/Capital Reserves | \$ - | \$ (97) | \$ 276 |

4.0 OUR PEOPLE

4.1 Number of Employees

Saskatoon Water had 160 employees as of December 2015. The graph shows the distribution in major areas. (Engineering includes Engineering Services and Engineering & Planning sections.)

Employee Distribution



4.2 Representative Workforce

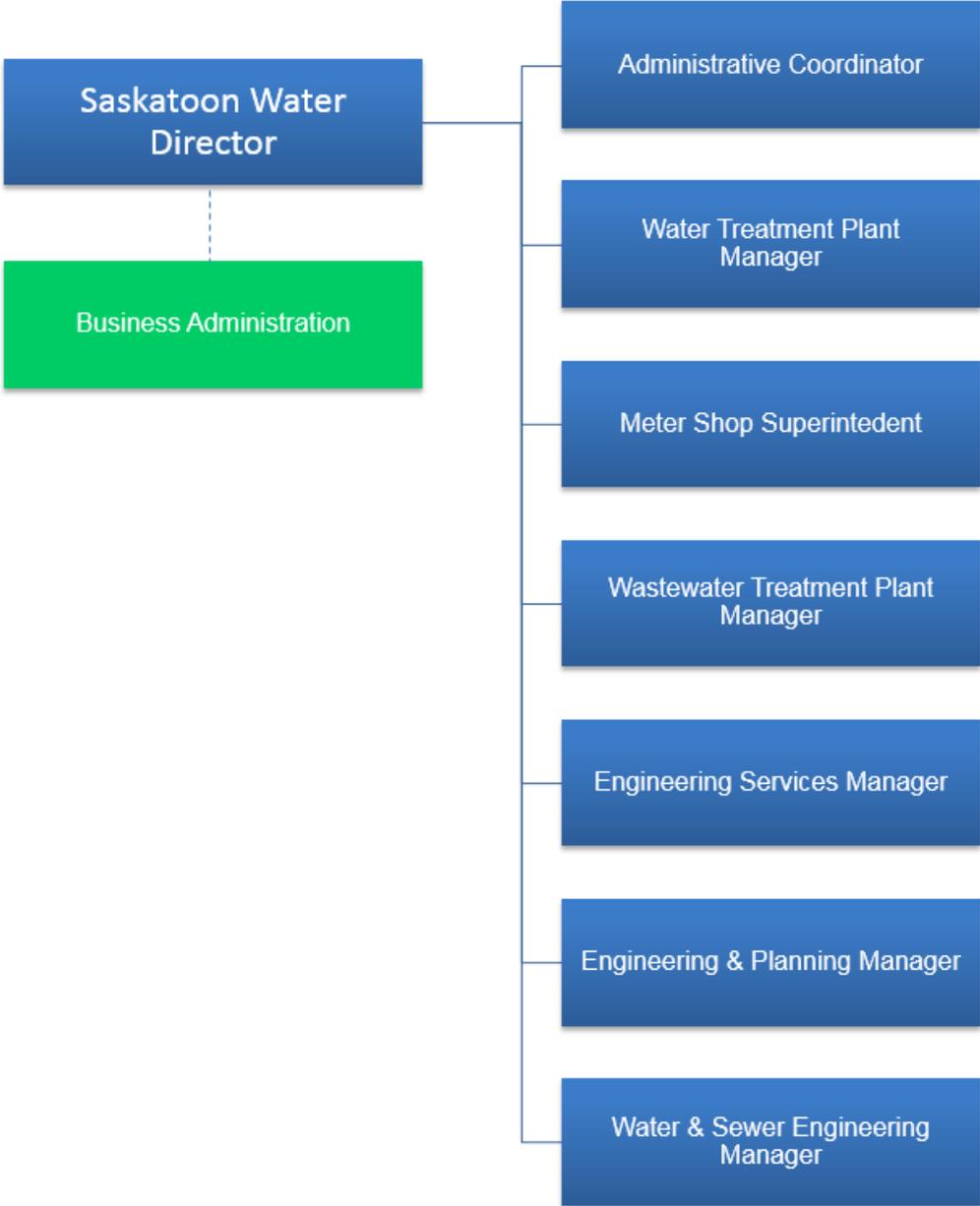
Saskatoon Water participated in diversity programs with Human Resources and other organizations to increase awareness among under-represented groups of career opportunities with Saskatoon Water. Examples of programs include Gabriel Dumont Institute Work Experience for Aboriginal People, Women in Trades - Grade XII Girls, and Open House for New Canadians.

Relative to goals set in 2014 by the Saskatchewan Human Rights Commission (SHRC) and adopted as corporate targets by the City, Saskatoon Water had a higher proportion of self-declared visibility minority employees and lower proportions of employees who self-declared as Aboriginal, female, or with a disability as of December 2015.

| Percentage of Employees Self-Declared as an Equity Group Member December, 2015 | | | |
|---|-----------------|-------------------|-----------|
| Equity Group | Saskatoon Water | City of Saskatoon | SHRC Goal |
| Self-Declared as Aboriginal Ancestry | 5.3% | 7.2% | 14.0% |
| Self-Declared as Visible Minority | 12.7% | 10.3% | 11.0% |
| Self-Declared as Person with Disability | 1.3% | 3.9% | 12.4% |
| Self-Declared as Female | 18.7% | 38.0% | 46.0% |

4.3 Organizational Chart

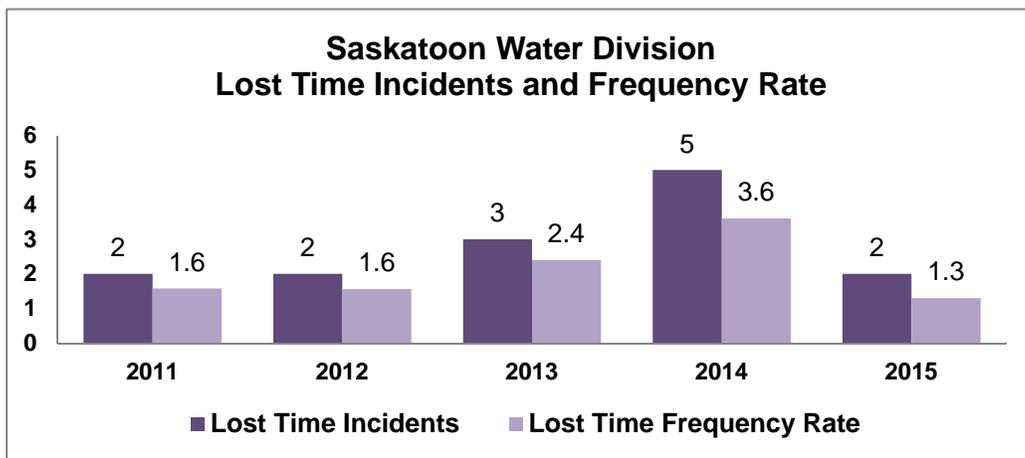
The organizational chart provides a high level overview of how Saskatoon Water is organized and key positions in 2015.



4.4 Employee Safety

Management and staff placed a strong emphasis on safety in the workplace to strive to meet the corporate target of zero lost-time injuries. Progress has been made by holding safety meetings, “tool box” meetings, work observations, inspections, and work planning. In 2015, Saskatoon Water achieved 100% of safety meetings, 100% of inspections, and 87% of the work observations planned for the year. The emphasis on safety improved employee engagement and morale and reduced lost-time incidents.

Saskatoon Water employees’ Lost Time Frequency Rate of 1.3 in 2015 was the lowest it had been in the last five years and lower than the 3.9 average for all City employees. Our employees had two lost-time incidents in 2015, compared to five incidents in 2014. The 106 lost-time days experienced in 2015; however, was similar to the 103 lost-time days in 2014. The number of lost-time days and severity rate in 2014 and 2015 were both higher than in the previous two years.



5.0 OUR WORK

5.1 Community Awareness and Engagement

Water Quality Reporting: The Water Security Agency (WSA) requires that at least once each year, Saskatoon Water provide notification to consumers of the quality of water produced and supplied, as well as information on the performance of the waterworks in submitting samples as required by a Minister's Order or Permit to Operate a Waterworks. In compliance with this order, Saskatoon Water produces the [Drinking Water Quality and Compliance](#) report annually.

For general information on water quality, water and wastewater treatment processes, environment, major capital projects, and water conservation, Saskatoon Water posts [Saskatoon Water's 2014 Annual Water Quality Report](#) on the City's website.

Guided Tours of Water Treatment and Wastewater Treatment Plants: Guided tours are available to the public, ages 16 and older, to increase awareness of how the utilities operate in providing safe, reliable water and in returning quality effluent to the South Saskatchewan River. In 2015, the WTP had 315 people booked on 21 tours and the WWTP recorded 305 participants on 23 tours.

Water Week: Saskatoon's Water Week, March 16 to 22, 2015, was themed "Know Your H₂O". Communication and engagement activities to increase water awareness included a Water Week website, Facebook Water Week Question of the Day, Twitter, YouTube videos about the WTP and the WWTP, and media interviews.



Avenue H Reservoir

Open House and Tour of the Avenue H Water Reservoir Expansion: The general public and dignitaries were invited to an open house and tour of the Avenue H Reservoir Expansion project.

Open House for Odour Abatement Project: Over \$10 million has been allocated for an odour abatement project at the WWTP. When completed, the project is expected to reduce odour by 76%, which will enhance the quality of life for nearby residents. An open house was held to present the project and expected results for nearby residents.

Open House for Surface Flooding: Over 60 people attended an open house to secure input from citizens in five areas with known surface flooding to discuss the impact of flooding and options to control flooding. Consultation results were summarized and are being considered in the Storm Water Utility Business Plan.

11th Street Reporting: Public meetings were held with residents concerned about slumping resulting from high groundwater levels. Regular results of monitoring by Golder Associates were provided to residents in the immediate area.

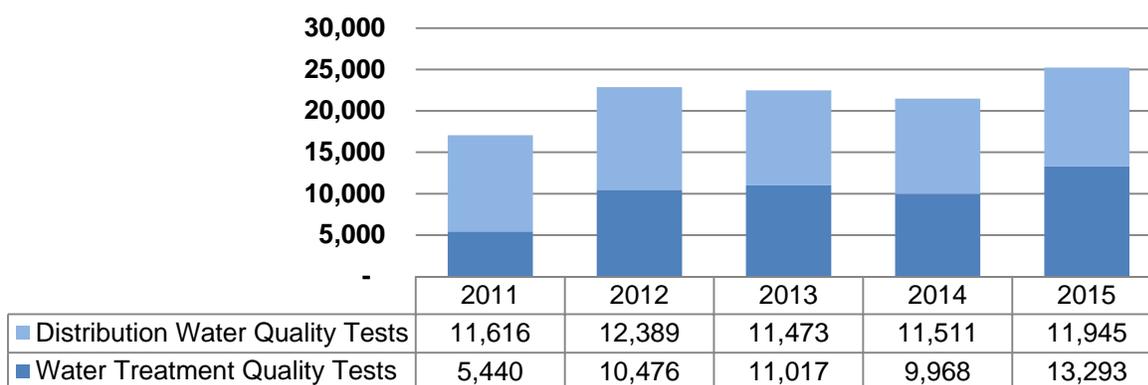
Montgomery Local Area Plan: A presentation at a Community Association event encouraged local residents to keep culverts in front of their properties clear to maintain neighbourhood drainage.

5.2 Operating Highlights

Water Quality: The City’s water treatment and distribution systems are regulated by a “Permit to Operate a Waterworks” issued by the WSA. Our drinking water quality is further regulated by Health Canada’s *Guidelines for Canadian Drinking Water Quality* and Saskatchewan Environment’s *The Water Regulations, 2002*. Water quality is closely monitored 24 hours a day, 365 days a year.

The WTP’s comprehensive Maintenance and Equipment Inspection Program meets the highest standard in North America. In 2015, a total of 13,293 water treatment quality tests and 11,945 distribution water quality tests were conducted by our WTP Laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA). Additional quality tests were conducted at every step of the treatment process for a total of over 50,000 tests.

Number of Water Quality Laboratory Tests



The following table shows the results of some of the many types of testing completed by the WTP, which are well within acceptable limits under the Permit to Operate.

| Water Distribution System Values | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------------------|
| | 2011 | 2012 | 2013 | 2014 | 2015 | Allowable Values |
| Yearly Total Chlorine Median (mg/L) | 1.73 | 1.83 | 1.8 | 1.78 | 1.83 | > 0.5 |
| Yearly Turbidity Median (NTU) ² | 0.16 | 0.16 | 0.12 | 0.14 | 0.18 | < 1.0 |
| Total Coliforms >0 (CFU/100mL) ³ | 0 | 0 | 0 | 0 | 0 | 0 |

² Nephelometric Turbidity Units (NTU) is a measure of scattered light. A high turbidity level is caused by organic matter which can promote the growth of pathogens as well as being aesthetically unappealing.

³ Colony Forming Unit (CFU) is a measure of viable bacterial cells.

In addition to the *Drinking Water Quality and Compliance* report, the *2015 Waterworks System Assessment* was completed to meet the WSA’s requirements for a thorough five-year reporting of the WTP and distribution system.

Wastewater Quality: The City’s wastewater collection and treatment systems are regulated by a “Permit to Operate a Sewage Works” issued by the WSA. Our final effluent water quality is further regulated by Saskatchewan Environment’s *Sewage Works Regulations, 2010, Saskatchewan Environmental Code, 2015*, and the *Federal Wastewater System Effluent Regulation, 2012*. Final effluent water quality is closely monitored 365 days a year.

The WWTP’s comprehensive Maintenance and Equipment Inspection Program meets the highest standard in North America. In 2015, a total of 6,370 final effluent quality tests and over 20,000 water quality tests of other samples, including groundwater, ponds, outfalls, industries, and the river were conducted by our WWTP CALA-accredited Environmental Laboratory. Over 40,000 tests were conducted throughout the treatment process.

The following table shows the results of some of the many types of testing completed by Saskatoon Water, which are well below the maximum allowable values under the Permit to Operate.

| Wastewater Distribution System Values | | | | | |
|--|-------------|-------------|-------------|-------------|-------------------------------------|
| | 2012 | 2013 | 2014 | 2015 | Wastewater Effluent Standard |
| Yearly Median CBOD ⁴ | 4.9 | 4.6 | 4.3 | 3.9 | <25 mg/L |
| Yearly Median TSS ⁵ | 10.7 | 8.8 | 10.0 | 8.0 | <25 mg/L |
| Yearly Median Total Phosphorous (TP) | 0.15 | 0.26 | 0.24 | 0.2 | <0.5 mg/L |
| Yearly Median E.coli ⁶ | <10 | <10 | <10 | <10 | <200 mpn/100mL |

Drainage Inspections: The Storm Water Utility helps developers and citizens ensure that drainage is meeting Saskatoon’s [Drainage Bylaw](#). The drainage inspector responded to 377 and 416 citizen drainage issues in 2014 and 2015, respectively.

Rainfall Reporting: Eight rainfall gauges were regularly monitored and protocol for reporting was implemented that informed the City of flood potential and assessed past storms. The [2015 Annual Rainfall Report](#) provides a summary of Saskatoon’s 2014 and 2015 rainfall seasons.

Rainfall Intensity-Duration-Frequency Curves: Engineering & Planning worked with the University of Saskatchewan to integrate climate change patterns into its models for

⁴ Measures the oxidation of carbons in water

⁵ Total Suspended Solids

⁶ E.coli is a common indicator of fecal contamination and is quantified using the Most Probable Number (MPN) method. MPN is a probabilistic test which assumes coliform bacteria meet certain criteria.

severe storms. The new models will impact design standards for storm sewers and retention ponds.

Surface Flooding Control Strategy: Thirty sites with known surface flooding were assessed and prioritized based on risks of surface water reaching the site and the building, classification of roadway affected, and number of properties potentially affected. In 2014, the three highest ranking sites were examined in detail and the costs of alternative solutions, such as ponds and increased pipe sizes, were assessed. The cost to provide “1 in 100-Year” flood control for 286 houses, was estimated to be \$52.3 million.

5.3 Capital Projects

Saskatoon Water had 93 active capital projects as of December 31, 2015, budgeted at more than \$216.6 million. The following table summarizes the active capital projects by section:

| Active Capital Projects as of December 31, 2015 | | | |
|---|----------------------|------------------|---------------------|
| Section | # of Active Projects | Approved Funding | Net Unspent Funding |
| Water Treatment | 30 | \$124,033,400 | \$25,977,515 |
| Wastewater Treatment | 44 | \$ 89,920,000 | \$32,710,303 |
| Storm Water | 19 | \$ 2,685,000 | \$ 1,617,000 |
| Total | 93 | \$216,638,400 | \$60,304,818 |

The following section describes some of the major capital projects funded by the water-related utilities.

Water Treatment Plant Expansion:

Saskatoon Water substantially completed its most significant WTP upgrade in over 50 years, with a total cost of \$77 million. This project included reservoir expansions and new pumphouses at the Avenue H and 42nd Street facilities. An ultraviolet disinfection system was added at the new four-storey-tall Avenue H facility. Although our stringent drinking water processes already complied with water quality regulations, this additional measure further ensures safe, high-quality drinking water.



Ultraviolet Disinfection System

The Avenue H and 42nd Street reservoir expansions increased useable water storage capacity from 42 to 72 million litres at these two sites to meet the growing needs of the city. New high lift pumping stations at each location improved efficiency and reduced operating costs.



42nd Street Reservoir Expansion - Outside



42nd Street Reservoir Expansion - Inside

Acadia Drive Capacity Improvements: Work also began to improve pumping capacity at the Acadia Drive Water Reservoir and Pumphouse, which serves customers located south of College Drive and east of Preston Avenue. The upgrade is expected to be completed in 2016.

Clarifier Upgrades: The WTP upgraded clarifiers by adding tube settlers to Clarifier #2 in 2014 and to Clarifier #4 in 2015, resulting in an increased capacity that enables the City to postpone construction of an additional clarifier, estimated at \$15.0 million.

Water Treatment Plant Transfer Pumping and Electrical Upgrades: A “Terms of Reference” was prepared for engineering consulting services for transfer pumping and electrical upgrades. These future upgrades will provide dedicated efficient pumps to transfer water to the Avenue H Reservoir facility.

Sanitary Lift Station Upgrades: Upgrading lift stations improved the efficiency and reliability of the wastewater collection system. The Spadina Lift Station upgrade work started in 2015 and is expected to be completed in 2016. The 33rd Street Lift Station was decommissioned as sanitary sewer flow was permanently diverted to the new Elk Point Lift Station.

Wastewater Treatment Plant Digester: An analysis of options identified a conventional digester as the preferred technology for a fourth WWTP digester required to meet demands of growth and increase treatment reliability. The new digester is expected to be operational by 2018.

Wastewater Odour Abatement Project: Design work for the \$10.0 million wastewater odour abatement was completed in 2014. The Odowatch continuous odour monitoring system was installed and over 50% of the odour abatement construction was completed by the end of 2015. The project will reduce approximately 76% of all odour emissions during normal operations.

The Marquis Odour Control Facility and Drop Structure were commissioned in 2015.



The above pictures show the WWTP Dissolved Air Flotation (DAF) tanks before and after covers have been added to reduce odour. The thickening process allows more solids to be removed from wastewater and contributes to the clarification process.

Sanitary Sewer Superpipe: The Lakeview Sanitary Sewer Storage facility, funded by the Flood Protection Program (FPP), was the 11th “superpipe” facility installed in the city to increase capacity and mitigate risk of sewer backup.

Mackie Crescent: A trenchless storm sewer replacement project was completed at Mackie Crescent, minimizing cost and disruption to residents.

14th Street and 15th Street Storm Sewer Outfall Rehabilitation: Construction was completed to restore storm sewer trunk outfalls along the river that had been damaged as a result of soil erosion.



The above pictures show the 14th and 15th Street Storm Sewer Trunk Outfall Rehabilitation

East Riverbank Stabilization - 17th Street and Saskatchewan Crescent: Golder Associates designed an award-winning solution to remediate slope failure at 17th Street. The \$1.8 million project stabilized the road embankment with lightweight fill and installation of a sub-drainage system.



The above picture shows the expanded polystyrene fill used to stabilize the embankment.

5.4 Continuous Improvement Initiatives

Saskatoon Water is committed to Continuous Improvement (CI) through improved customer service and continually implementing innovations to improve efficiencies and reduce costs. In addition to the operating and capital projects described above, Saskatoon Water has undertaken the following CI initiatives:

Water Treatment Plant Chemical Optimization: The amount of lime and ferric required in the water treatment process was reduced by optimizing the chemical dosage, with significant cost savings.

Procurement Process Improvements: The procurement process was improved by securing large contracts with major suppliers to take advantage of bulk discounts, which resulted in savings of over \$200,000. Blanket orders with major suppliers eliminated unnecessary paperwork and sole source contracts. Procurement also was streamlined by using electronic ordering and payments. All parts are now delivered to stores, resulting in higher productivity for onsite staff. This process has reduced the administrative costs of procurement for the City by over \$25,000, while also increasing transparency and reducing wait times for repair and maintenance materials.

Filter Optimization: Through extensive testing, the WTP extended the filter run time (time between cleaning) to minimize the water wasted during the cleaning process, reduce chemical usage/pumping at the Residual Handling Facility, and save energy. The increase in the filters' overall capacity will defer future capital expenditures.

Residual Handling Facility Pump Optimization: After a six-month trial, a new pump brand for the WTP was selected to increase reliability and reduce facility down time as well as reduce operating and maintenance costs.

Inventory Management System: A master inventory list and kitting of related items was completed for the WWTP with active tracking of assets. The proper critical spares list and "right time" ordering has resulted in cost savings due to reduced downtime and less risk to the plant.

Wastewater Nutrient Recovery and Wastewater Discharge Quality: The Nutrient Recovery Facility (Ostara system) transforms phosphorous and nitrogen from waste streams into a marketable, eco-friendly fertilizer; reduces struvite (a naturally occurring, hard deposit that plugs pipes and pumps); and improves reliability of the WWTP. System optimization increased nutrient recovery and reduced the volume of sludge sent to the holding ponds by 7% in 2015. The optimization resulted in a \$65,000 savings and improved quality of effluent discharged to the river. Saskatoon's Ostara system is one of two of its kind in North America and is the top performing worldwide Ostara site, in terms of nutrient yield.

Bio-solids Handling: The WWTP's in-house innovation and ideas led to experimentation of many different methods of bio-solids applications. Material handling has been reduced by a factor of four, thereby reducing costs. Odour emissions also have been significantly reduced.

Advanced Metering Infrastructure: Hardware was installed and testing started for the new Advanced Metering Infrastructure (AMI) System, which will be used to electronically transmit actual water consumption data. When AMI is fully installed, all meter reading for billing purposes and some electrical service connects and disconnects will be done remotely, leading to reduced operating costs. The system will also provide automatic notification of metering errors and tampering which will reduce lost revenue. Better data through AMI will allow customers to save money by changing their water consumption habits, and the City will have better information to allow more efficient operation of the electrical and water distribution systems.

Run-off Assessment Process Improvement: A review was initiated to identify a more proactive assessment process to capture the correct revenue from storm water charges resulting from growth and development of multi-residential and commercial properties.

6.0 OUR ENVIRONMENT

6.1 Stewardship

Protecting the river and its surrounding watershed is vital to the long-term sustainability of our water supply. The public expects, and Saskatoon Water is committed to, responsible watershed management and stewardship. Saskatoon Water is a member of the South Saskatchewan Watershed Stewards Incorporated, a community-based organization that was formed to implement the South Saskatchewan River Watershed Source Water Protection Plan.

The WWTP consistently meets or exceeds all regulatory limits for effluent discharged to the river under WSA's "Permit to Operate a Sewage Works". Phosphorous is the key nutrient the WWTP removes because of its negative impacts on the South Saskatchewan River. The implementation of the Ultraviolet Disinfection Facility, to replace chlorine disinfection, has improved the quality of the final effluent being discharged to the South Saskatchewan River.

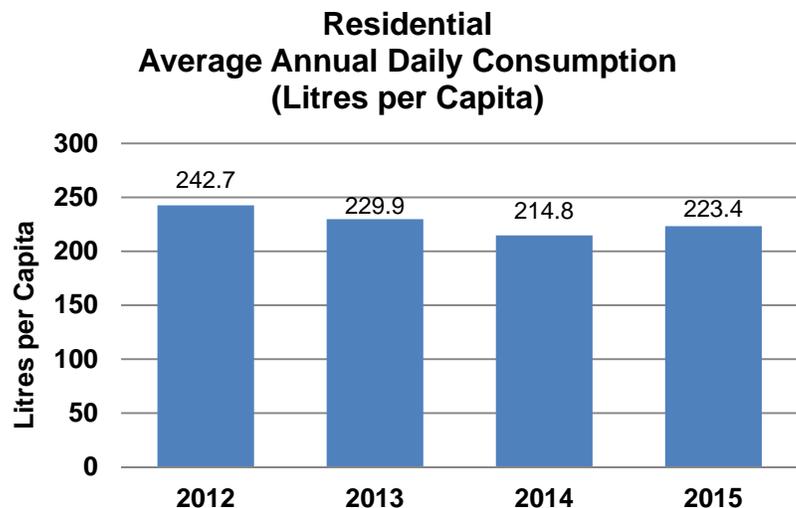
The Environmental Laboratory at the WWTP received ISO/IEC 17025:2005 accreditation from CALA in July 2015. Accreditation was maintained at the WTP Laboratory.

Saskatoon Water supports the Provincial Operator Certification Program, for both the Water and Wastewater Treatment Plants, which helps protect both the public and the environment.

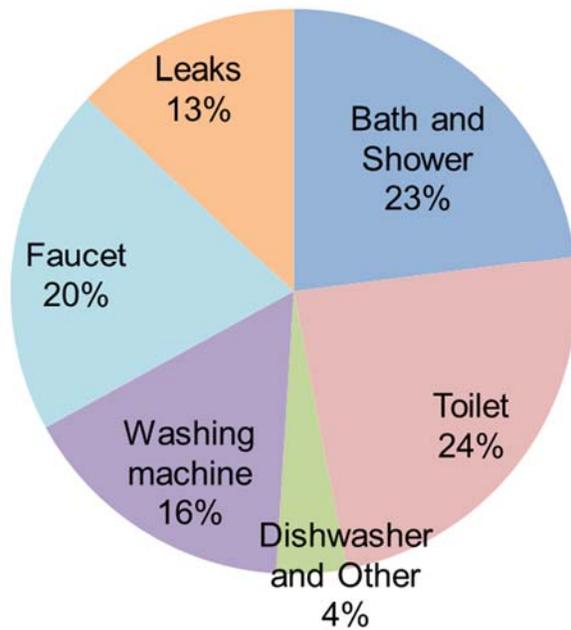
6.2 Conservation

Saskatoon water rates are designed to encourage water conservation in order to defer the need for high capital intensive capacity projects. Customer education to reduce the summer maximum day volume (peak demand management) can also assist in deferring some capital expenditures.

Due to fluctuating seasonal irrigation demands, Saskatoon's total average annual daily consumption varies significantly from year to year.



Residential Indoor Water Use



A recent study conducted by the Water Research Foundation shows that indoor household water use in a single family home has decreased by 22% from 1999 to 2016. The City of Saskatoon has experienced a similar downward trend as citizens implement low-flow fixtures.

The chart provides an indication of how indoor water is consumed in average residential homes in Canada and the United States.

Source: Water Research Foundation, April 2016

7.0 OUR CHALLENGES

Saskatoon Water has been proactive in anticipating and managing the following ongoing challenges it faces:

Keeping Up with Growth: Saskatoon's rapid growth in population and development has required additions to water infrastructure with large up-front capital expenditures. Construction costs have been higher because of the strong competing demands for contractor services. The division coordinated multiple capital projects, trained staff for new facilities, and identified ways to defer capital expenditures.

Infill Development: Cumulative impacts of infill development are placing higher demands on the carrying capacity of existing water and sewer infrastructure. More infill reduces greenspace and increases surface runoff so appropriate policies are needed to minimize surface flooding.

Age and Condition of Existing Infrastructure: Aging infrastructure has entered into a "replacement era" where asset sustainability and reliability will be at risk if not properly managed. Some of the infrastructure is over 100 years old and does not meet design standards for new development areas. Monitoring and assessing the physical condition and capacity of the infrastructure has been initiated as a foundation for an asset management program to better maintain our assets, prolong life, and increase resiliency.

Climate Change and Rainfall: Changing rainfall patterns impact demand for water, with high peak demands during dry stretches. Wet weather conditions also have created drainage issues throughout the city. High groundwater levels have impacted neighbourhood drainage and resulted in east riverbank slumping and slope failure that damaged infrastructure.

Drainage Bylaw Enforcement: Neighbourhood storm water drainage is impacted by properties, which are developed contrary to approved design standards or drainage paths that are not maintained, resulting in flooding for homeowners and their neighbours. Appropriate tools and resources are necessary for inspections when development occurs to minimize future problems.

Regulatory Requirements: The provincial Permit to Operate impacts the required processes and standards for the WTP and WWTP. Further evolving federal and provincial regulations have the potential to impact discharges to the river. Saskatoon Water will continue to monitor regulatory trends and opportunities to be a leader in protecting our watershed.

Inflow & Infiltration: Identifying and removing the amount of inflow and infiltration entering the sanitary sewer system will help to protect the environment, reduce sewer back-ups, and costs for collection and treatment. Partial treatment of high flows, which are mostly rain or groundwater, will be considered as the WWTP reaches capacity.

8.0 CONCLUSION

The WTP and the WWTP have long-term strategic capital development and expansion plans. Through its approved 2015 Operating Budget and the approved five-year Capital Plan, Saskatoon Water was able to maintain operations and fund capital projects related to treated water and wastewater quality, city growth, and regulatory matters.

The success of Saskatoon Water is dependent on the dedication and skills of our employees, and their efforts are greatly appreciated. Our competent team of plant operators, tradespersons, maintenance staff, engineers, technologists, technicians, chemists, and administrators play a crucial role. The guidance and support of the General Manager, City Manager, and City Council is appreciated.

The staff of Saskatoon Water look forward to the challenges and the opportunities that the future will provide.

9.0 APPENDICES

Appendix One: Water, Wastewater and Storm Water Infrastructure

In 2014, the replacement value of all water, wastewater, and storm water infrastructure was estimated at over \$9.5 billion.

The Water Treatment Plant (WTP) and assets associated with water distribution have an estimated value of \$3.4 billion. An update to the valuation of the WTP, water intakes, and reservoirs is planned for 2016.

The Wastewater Treatment Plant and assets associated with the sanitary sewer collection system has an estimated replacement value of \$4.0 billion.

Saskatoon's storm water infrastructure has a replacement value of over \$2.0 billion.

| Water Utility Assets | | |
|---|----------------|-------------------------|
| Asset | 2014 Inventory | Replacement Value (\$M) |
| Water Treatment Plant, Water Intakes and three Reservoirs | | \$ 600 |
| Water Pipes | 1,132 km | 2,073 |
| Valves | 13,964 | 175 |
| Hydrants | 7,063 | 76 |
| Service Connections | 71,096 | 519 |
| Total | | \$ 3,443 |
| Wastewater Utility Assets | | |
| Asset | 2014 Inventory | Replacement Value (\$M) |
| Wastewater Treatment Plant | | \$ 500 |
| Lift Stations | 28 | 154 |
| Wastewater Pipes | 1,030 km | 2,686 |
| Manholes | 11,298 | 208 |
| Forcemains | 44 km | 98 |
| Service Connections | 69,635 | 393 |
| Total | | \$ 4,039 |
| Storm Water Utility Assets | | |
| Asset | 2014 Inventory | Replacement Value (\$M) |
| Storm Water Pipes | 702 km | \$ 1,797 |
| Manholes | 8,710 | 136 |
| Catch Basins | 11,758 | 44 |
| Leads | 136 km | 34 |
| Service Connections | 2,971 | 17 |
| Wet Ponds | 20 | 16 |
| Dry Ponds | 8 | 2 |
| Culverts | 5 km | 2 |
| Water Outfalls | 92 | 6 |
| Total | | \$ 2,053 |

Appendix Two: Understanding Your 2016 Residential Water-Based Utilities

Account Number: 123456789

Detail Summary for

| | | | | |
|---------------------------------------|---------|---|-------|---------|
| | | A → Water, Sewer, & Infrastructure | | |
| Usage at Meter # 20161234 | | Water Service Charge 0.4615 per day for 32 days | 14.77 | |
| Customer Reference # | | Residential Water | | |
| Last Billed Read Jan 16 | 132.1 | First 326.66 ft ³ x 0.03207 per ft ³ | 10.48 | |
| Actual Read on Feb 01 | 137.02 | Total Water..... | | \$25.25 |
| Estimate to Feb 17 | 141.35 | B → Sewer Service Charge 0.4615 per day for 32 days | 14.77 | |
| Meter Consumption | | Residential Sewer | | |
| Billing Multiplier | 35.3146 | First 326.66 ft ³ x 0.01879 per ft ³ | 6.14 | |
| Billed Consumption (ft ³) | 326.66 | Total Sewer..... | | \$20.91 |
| Total Billed Consumption | 326.66 | C → Temp Flood Protection Chg 0.1478 per day for 32 days | 4.73 | |
| | | Residential Infrastructure | | |
| | | First 326.66 ft ³ x 0.02311 per ft ³ | 7.55 | |
| | | Total Infrastructure..... | | \$12.28 |
| | | Total Water, Sewer & Infrastructure..... | | \$58.44 |
| | | Billing Period: Jan 16 2016 - Feb 17 2016 | | |
| | | E → Storm Water Management | | |
| | | Storm Water Mgt Charge 0.1445 per day for 31 days | 4.48 | |
| | | Total Storm Water..... | | \$4.48 |
| | | Billing Period: Jan 17 2016 - Feb 17 2016 | | |

Bill

A. Water Service Charge: The fixed monthly charge for a 5/8 inch water meter is \$9.36, and for a 3/4 inch meter is \$14.04. The fee is prorated by the number of days in the month

A second water service charge is based on water usage (volumetric): \$3.207 per 100 ft³ for the first 600 ft³, \$3.57 per 100 ft³ for the second 600 ft³ and \$4.70 per 100 ft³ for over 1,200 ft³. The water service charges are used to fund water utility operations and capital projects.

B. Sewer Service Charge: The fixed monthly sewer service charge is based on the size of the water meter and is the same amount as the fixed water service charge.

The sewer volumetric charge is 58.6% of the water volumetric charge. Rates are set on a cost recovery basis and recognize that not all water returns to the sanitary sewer: \$1.879 per 100 ft³ for the first 600 ft³, \$2.092 per 100 ft³ for the second 600 ft³ and \$2.754 per 100 ft³ for over 1,200 ft³. Sewer service charges fund wastewater operations and capital projects.

C. Temporary Flood Protection Charge: The charge is a fixed fee of \$4.50 per month, prorated by the number of days in the month. The fee is charged on each water meter until December 2018. The charge is used to upgrade the sanitary sewer system to reduce the risk of sewer back-ups during severe rain events.

D. Residential Infrastructure: The fee is \$2.311 per 100 ft³ of water usage. This fee is used for the capital replacement and upgrade of the water distribution and wastewater collection systems. The Redevelopment Levy to increase capacity of existing infrastructure to accommodate infill developments and the Roadways Levy that funds remediation of roadway damage associated with the utilities are included in the charge.

E. Storm Water Management Charge: The monthly charge for residential properties is a fixed amount of \$4.40 prorated by the number of days in the month. This fee is used to fund operations and capital projects for storm water and for stabilizing riverbank slumping.

Appendix Three: Abbreviations

AMI – Advanced Metering Infrastructure

CALA – Canadian Association for Laboratory Accreditation Inc.

CBOD - Carbonaceous Biochemical Oxygen Demand

CFU – Colony Forming Unit

CI – Continuous Improvement

City – City of Saskatoon

IEC – the International Electrotechnical Commission

IS – Infrastructure Services

ISO – the International Organization for Standardization

MPN – Most Probable Number

NTU - Nephelometric Turbidity Units

PW – Public Works

TP - Total Phosphorous

US – Utility Services

WSA – Water Security Agency

WTP – Water Treatment Plant

WWTP – Wastewater Treatment Plant

Appendix Four: Glossary

Abatement: To reduce the amount or lessen the effect of.

Backflow Prevention Device: A backwater valve is a device that prevents sewage from backing up into basements.

Bio-Solids: Organic matter recycled from sewage.

Capital Reserve: Funding that is reserved for long-term infrastructure projects to be undertaken in the future.

Clarifier: A settling tank used to remove solids in the water treatment process.

Colony Forming Unit (CFU): A measure of viable bacterial cells.

Commercial customers: For this report, refers to all non-residential customers and includes retail, wholesale, industrial, and institutional customers.

Critical Spares: Parts that may cause significant impact to operations in the event of a failure.

Cross Connection Control Program: A cross connection is any link between the water supply and potentially contaminated sources. The Cross Connection Control Program ensures that proper backflow prevention devices are installed to prevent foreign substances from entering the water distribution system.

Digester: One step of the wastewater treatment process used to decrease the amount of organic matter present.

Drop Structure: A device used in sanitary sewer collection systems to drop wastewater at a level in the manhole so that maintenance can be conducted during flow.

Effluent: Treated water discharged back into the river.

Ferric: Iron-containing materials or compounds.

Grant-In-Lieu of Taxes: Money paid by the Water and Wastewater Utilities in place of taxes.

Imperviousness: Ability of a material (e.g. soil, concrete) to not allow fluid to pass through.

Infill (Development): Development of land within already developed areas.

Infiltration: Groundwater seeping into sanitary sewers through cracks and crevices such as defective pipe joints and broken pipes.

Inflow: Water flowing into the sanitary sewer through large openings such as cross connections and weeping tile.

Irrigation: Artificial application of water typically due to low amounts of rainfall.

Kitting: Process in which individually separate, but related items are grouped, packaged, and supplied together as one unit.

Lift Station: Facility designed to move wastewater or storm water from lower to higher elevations with pumps.

Low-Flow Fixture: Fixtures that use water efficiently to reduce overall water usage.

Nephelometric Turbidity Units (NTU): A measure of scattered light. A high turbidity level is caused by organic matter that can promote the growth of pathogens, as well as being aesthetically unappealing.

Potable: Safe to drink.

Procurement: The process of obtaining or purchasing.

Residual Handling Facility: Removes chlorine and solids, mostly consisting of sand and inert ferric material, from the Water Treatment Plant effluent that is discharged to the South Saskatchewan River.

Return Period: The estimate of the likelihood of a rainfall event. A two-year rain event would have a 50% likelihood of occurring in any given year. A five-year rain event would have a 20% likelihood of occurring in any year.

Right Time Ordering: An inventory strategy that increases efficiency and reduces costs by balancing having supplies when needed with the costs of carrying inventory.

Stabilization Reserve: Water utility revenues fluctuate due to rainfall and demand for irrigation. Annual operating surpluses, which are more likely during drier years, are allocated to the Stabilization Reserve that can be used in years with an operating deficit. The Stabilization Reserve is capped at 5% of the current year's budgeted metered revenue, and any additional surplus is allocated to the Capital Reserve.

Struvite: A naturally occurring, hard deposit of magnesium ammonium phosphate crystallization that occurs within the Wastewater Treatment Plant infrastructure.

Sub-drainage System: Typically perforated pipe used to drain groundwater and seepage.

Superpipe: A large sanitary storage tank to handle surcharged wastewater.

Surface Runoff: Rainfall flowing overland and into the storm sewer without being absorbed into the ground.

Trenchless Replacement: Sewer pipe replacement without the use of an open cut excavation.

Turbidity: The cloudiness or haziness of a fluid caused by a large number of individual particles that are generally invisible to the naked eye.

Long-Term Lead Service Line Replacement and Water Main Capacity Improvement Strategy

Recommendation

That the Administration be directed to prepare the preliminary 2017 Business Plan and Budget based on the lead service line replacement and water main capacity improvement strategy outlined in this report.

Topic and Purpose

The purpose of this report is to present the major factors Administration considered when developing a proposed program to accelerate Lead Service Line (LSL) and water main replacements.

Report Highlights

1. Saskatoon has an approved Level of Service for the replacement of Lead Service Lines (LSLs).
2. As cast iron water mains age, internal corrosion can restrict flow. These capacity problems are most evident in pre-1940s water mains and will continue to deteriorate over time.
3. Administration has identified water mains in need of capacity improvements and these water mains are in the same areas as over 80% of LSLs.
4. A coordinated program of water main capacity improvements and LSL replacements is recommended. The recommended option will significantly accelerate LSL replacements and result in a completion date of 2026 for replacement of all LSLs. Alternative options are presented for completion by 2023, or 2030.
5. Saskatoon Water will report on the financial impact of the recommended strategies as part of the 2016-2019 utility rate approval.

Strategic Goals

This report supports the Strategic Goals of Quality of Life and of Asset and Financial Sustainability by improving water main capacity and removing LSLs from the water distribution system. Water main capacity upgrades will help ensure that minimum water flows are being met, improving quality of life. Renewing the mains will increase asset sustainability. Removing LSLs from Saskatoon's inventory improves quality of life by virtually eliminating the need for affected property owners to take daily action to reduce their exposure to lead in their drinking water.

Background

Capital Project #1615 is used for the preservation of the water distribution system and is funded through the Infrastructure Levy of the Water Utility Rate. Preservation projects are planned capital work such as water main replacements and service line

replacements. In 2015, total funding for LSL replacements was \$1.5M and water main replacement was \$5.06M.

Report

The City currently has programs for the replacement of water mains and LSLs. Water main replacements are based on the number of breaks a segment has incurred in the last 25 years. There is a Level of Service and long-term funding plan in place for water main replacements.

LSL replacements are done on an emergency basis, or at the request of homeowners, or when road reconstruction is taking place. A funding strategy is in place for approximately 100 emergency/roadway replacements and 100 homeowner requested replacements per year.

Due to a sharp increase in homeowners requesting LSL replacements, Administration investigated options to accelerate LSL replacements to meet demand in a timelier manner. Additional funding has been put in place to replace an additional 100 homeowner requested LSLs in 2016.

When developing an accelerated LSL Replacement Program, the current process of replacing service lines based on homeowner requests and emergencies would not be efficient since the replacements are scattered throughout the City. Attachment 1 illustrates the number of LSLs by neighbourhood. A more strategic approach would allow for coordination of this work with other infrastructure projects and reduce costs for the program in the long term.

Approximately 81% of LSLs are connected to cast iron water mains installed prior to 1940. In Saskatoon, water main break data has shown that cast iron water mains from the pre-1940 era have incurred breaks at a lower rate than those installed post-1940. For this reason, pre-1940 water mains have not typically been the focus of water main replacement programs. However, the flow capacity of cast iron water mains decreases over time due to internal corrosion of the pipes causing formation of tuberculation inside the mains. These capacity issues have been confirmed through modeling and testing, and are most evident in pre-1940 water mains and become worse over time.

Low-capacity mains can have negative effects on water supply service delivery, such as lower pressure and reduced flows. It is important that the City begin to address capacity issues in a proactive, strategically planned and sustainable manner. Implementing a program to replace the low-capacity cast iron water mains and LSLs can mitigate these issues before they become problematic or critical.

Recommended Strategy

A strategy is recommended where pre-1940 water mains and LSLs are replaced at the same time. Water mains with more than five LSLs connected to them would be prioritized and scheduled for replacement along with the associated LSLs. To provide a

complete preservation strategy, full resurfacing of the roadways in these areas will be conducted where appropriate.

Combining the LSL work with the water main replacement work and road restoration will reduce long-term costs compared to replacing the LSLs one at a time and then returning at a future date and replacing the water main. Residents would also benefit from a coordinated approach since water service and road disruptions would be limited to one construction season. The following recommendations are suggested for the proposed program:

- It is recommended that the homeowner request process be discontinued and the current backlog (approximately 647 requests for replacements) be completed over 3 years, 2016 – 2018, at a cost of \$1.605M in 2016, \$1.635M in 2017, and \$1.676M in 2018.
- It is recommended that in 2017 a coordinated water main capacity improvement and LSL replacement project be initiated. The goal of the project will be to fully remove the LSL inventory and replace 28km of low-capacity water mains by 2026 at which point the funding would continue to be used to improve water main capacity.

The proposed program will include the following details:

- Cast iron water mains that serve more than 5 LSLs will be replaced along with the LSLs. Approximately 2.8km of water main and 300 LSLs will be replaced per year as part of this project, at a cost of \$7.785M in 2017 (\$5.535M for water main and \$2.250M for LSL replacements).
- It is anticipated that 100 emergency lead replacements will occur per year between 2017 and 2019 combined with the 300 planned LSL replacements. A total of 400 LSLs would be replaced per year, except for 2017 and 2018 when approximately 620 would be replaced per year in order to remove the remainder for the homeowner backlog as outlined above.
- A long-term LSL replacement schedule will be developed. Homeowners who want their LSL replaced ahead of schedule can do so at their own cost for the entire replacement. When their home comes up on the replacement schedule, the homeowner will be reimbursed for the City portion of the connection replacement. The City's portion will be calculated as 60% of the tendered amount in the year the connection was replaced.
- It is estimated that this work will require three people in the Construction & Design division for project management and inspection. Costs for FTEs are included in the proposed budgets. This work requires intensive communication, coordination, and customer-service time due to the significant impact on affected residents.

Attachment 2, Table 1 outlines the recommended budget to 2026, and Table 2 outlines the Level of Service that would be provided by this budget.

Benefits

It is estimated that a coordinated approach to LSL replacements and water main capacity improvements would save approximately \$1.2M in excavation and road restoration costs alone over 10 years and require less water service and street disruption to homeowners that live where multiple LSLs require replacement.

Having a proactive and sustainable plan for replacing pre-1940 water mains has the benefits of improving water main capacity before they degrade further and adversely affect water pressures and flows. In addition, this strategy will reduce the cost and service interruptions of water main break repairs that will eventually begin occurring on these mains.

Options to the Recommendation

Saskatoon Water will determine the impact that the strategies presented in this report will have on rates and present that in the upcoming 2017-2019 Utility Rate approval report. At that time, more information is expected to be known about contributions available from recently announced federal programs.

The Administration has developed the following two options to the recommendation:

1. Replace LSLs at a quicker pace than the recommendation. Approximately 600 lead connections per year instead of the recommended 400 and approximately 4km of water main capacity improvements per year instead of the recommended 2.8km. This option would replace the LSL inventory by 2023 and, similar to the recommended strategy, would discontinue the homeowner request program but complete the current homeowner backlog by 2018.

Number of LSLs replaced, length of water main capacity improvements, and total costs for the 2017 to 2019 period are detailed as follows:

- Attachment 2, Table 3 outlines the recommended budget to 2023.
- Attachment 2, Table 4 outlines the Level of Service that would be provided by this budget.

This option is not recommended due to coordination problems that would be created with a program of this scope. A program this large would have significant water service and roadway disruptions in the City each year and would be difficult to effectively coordinate with road preservation which may result in recently paved roads being excavated, or advancing the timing of road preservation projects to align with water main work. This could also cause rate shock and require an inordinate portion of road program funding.

2. Replace LSLs at a slower pace than the recommendation. Approximately 300 lead connections per year instead of the recommended 400 and approximately 0.9km of water main capacity improvements per year instead of the recommended 2.8km. This option would replace the LSL inventory by 2030 and would continue with the homeowner requested LSL Replacement Program. Since the homeowner request program would stay in place, this option would not

be well coordinated with water main replacement or road preservation programs. Details are provided as follows:

- Attachment 2, Table 5 outlines the recommended budget to 2030.
- Attachment 2, Table 6 outlines the Level of Service that would be provided by this budget.

This option is not recommended as it continues the scattered approach to LSL replacements which results in multiple disruptions for residents. There would also be increased costs due to lost efficiencies of coordinating LSL and water main replacements. This strategy would require multiple excavations in a street, degrading of the roadway surface and multiple water disruptions in areas where many lead connections exist.

The following table is a summary of the recommendation and two alternative options:

| | Recommendation | Option 1 | Option 2 |
|---|-----------------------|-----------------|-----------------|
| Current Homeowner Request Backlog Complete | 2018 | 2018 | 2021 |
| Homeowner Request Program Continues? | N | N | Y |
| Year LSL Inventory Replacement Complete | 2026 | 2023 | 2030 |
| LSL Replacements Coordinated with Water Main and Road Preservation? | Y | Y | N |
| km's of Water Main Capacity Improvements | 28 | 28 | 13 |

Public and/or Stakeholder Involvement

This report details data and initiatives that were developed in conjunction with the Saskatoon Fire Department and Public Works, Construction & Design, and Saskatoon Water divisions.

Public input was also taken into account when developing service levels for water main replacement programs and lead connection replacement programs.

Communication Plan

The City has a communication plan to educate residents about lead connections and provide information about the LSL Replacement Program. If the recommended strategy is approved by Council, communication tactics within the plan will be updated.

Current communications tools include a page on the City's website, a letter mailed periodically to property owners and occupants with lead service connections advising them of the replacement program, a brochure, and a letter to residents who request a new utility account at a property known to have an LSL.

Financial Implications

The 2016 Water Wastewater and Infrastructure Levy Budgeted Revenues were approximately \$133M; therefore, the recommended strategy increase of approximately \$7.6M represents an increase of 5.7% of 2016 budgeted revenues. Saskatoon Water will investigate the impact that the recommended strategy will have on utility rates and present more detailed information in the upcoming 2017-2019 Utility Rate Report.

There are already significant pressures on the Water and Wastewater Utilities for 2017 through 2019. At this time, the Administration is considering the potential use of the federal funding for both the program outlined in this report as well as the existing annual water main programs. Maintaining some portion of senior government funding within the Utility may be required in order to both achieve this significant service improvement and keep annual rate increases at a manageable level.

Other Considerations/Implications

There are policy, environmental, privacy, or CPTED implications or considerations.

Due Date for Follow-up and/or Project Completion

More information on Utility Rate impacts will be presented in the 2017 – 2019 Utility Rate approval report.

Public Notice

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

Attachments

1. 2016 Lead Service Line Inventory
2. Recommended and Optional Budgets and Service Levels

Report Approval

Written by: Stephen Wood, Manager, Water & Sewer Preservation
Reviewed by: Rob Frank, Manager, Asset Preservation Section
Reviewed by: Dan Willems, Director of Major Projects
Reviewed by: Reid Corbett, Director of Saskatoon Water
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities Department

EUCS SW Long-Term Lead Service Line Replacement-WM Cap Improv Strategy

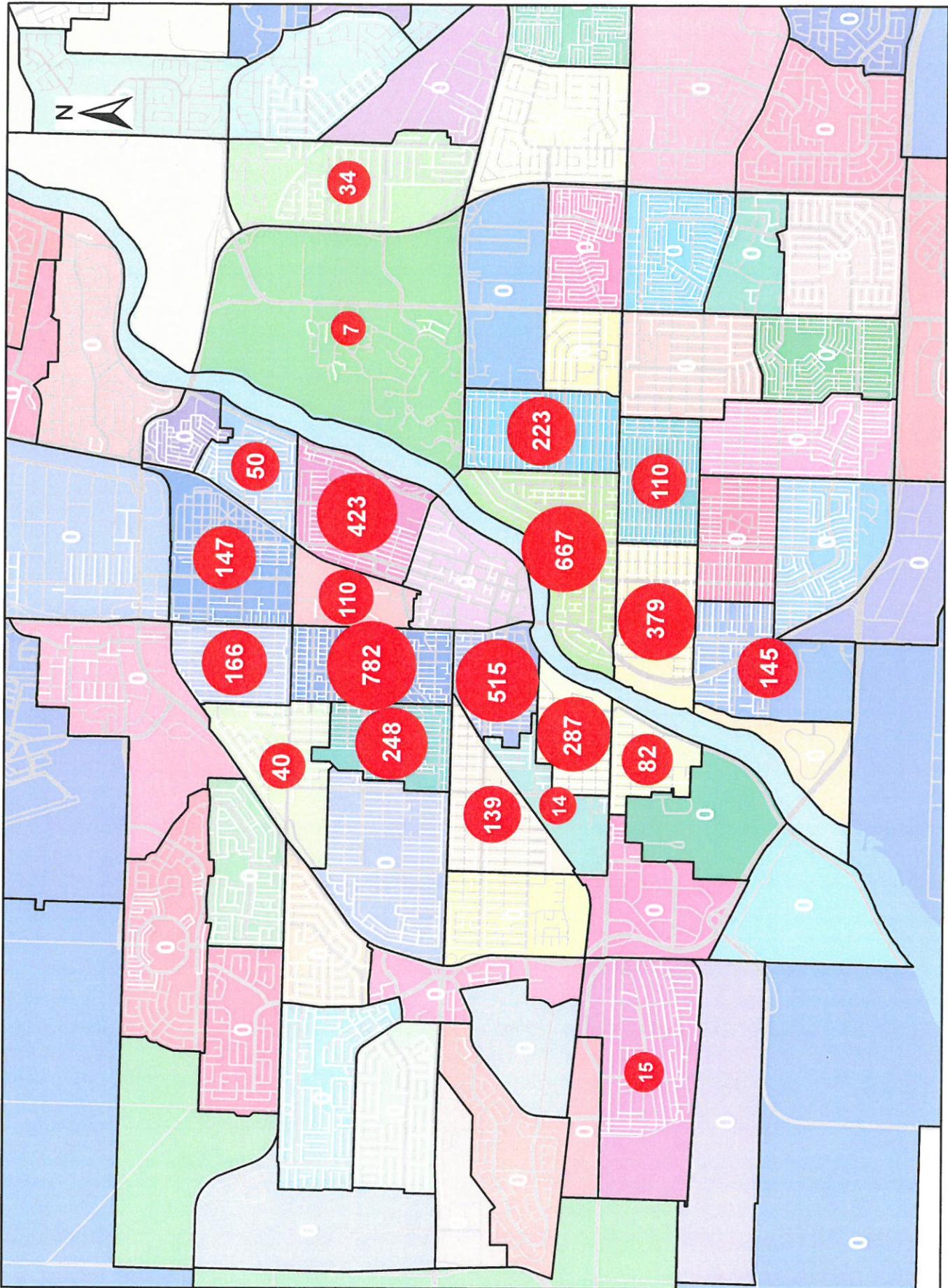


Figure 1
2016 Lead Service Line Inventory

Table 1 - Recommended Budget

| | 2016 (\$000's) | 2017 (\$000's) | 2018 (\$000's) | 2019 (\$000's) | 2020 (\$000's) | 2021 (\$000's) | 2022 (\$000's) | 2023 (\$000's) | 2024 (\$000's) | 2025 (\$000's) | 2026 (\$000's) |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Water main capacity improvements | 200 | 5,535 | 5,673 | 5,815 | 5,961 | 6,110 | 6,262 | 6,419 | 6,579 | 6,744 | 6,912 |
| Long-term LSL Replacement (to be coordinated with water main capacity improvements) | | 2,250 | 2,306 | 2,364 | 2,423 | 2,484 | 2,546 | 2,609 | 2,675 | 2,741 | 2,810 |
| Emergency Lead Connection Replacements | 750 | 769 | 788 | 808 | 828 | 849 | 870 | 892 | 914 | 937 | 960 |
| Removal of Homeowner Request Backlog | 1,605 | 1,635 | 1,676 | - | - | - | - | - | - | - | - |
| Totals LSL and Capacity Funding | 2,555 | 10,189 | 10,443 | 8,987 | 9,211 | 9,442 | 9,678 | 9,920 | 10,168 | 10,422 | 10,682 |

Table 2 - Recommended Budget Service Levels

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | | 2026 |
|---------------------|------|------|------|------|------|------|------|
| # of LSL's Replaced | 314 | 618 | 618 | 400 | 400 | | 400 |
| km's of Capacity | - | 2.8 | 2.8 | 2.8 | 2.8 | | 2.8 |

Table 3 - Option #1 Budget

| | 2016 (\$000's) | 2017 (\$000's) | 2018 (\$000's) | 2019 (\$000's) | 2020 (\$000's) | 2021 (\$000's) | 2022 (\$000's) | 2023 (\$000's) |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Water main capacity improvements | 200 | 5,535 | 5,673 | 9,250 | 9,481 | 9,718 | 9,961 | 10,210 |
| Long-term LSL Replacement (to be coordinated with water main capacity improvements) | - | 2,250 | 2,306 | 3,750 | 3,844 | 3,940 | 4,038 | 4,139 |
| Emergency Lead Connection Replacements | 750 | 769 | 788 | 808 | 828 | 849 | 870 | 892 |
| Removal of Homeowner Request Backlog | 1,605 | 1,635 | 1,676 | - | - | - | - | - |
| Totals LSL and Capacity | 2,555 | 10,189 | 10,443 | 13,808 | 14,153 | 14,507 | 14,869 | 15,241 |

Table 4 - Option #1 Service Levels

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | | 2023 |
|-------------------------------|------|------|------|------|------|------|------|
| # of LSL's Replaced | 314 | 618 | 618 | 600 | 600 | | 600 |
| km's of Capacity Improvements | - | 2.8 | 2.8 | 4.0 | 4.0 | | 4.0 |

Table 5 - Option #2 Budget

| | 2016 (\$000's) | 2017 (\$000's) | 2018 (\$000's) | 2019 (\$000's) | 2020 (\$000's) | 2021 (\$000's) | 2022 (\$000's) | 2023 (\$000's) | 2024 (\$000's) | 2025 (\$000's) | 2026 (\$000's) |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Water main capacity improvements | 200 | 1,850 | 1,896 | 1,944 | 1,992 | 2,042 | 2,093 | 2,145 | 2,199 | 2,254 | 2,310 |
| Long-term LSL Replacement (to be coordinated with water main capacity improvements) | - | 769 | 788 | 808 | 828 | 849 | 870 | 892 | 914 | 937 | 960 |
| Emergency Lead Connection Replacements | 750 | 769 | 788 | 808 | 828 | 849 | 870 | 892 | 914 | 937 | 960 |
| Homeowner Request Backlog | 1,605 | 769 | 788 | 808 | 828 | 849 | 870 | 892 | 914 | 937 | 960 |
| Totals LSL and Capacity Funding | 2,555 | 4,157 | 4,261 | 4,367 | 4,476 | 4,588 | 4,703 | 4,821 | 4,941 | 5,065 | 5,191 |

Table 5 Cont'd

| | 2027 (\$000's) | 2028 (\$000's) | 2029 (\$000's) | 2030 (\$000's) |
|--|-------------------|-------------------|-------------------|-------------------|
| Water main capacity improvements | 2,368 | 2,427 | 2,488 | 2,550 |
| Long-term LSL Replacement (to be coordinated with water main capacity improvements) | 984 | 1,009 | 1,034 | 1,060 |
| Emergency Lead Connection Replacements | 984 | 1,009 | 1,034 | 1,060 |
| Homeowner Request Backlog | 984 | 1,009 | 1,034 | 1,060 |
| Totals LSL and Capacity Funding | 5,321 | 5,454 | 5,590 | 5,730 |

Table 6 - LSL Replacements and Water Main Improvements at Option #2 Budget

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | | 2030 |
|-------------------------------|------|------|------|------|------|------|------|
| # of LSL's Replaced | 314 | 300 | 300 | 300 | 300 | | 300 |
| km's of Capacity Improvements | - | 0.9 | 0.9 | 0.9 | 0.9 | | 0.9 |

Integrated Waste Management Annual Report 2015

Recommendation

That the report of General Manager, Corporate Performance Department, dated May 9, 2016, be forwarded to City Council for information.

Topic and Purpose

The performance of civic waste handling and reduction programs are reported in the Integrated Waste Management Annual Report for 2015.

Report Highlights

1. A Waste Diversion Rate of 70% by 2023 has been established as a Performance Target. The 2015 rate is 21%, below the national average (2012) of 33.7%.
2. Saskatonians continue to dispose less waste than the national average (which includes rural areas), but at a rate higher than most Canadian cities at 242 kilograms per person.
3. The City of Saskatoon's (City's) membership to the National Zero Waste Council was approved on April 22, 2016.
4. The City's residential curbside recycling, multi-unit residential recycling, compost depots, public space recycling, and civic facilities recycling diverted a total of 14,678 tonnes of materials, an increase from 2014.
5. 1.97 million garbage carts were emptied in 2015 with a reliability rate of 99.9%. City staff responded to 2,950 calls about missed residential garbage collections.
6. More than 88,000 vehicles delivered loads to the landfill. Total material deposited in 2015 was 112,418 tonnes, down from 126,174 tonnes in 2014.
7. 91% single family and 74% multi-family households recycle all or most of their recyclable items and 93% of residents are very satisfied or somewhat satisfied with the overall quality of the recycling service received.

Strategic Goal

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

Background

City Council received an Integrated Waste Management Annual Report for 2014 on October 26, 2015.

Report

Attachment 1 is the Integrated Waste Management Annual Report for 2015. The report provides a description of the waste handling, waste reduction, and waste diversion programs and services provided by the City of Saskatoon (City). These include:

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

Other waste diversion programs include:

- home composting education;
- curbside swap; and
- integrated waste education.

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

Communication Plan

The 2015 Integrated Waste Management Annual Report will be available for viewing on the City's website. A Public Service Announcement and social media posts will be distributed.

Environmental Implications

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

Other Considerations/Implications

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

Due Date for Follow-up and/or Project Completion

An Integrated Waste Management Annual Report will continue to be produced each year. The next report will be prepared for the 2016 year, submitted to the Standing Policy Committee on Environment, Utilities and Corporate Services in April 2017.

Public Notice

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

Attachment

1. Integrated Waste Management Annual Report 2015

Report Approval

Written by: Katie Burns, Environmental and Corporate Initiatives

Reviewed by: Amber Weckworth, Education and Environmental Performance
Manager

Brenda Wallace, Director of Environmental and Corporate Initiatives

Todd Christianson, Operations Superintendent (Landfill)

Cory Strawson, Operations Superintendent (Collections & Containers)

Trent Schmidt, Acting Director of Public Works

Jeff Jorgenson, General Manager, Transportation & Utilities

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

Integrated Waste Management Annual Report (2015).docx

Integrated Waste Management Annual Report 2015



Introduction

What is Integrated Waste Management?

Integrated Waste Management (IWM) is a comprehensive approach to waste prevention, recycling, composting, and disposal. An effective IWM system considers how to prevent, recycle, and manage waste in ways that protect both human and environmental health while staying affordable and convenient.

In 2015, the City of Saskatoon's core services included the following services and programs:

Waste Diversion Services

- Curbside recycling for all single-family homes
- Multi-unit recycling collection
- Recycling depots
- Public space recycling
- 2 drop-off locations for yard-waste composting
- Optional subscription-based leaves and grass curbside collections
- Household hazardous waste drop-off events

Waste Disposal Services

- A regional landfill
- Curbside collections for all single-family homes
- Collection for many multi-unit and commercial customers (other buildings and businesses contract to private haulers)
- Containers for single-family homes

Education and Engagement Services

- Webpage and online engagement
- Collection Calendar
- Curbside and multi-unit recycling program education
- Rolling Education Unit and Let's Roll Recycling Team
- Home composting education
- Saskatoon Curbside Swap
- Waste bylaw enforcement

Target – 70% Diversion by 2023

The City of Saskatoon (City) has adopted a 10-year target to divert 70% of waste from the Saskatoon landfill by 2023 with a longer term vision of achieving Zero Waste. This ambitious target shows a commitment by the City to establish new options for waste reduction, recycling, reusing, and composting as well as continuously improving our existing programs.

The target is linked to the City's Strategic Plan 2013 - 2023. Priorities under Environmental Leadership include:

- Eliminate the need for a new landfill by eliminating waste and/or diverting waste for re-use in other projects.
- Promote and facilitate city-wide composting and recycling to reduce the rate and volume of waste sent to the landfill

National Zero Waste Council

In February 2015, Saskatoon City Council voted unanimously to become a member of the National Zero Waste Council (NZWC) by May 2016. The application was submitted in March 2016 and was approved by the National Zero Waste Council Management Board on April 22, 2016.

The NZWC is a cross-sector leadership group that brings together governments, businesses, and non-government organizations to advance waste prevention in Canada. The aim for the NZWC is to substantially reduce waste and the associated environmental and economic costs of waste management through product design and behaviour change.

Delivering Integrated Waste Management Services

Integrated Waste Management falls within the Environmental Health Business Line, which is jointly managed by Public Works and Environmental & Corporate Initiatives through the Waste Handling Service Line and the Waste Reduction & Resource Recovery Service Line.

Waste Handling is provided by Public Works and the goal is to provide efficient, effective, customer-oriented waste management services. Waste Handling includes:

- Garbage containers and garbage collection services for single-family, multi-family and commercial customers
- Management of the Saskatoon Regional Waste Management Facility (Landfill)
- Operation of compost and recycling depots
- Provision of carts, collections and customer service for Green Cart subscriptions

- Collection of recyclable materials from recycling depots and civic facilities to Cosmopolitan Industries
- Communications related specifically to waste management operations
- Enforcement of the Waste Bylaw



The Public Works Division has the following resources dedicated solely to Waste Handling: an Environmental Operations Manager, an Operations Superintendent for Collections & Containers with 41 staff, an Operations Superintendent for Landfill with 27 staff, an Operations Engineer, a Depots Supervisor, and a Project Engineer for Landfill Gas.

Waste Reduction and Resource Recovery efforts are led by Environmental & Corporate Initiatives and focus on reducing, reusing, recycling, recapturing resources, and seeking operational efficiencies. Initiatives under this program include:

- Managing recycling contracts with Loraas Recycle for single-family residential and Cosmopolitan Industries Ltd. for multi-unit residential
- Waste diversion programs and initiatives including Curbside Swap, public space recycling, and household hazardous waste drop-off
- Capital projects related to waste diversion, such as Recovery Park
- Energy efficiency initiatives, such as the Efficient Waste System project and natural gas vehicles

- Development and amendments of plans, policies, and regulations in order to meet waste reduction targets
- Monitoring and reporting on waste diversion/reduction, energy use, and greenhouse gas emissions
- Increasing awareness, generating excitement, and educating residents on how and why to reduce and recycle waste

The Environmental & Corporate Initiatives Division has the following resources: a Director, an Education & Environmental Performance Manager with six staff, a Land & Water Manager with three staff, and an Energy & Sustainability Manager with three staff. In addition to Waste Reduction & Resource Recovery, the Environmental & Corporate Initiatives Division has responsibilities within the following Service Lines: Environmental Programs, Waste Services, Water, Wastewater, Storm Water, Facilities Management, River Landing, and Corporate Projects.

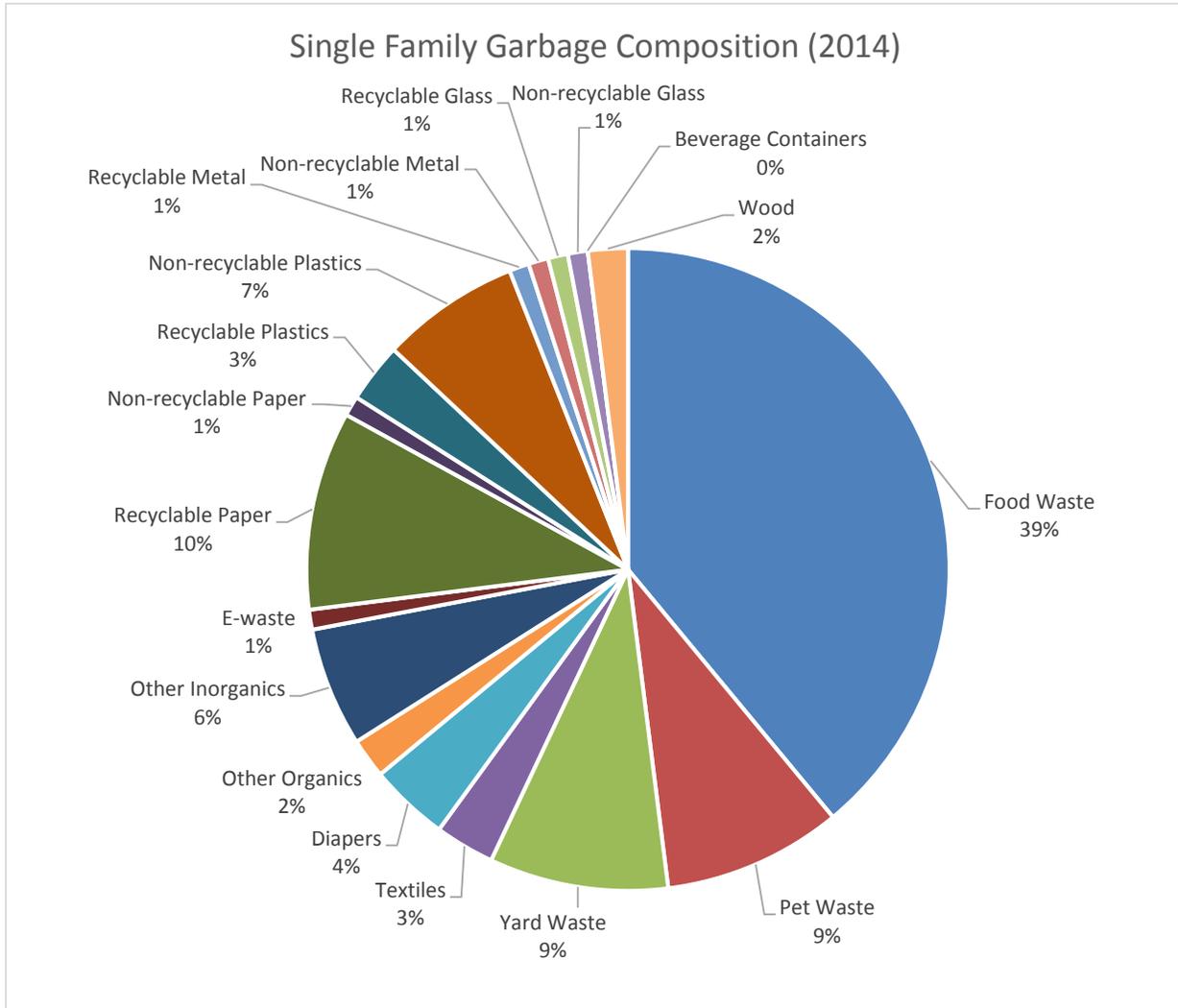
The work of both Divisions is directly supported by Business Administration and Communication staff.

2014 Waste Characterization Study

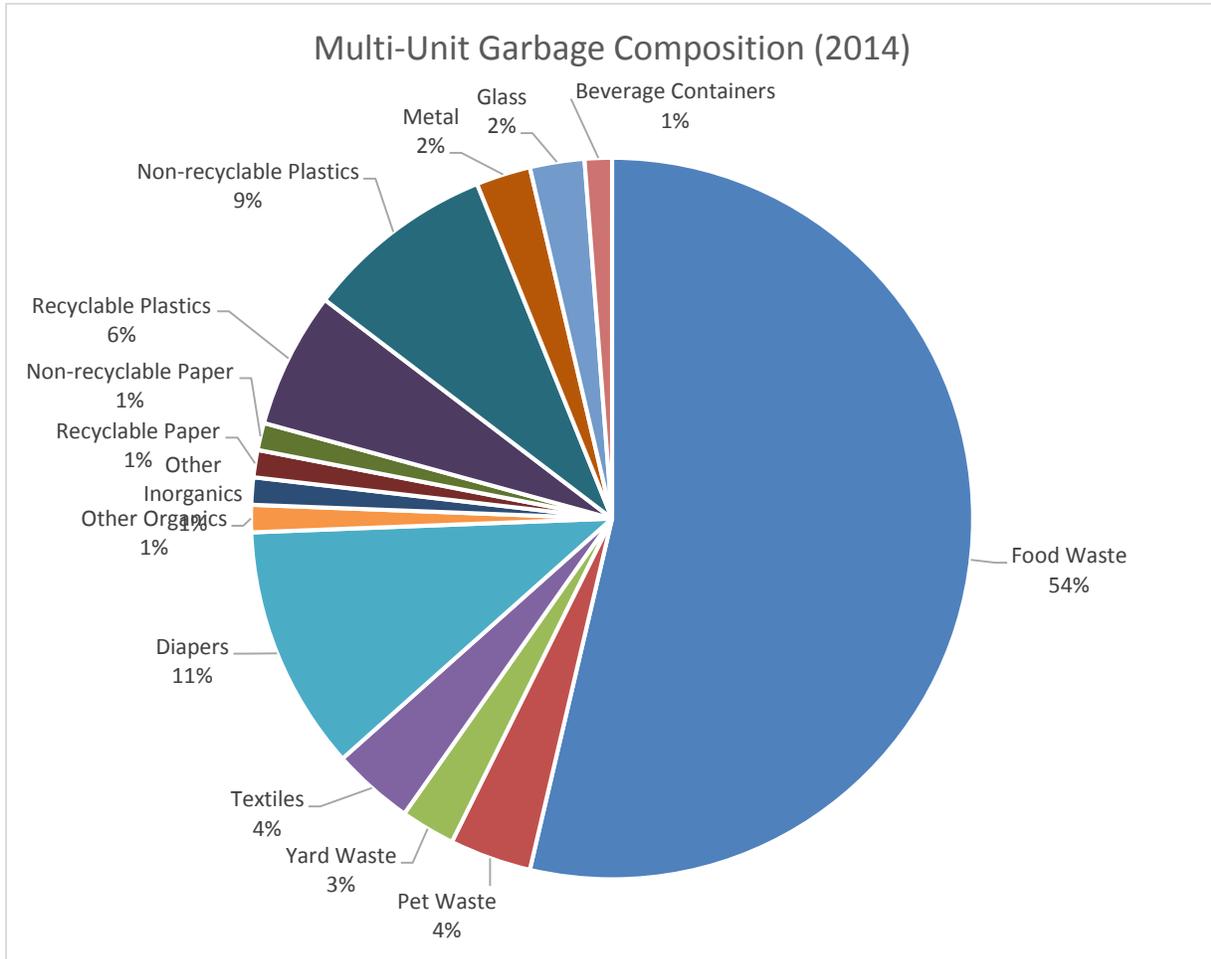
In 2014, the City of Saskatoon completed a Waste Characterization Study. The study included waste audits of the waste from both single family and multi-family homes, industrial/commercial/institutional waste, and homogenous waste at the landfill. It compared solid waste composition with a similar study completed in 2012 and analyzed the impact of waste diversion and waste minimization programming in the City.

The study focussed only on City programs and, therefore, provides a representative picture of waste behaviours in the community rather than a comprehensive audit of waste generation and handling.

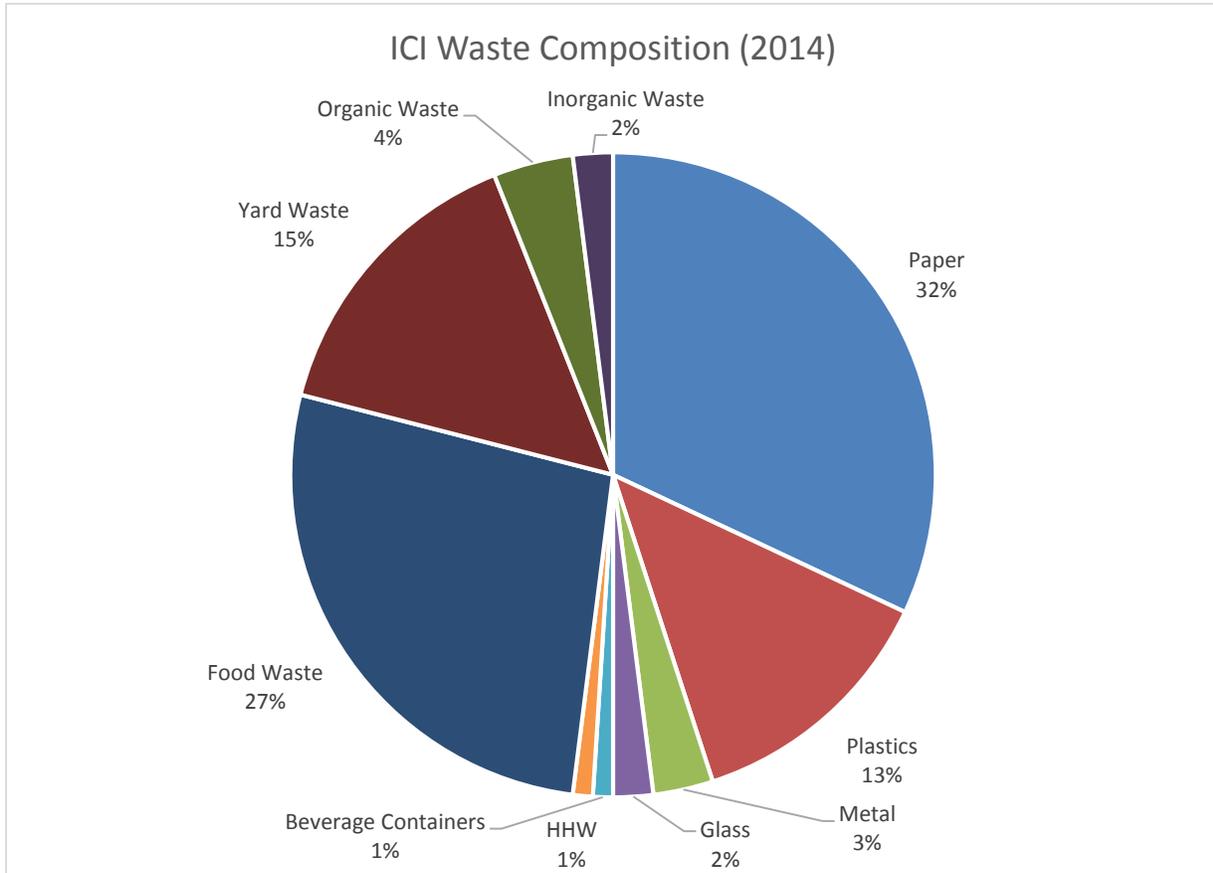
The results of the characterization showed that of the 53,012 tonnes of garbage collected from single family homes in 2014, 14,000 tonnes of material could have been diverted through the City's diversion programs and other programs available to residents.



The 2014 results for the multi-unit waste composition audits showed that 11,600 tonnes of waste were generated from multi-unit buildings and up to 30% of the materials were recyclable. With the city-wide roll out of the Multi-Unit Residential Recycling program completed in 2015, there is now the opportunity to divert these materials.



The 2014 Waste Characterization Study also sampled waste from the Industrial, Commercial and Institutional sector as it entered the Saskatoon Landfill. The results showed a high proportion of materials that could be diverted through recycling or composting programs.



Taking Action

A number of waste minimization and diversion activities are underway in 2016 to continue to reduce the amount of waste landfilled and to improve the waste diversion rate including:

Waste Characterization Study

A Waste Characterization Study is being completed in 2016 with multiple samples being collected throughout the year. In addition to the metrics that have been reported in previous studies, this study will measure community waste destined for all three landfills in the region, use more accurate methods, provide more detail in industrial, organic and other waste categories, and capture seasonal variability.

Waste Diversion Plan

A Waste Diversion Plan will be started in 2016 and is anticipated to be completed in 2017. The plan will apply the Waste Characterization Study findings and propose a set of actions including costs and implementation strategies. Community engagement will be an important component of the Waste Diversion Plan.

Recovery Park Planning

Planning is underway for Recovery Park, which will provide a “one-stop” location at the City’s landfill with numerous waste diversion and disposal options. The site could provide construction and demolition waste recycling, household hazardous waste collection, composting, recycling, and a gently used item exchange, in addition to existing landfill services of scales and solid waste transfer bins.

Food in the Green Cart

The subscription Green Cart program, which has traditionally only accepted yard waste, will begin to accept food waste in 2016. Communications for the program will provide tips on minimizing odours to aid in the continued success of the green cart program.

Consultations on Paper and Cardboard Ban

Consultations are underway as the City explores options for requiring mandatory recycling of paper and cardboard by the Industrial, Commercial and Institutional (ICI) sector. The new requirements are expected to come into effect in 2017 and focus on ensuring the ICI sector has options for recycling paper and cardboard (as is already available for the residential sector). According to the 2014 Waste Characterization Study, the ICI sector disposed of over 13,000 tonnes of paper and cardboard at the City’s landfill, this is 10.7% of the total landfilled waste.

Efficient Waste System

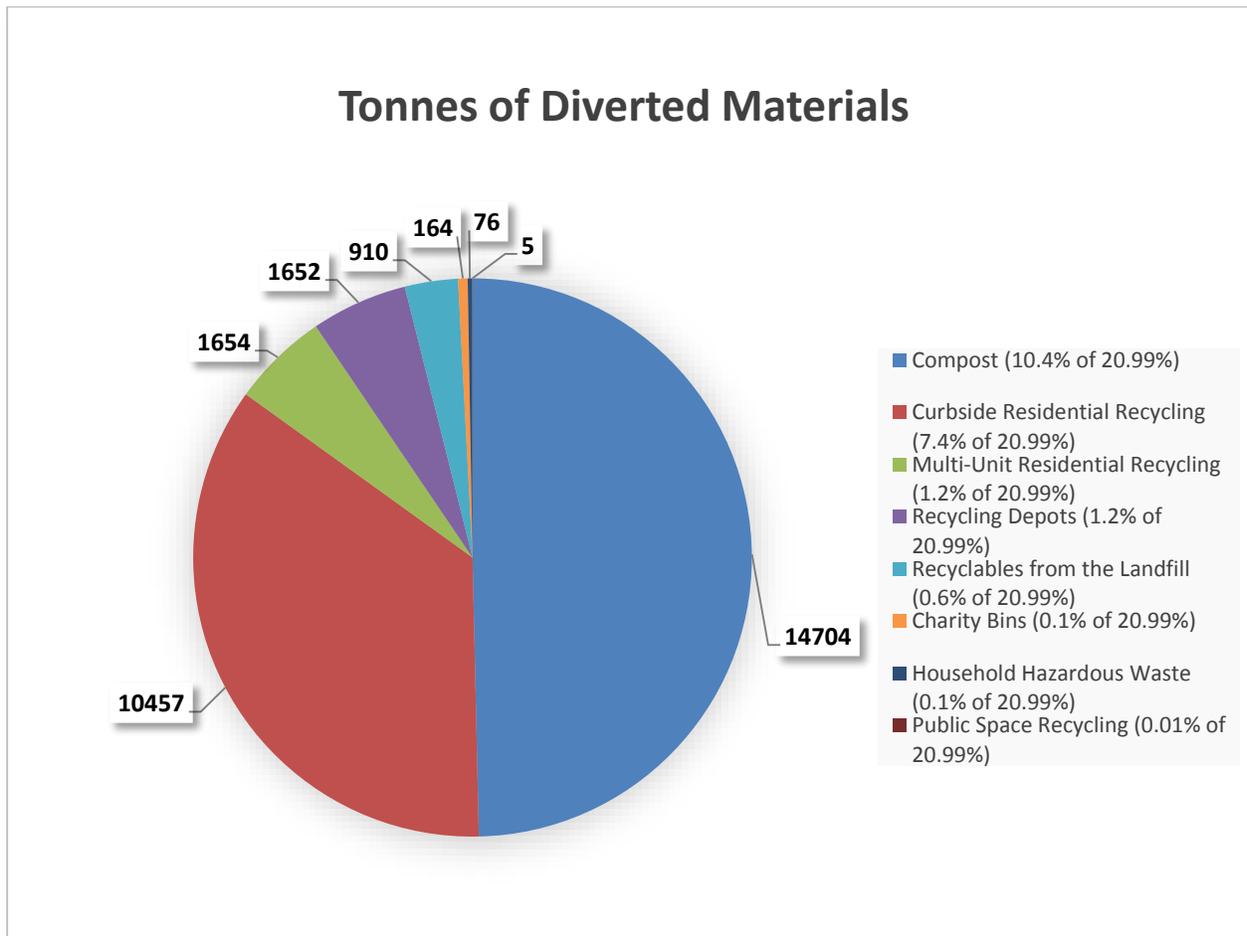
New routes and collection days came into effect on January 4, 2016. The garbage routes are more efficient by being as short and direct as possible, which improves reliability and efficiency of City services, reduces fuel use and reduces the greenhouse gas emissions from our fleet.

Multi-Material Recycling Program

The Multi-Material Recycling Program (MMRP), the waste paper and packaging stewardship program administered by Multi-Material Stewardship Western (MMSW), was launched on January 1, 2016, in response to provincial regulations. Municipalities and regional waste authorities can now expect to be compensated for some portion of the cost of collection and processing of recyclables. In 2016, the funds received by the City will be used toward the Multi-Unit Residential Recycling Program, Recycling Depot operations and Green Cart program.

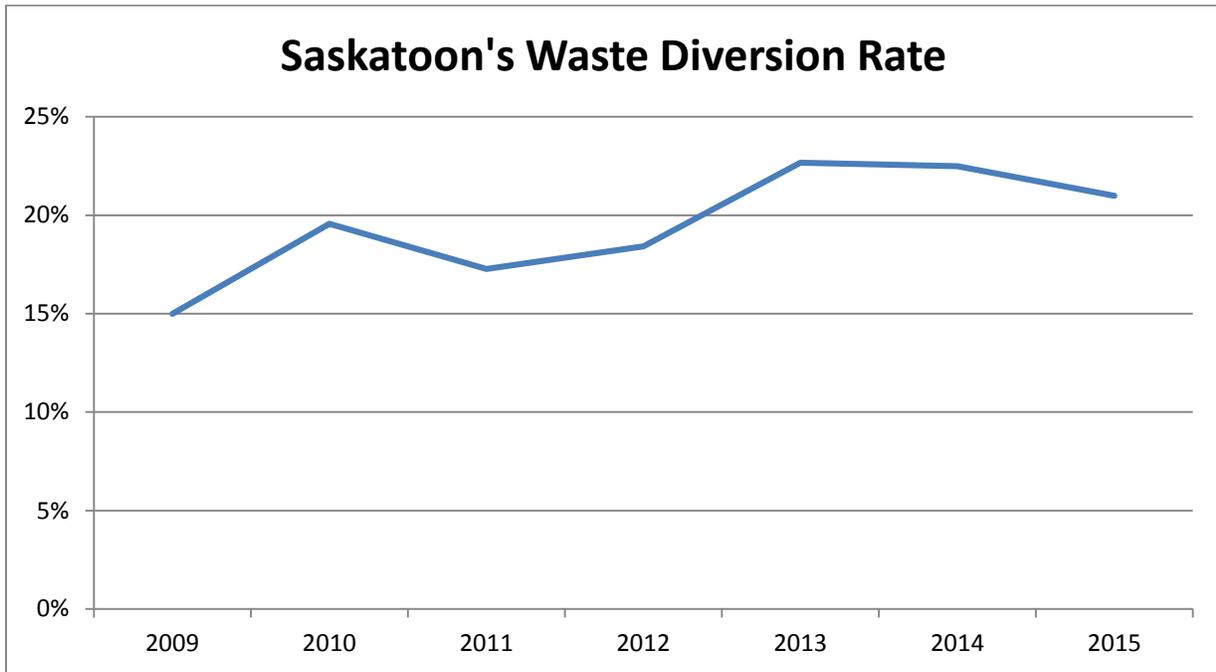
Waste Diversion Services

Waste is diverted from the landfill through a variety of programs and initiatives including recycling, composting, hazardous waste collection, and reuse of gently-used items. Outreach and education supports these programs and raises awareness about the importance of waste reduction and diversion. Education programs include the Saskatoon Curbside Swap, home composting education, the rolling education unit, and school-based recycling education. The figure below shows the tonnes of recyclables diverted from each initiative (total of 29,623 tonnes) and how each contributed to the diversion rate of 20.99% in 2015.



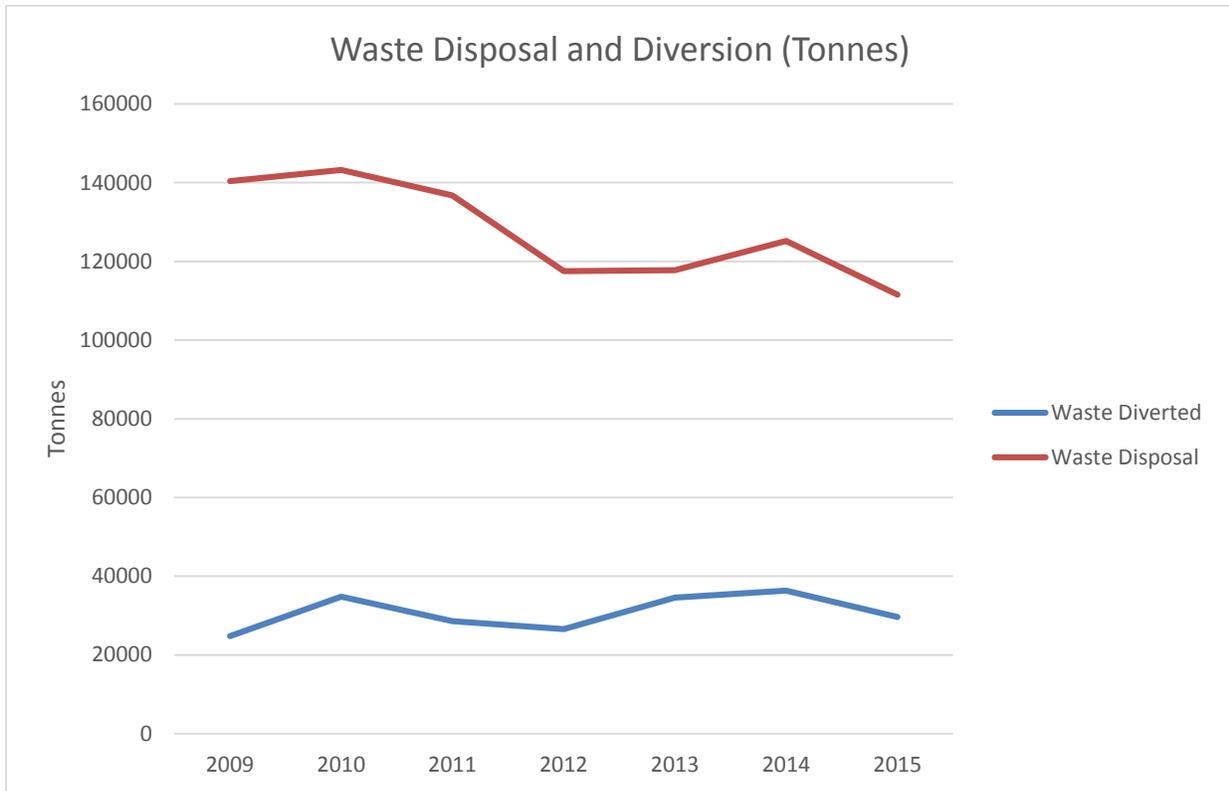
Saskatoon's Waste Diversion

The City's Waste Diversion Rate for 2015 was 20.99%, slightly down from 22.5% in 2014. For this reason the progress towards the target of 70% has been identified as needing improvement.

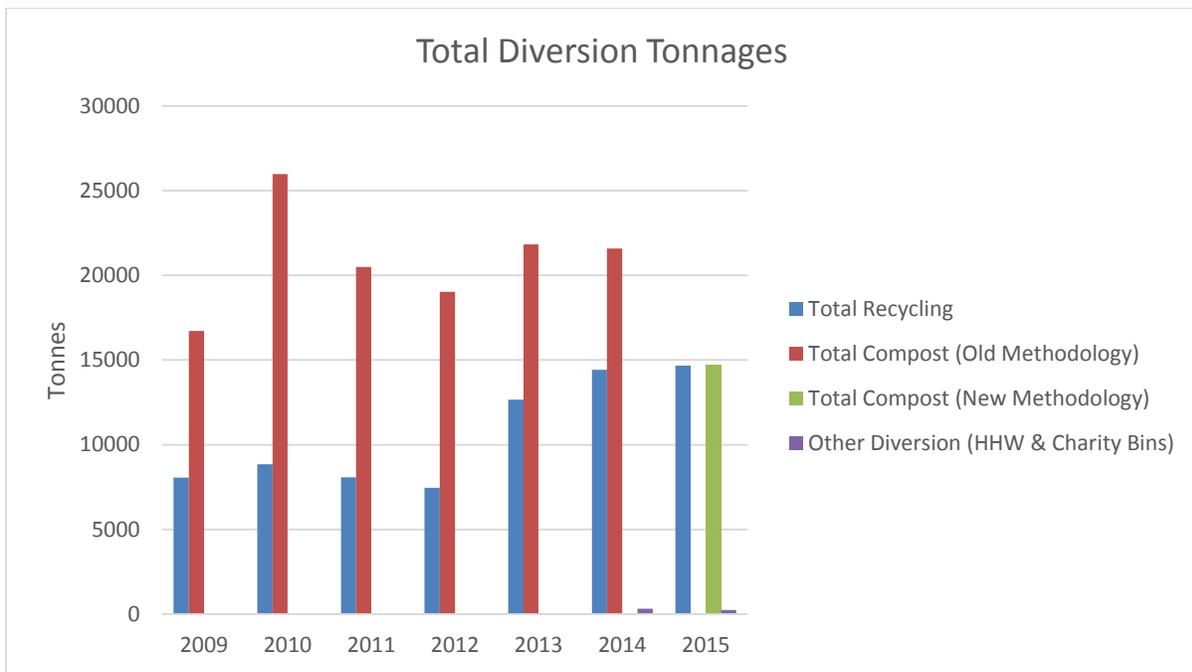


The City calculates the Waste Diversion Rate based on City run diversion and disposal programs. It does not include reduction, reuse, recycling or disposal through non-City programs, such as beverage containers, e-waste or nearby landfills. The Waste Characterization Study being conducted in 2016 intends to include both the waste generated and diverted throughout the entire Saskatoon community, including programs not operated by the City.

The total amount of waste accepted by both the City’s diversion and disposal programs was lower in 2015 than 2014. The tonnages of waste in both disposal and diversion programs is shown below.



The decline in the amount of diversion does not necessarily indicate that Saskatoon residents are diverting less waste. Reported compostable materials declined significantly from 2014 to 2015; however, these materials are based on a volume to weight estimate as there is no scale at either compost location. In 2015, a new and more accurate methodology was adopted to estimate the compost tonnages based on the amount of finished compost. The chart below shows the calculated tonnages of materials accepted into the City’s diversion programs.



The City’s waste diversion rate is below the national average. In 2012 (Statistics Canada), Canadians diverted 240 tonnes of waste per capita resulting in an overall diversion rate of 25.2%. In the 2014 National Solid Waste Benchmarking Initiative (NSWBI), the average curbside diversion rate was 33%.

Saskatoon’s 2015 diversion rate was benchmarked against other Canadian cities, as shown in the table below. Saskatoon’s diversion rate is second lowest amongst comparable cities.

| City | Diversion Rate |
|-------------|-----------------------|
| Surrey | 68%** |
| Halifax | 61%*** |
| Toronto | 53%* |
| Edmonton | 51%** |
| Ottawa | 45%* |
| Winnipeg | 34%* |
| Calgary | 28%* |
| Saskatoon | 21% |
| Regina | 19%*** |

* Source: 2014 Partnering for Service Excellence Performance Measures Report, Ontario Municipal CA’s Benchmarking Initiative

** Source: 2015 rate from webpage of the City

*** Source: 2014 rate as previously reported in the 2014 IWM annual report (the 2015 diversion rate not yet available)

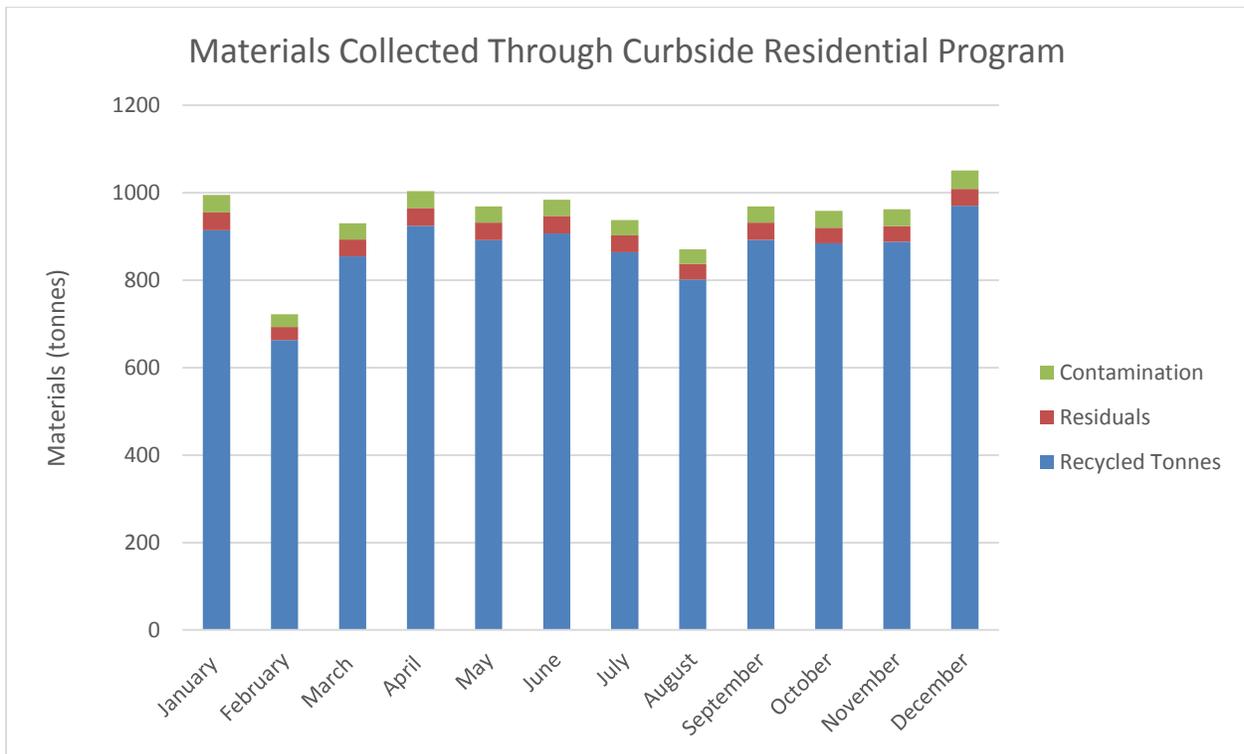
Recycling

Recycling Collections Provided to Residential (Curbside) Properties

Loraas Recycle has been providing curbside recycling service to single family households in Saskatoon since 2013. Each of the 67,807 households participating in the City’s curbside program is provided with a blue cart that is collected from their curb every second week based on a published collection schedule.



- 10,457 tonnes of recyclable materials were collected and marketed to be recycled into new products, contributing 7.4% toward the City’s waste diversion rate of 20.99%. This is down slightly from 2014 when 10,724 tonnes were recycled.
- In 2015, 11,353 tonnes of material were collected;
- 4% of this was contamination (materials placed in the cart that are not recyclable) and 4% of this was residual (materials that are technically recyclable but could not be recovered, usually because of their small size).



The set-out rate for the program averaged 68%, which provides a snapshot of what occurs on each collection day. This does not indicate how many people use their blue carts since many do not necessarily put them out each collection. The 2016 waste characterization study includes a participation study.

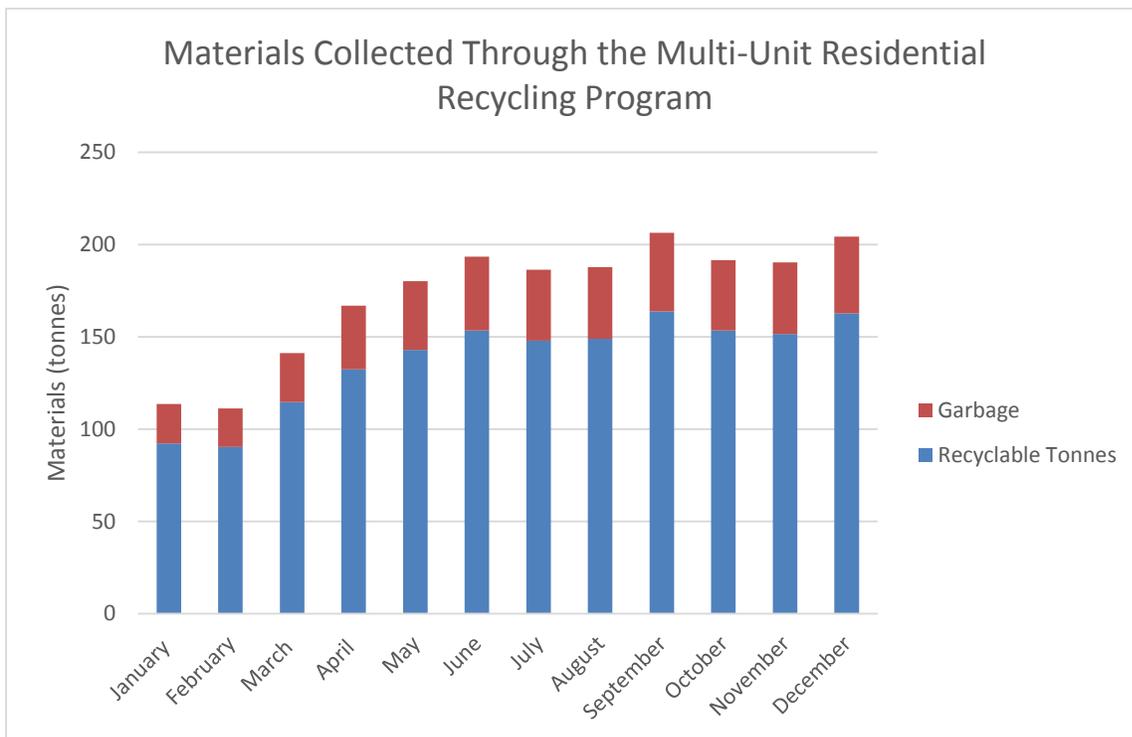
Carts not being collected due to incorrect placement or overfilling continue to occur. When a front street cart is inaccessible for the truck to tip, the bin is overloaded or the cart is contaminated an “Oops” notification is left with the uncollected cart. In 2015, there were an average of 1,096 instances per month that required an “Oops” notification. To put that into context, there were a total of 1,196,309 blue carts tipped in 2015, so approximately 1% were not compliant. Other ongoing concerns are carts left out in back lanes for more than 24 hours and scavenging of high value materials. Because of the challenges of back lane collection, “Oops” notices are not left on back-

lane carts. Back lane issues are addressed through communications such as the waste and recycling calendar and through warnings and tickets issued by the City’s Environmental Protection Officers (EPOs).

Recycling Collections for Multi-unit Residential Properties

The Multi Unit Residential Recycling (MURR) program was launched on October 6, 2014. Service is provided by Cosmopolitan Industries. In 2015, the roll-out of the program was completed for all multi-unit residential properties and by year-end there were 34,329 service addresses. In 2015:

- 1,654 tonnes of recyclable materials were collected and marketed to be recycled into new products, contributing 1.2% toward the City’s waste diversion rate of 20.99%.
- In 2015, 2,073 tonnes of material were collected;
- On average, 20% of this was contamination (materials placed in the bins that are not recyclable) or residual (materials that are technically recyclable but could not be recovered usually because of their small size).



The program was fully deployed in May, and residents seem generally pleased to have the service in place. A challenge with the program is the high volume of garbage being found in the recycling containers. A multi-unit recycling program could be expected to have higher rates of garbage than curbside programs due to the use of communal bins placed in publicly-accessible areas.

Recycling Program Customer Service

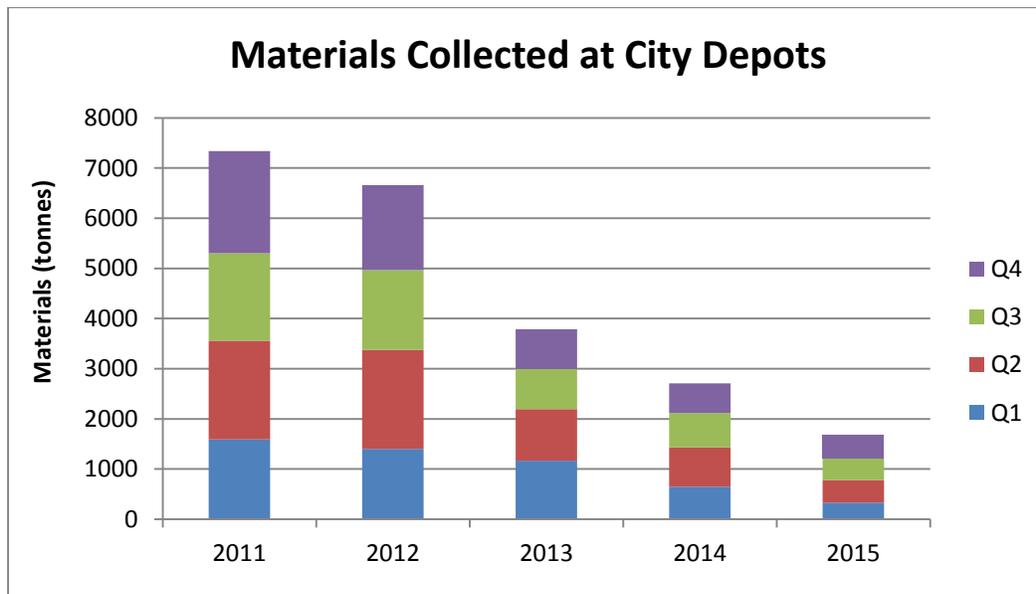
Resident inquiries regarding the curbside residential recycling program continues to be low at an average of 323 inquiries per month, which is down from an average of 368 inquiries per month in 2014.

Inquiries for the MURR program have started to decrease. In the first month of the program (November 2014) there were 276 inquiries, which decreased to 138 in December. In the first half of 2015, there were on average over 120 calls per month, which dropped in the second half of 2015 to approximately 80 calls per month.

Recycle Depots

In 2015, 1,652 tonnes of material were collected at the depots contributing 1.2% to the City’s diversion rate of 20.99%, a monthly average of 140 tonnes.

The four City-run depots now accept the same materials accepted in the MURR and curbside programs in a single stream with no sorting, as does all recycling at Civic facilities. The bins at the depots remain the property of Cosmopolitan Industries and all materials are collected by the City and processed at Cosmo’s Material Recovery Facility.



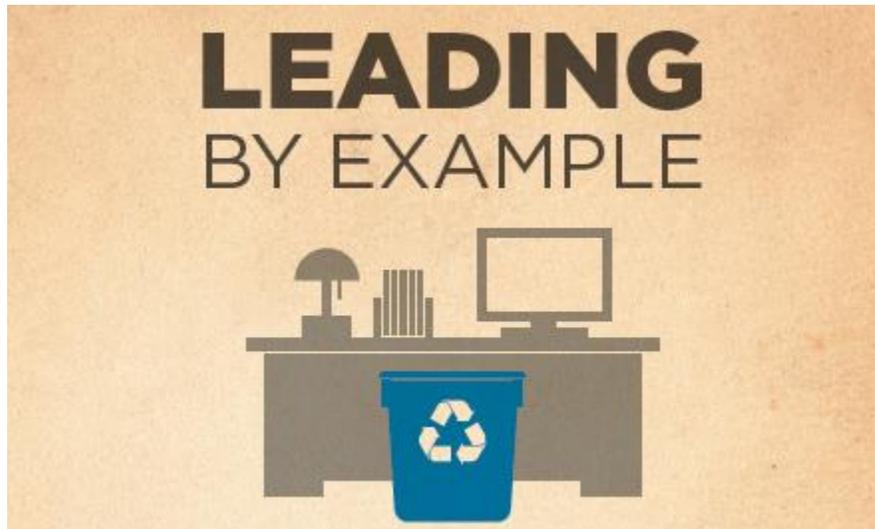
Charity Bins

In 2015, 164 tonnes of material were collected at charity bins located at the four City-run recycle depots contributing 0.1% toward the City’s total diversion rate of 20.99%. In 2015, the charities were Canadian Diabetes, Community Living and Salvation Army.

Public Space Recycling

5.3 tonnes of recyclables were collected through the City's Public Space Recycling programs in 2015. Currently, pedestrian-oriented commercial areas are serviced by bins that offer separation of beverage containers and paper from the regular garbage stream. Various locations throughout the city have also been using bottle baskets to divert beverage containers, including eight civic parks starting in the fall of 2015.

Recycling in Civic Facilities



Recycling has been established in most civic facilities, with single-stream collection in place at 18 facilities by the end of 2015. Recyclable materials from civic facilities are collected with material from the depots, so the exact tonnages are not available. However, a dedicated run of civic materials is collected quarterly in order to estimate program success. This will be reported in the 2016 report.

Compost Programs

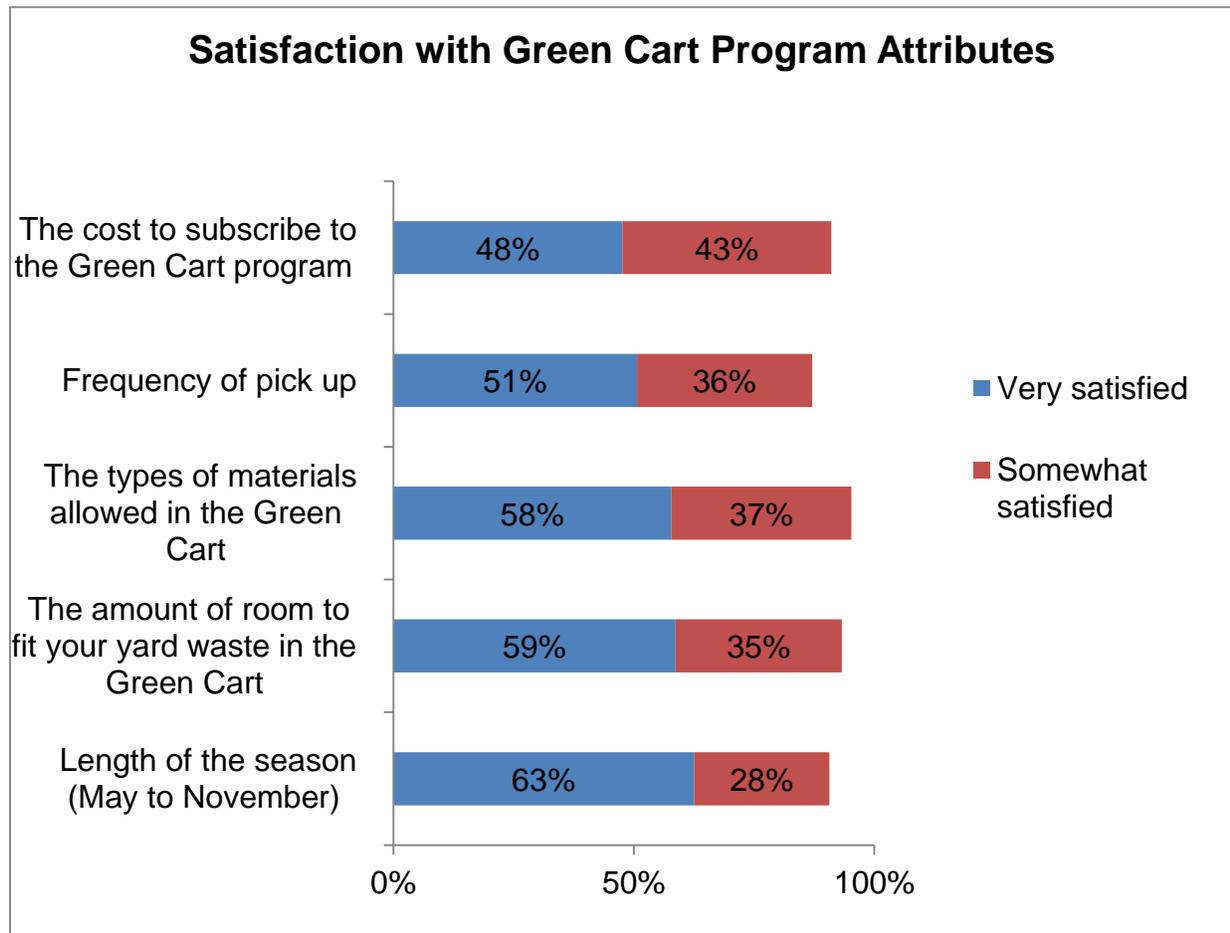
Leaves and Grass Collections – Green Cart

The Leaves and Grass Subscription Program served 5,752 subscribers in 2015, an increase of 46% from 2014. A total of 2,118 tonnes of compostable materials was diverted through the program, contributing 1.5% toward the City's diversion rate of 20.99%. Leaves, grass, and non-woody yard waste is collected at the curb from May to November on a bi-weekly basis. Materials are composted at the City's Highway 7 compost depot along with materials from public and commercial customers.

The City owns and maintains the green roll-out carts provided to subscribers to the Leaves and Grass program. In 2015, there were 5,752 green carts deployed.

The City contracted Insightrix Research Inc. to conduct a quantitative study to understand attitudes, usage, and satisfaction with the City’s Green Cart program among subscribers. A total of 958 subscribers participated in the survey between June 22 - July 7, 2015.

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



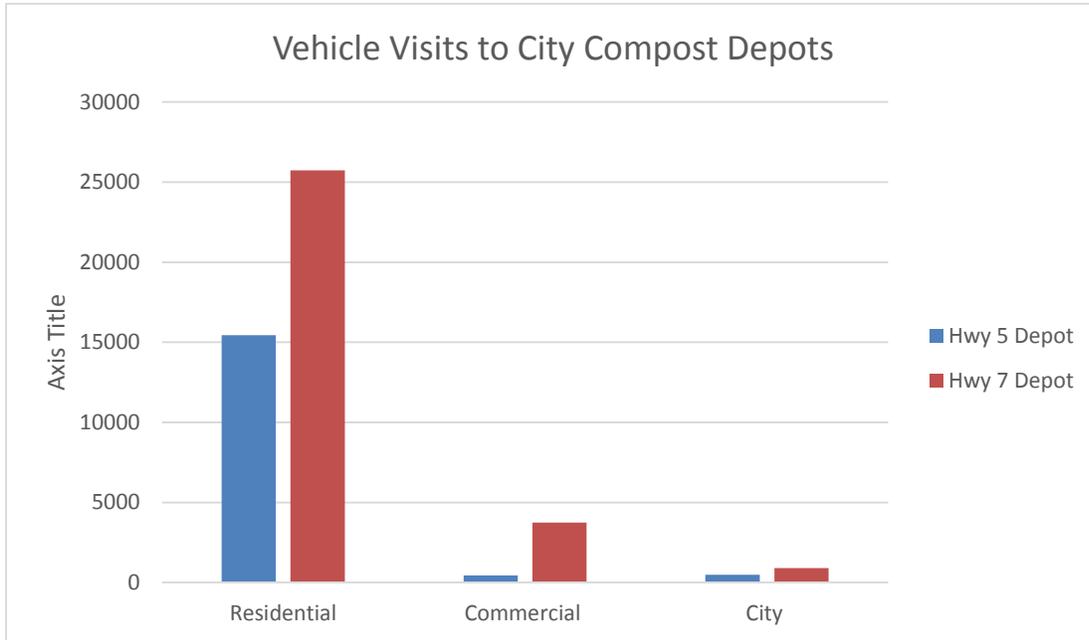


Compost Depots

In 2015, the City operated two compost locations for drop off of leaves, grass, non-elm tree and shrub branches, as well as garden waste that would otherwise end up in the landfill. The composting sites, located on Highway 7 (West depot) and on Highway 5 (East transfer station) are available to residents at no charge and to commercial haulers by permit (\$200 for the season). In 2015, 12,499 tonnes of material were diverted through the compost sites, contributing 9% toward the City's diversion rate of 20.99%.

The Highway 5 compost site serves as a transfer station and all materials are processed at the Highway 7 depot. At the end of the 2014 season the depot on McOrmond Drive closed permanently for development of the Holmwood neighbourhood in the area.

46,753 vehicle visits were made to the compost sites in 2015. There was significantly more traffic at the Highway 7 depot, with 30,382 vehicle visits compared to 16,371 to the Highway 5 site. In total, there were 41,168 residential vehicle visits, 4,191 commercial vehicle visits, and 1,394 City vehicle visits.



Approximately 88 commercial companies purchased \$200 permits which provided unlimited access to the composting sites for the season. Commercial haulers brought in approximately 26% of the materials delivered to the depots.



Christmas Trees

Every year temporary drop-off sites are set-up to collect natural trees from December 26 to January 31. Trees dropped off at these locations are chipped and either taken to the City compost depot or used as mulch. In 2015, 87 tonnes of material were collected through this program.

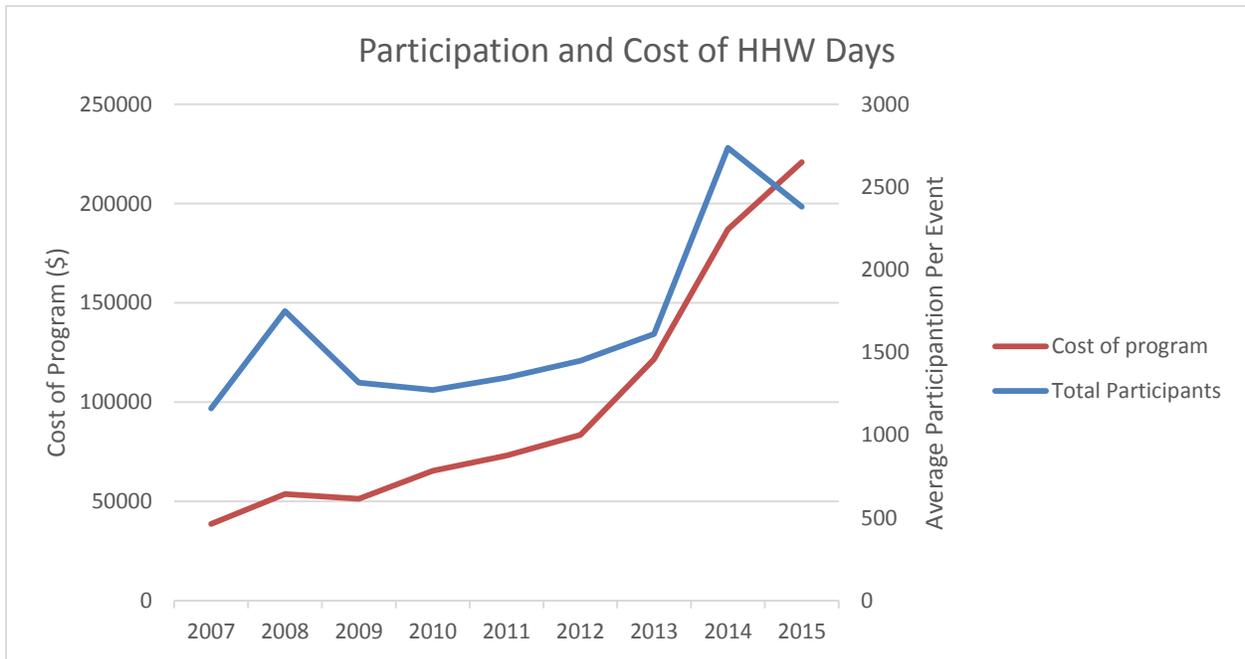
Other Diversion

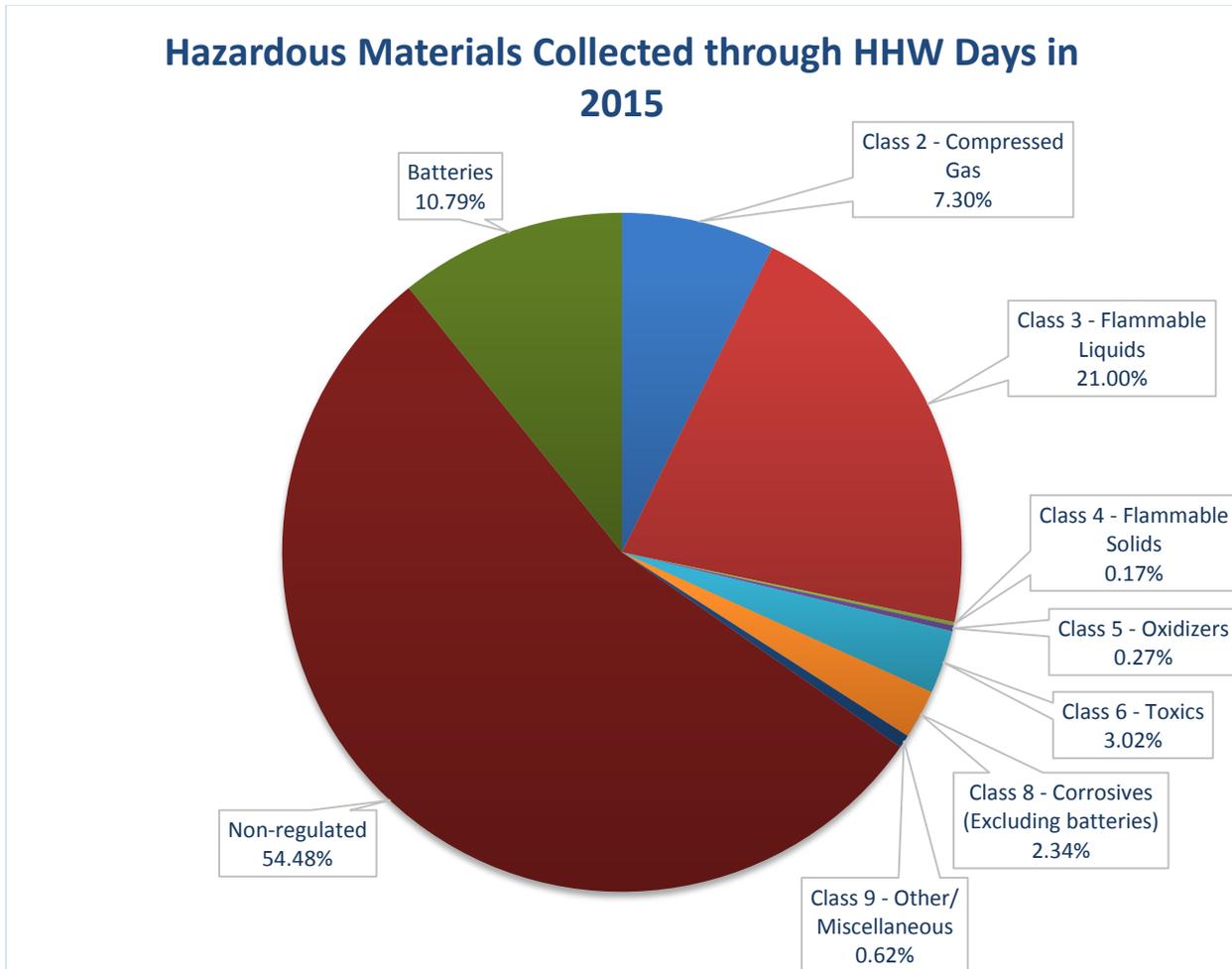
Household Hazardous Waste

In 2015, eight Household Hazardous Waste Collection Days collected 76 tonnes of hazardous materials from 2,381 residents. This represents a marginal (3%) increase in the total tonnage of materials collected but a reduction in the number of vehicles. This may be the result of four fewer events. The overall cost of the program continued to rise in 2015.



The Let’s Roll Team (contracted recycling educators) assisted Envirotec with four HHW Collection Days that were held between May and August. The Let’s Roll Team also researched alternative drop-off options for HHW at local Return-to-Retailers locations. These summer students also conducted a “secret shopper” survey of the Call2Recycle program’s Return-to-Retailer locations for household batteries. The students visited each location with batteries to recycle. They checked for program information, for a Call2Recycle recycling box and assessed the staff’s knowledge of the program.





Class 2 (compressed gas): aerosols, propane tanks, inhalers, fire extinguishers

Class 3 (flammable liquids): flammable liquids, paint and paint-related materials, adhesives, printing ink

Class 4 (flammable solids): flammable solids

Class 5 (oxidizers): oxidizing solids and liquids, organic peroxide

Class 6 (toxics): toxic liquids, pesticides, pharmaceuticals

Class 8 (corrosives): corrosive liquids and solids, mercury, ammonia solution

Batteries: alkaline, lead-acid, lithium

Non-regulated: oil, oil filters, oil containers, antifreeze, fertilizers, liquid cleaners, non-PCB light ballasts, fluorescent tubes, CFL bulbs, ink cartridges, lighters, treated railway ties

Other/miscellaneous: PCB light ballasts, sharps, smoke detectors, e-waste, test samples (unknowns)

Some household hazardous waste is also responsibly managed at the Landfill. An Eco-Centre for the recovery of antifreeze, oil, oil containers, and oil filters has been established in partnership with Saskatchewan Association for Resource Recovery Corporation (SARRC). The Eco-Centre (one of 36 across Saskatchewan) captured 51,716 litres of used oil, in addition to used oil filters and oil containers; total weight of materials collected at the Eco-Centre in 2015 was 81 tonnes.

Environmental and GHG Implications

Waste diversion results in a net reduction in greenhouse gas emissions compared to landfilling the same waste. This means the emissions reductions associated with re-using materials exceed the emissions produced in collection and processing activities.

The net reduction of GHG for the City's recycling programs in 2015 was 36,171 tonnes CO₂e. The net reduction of GHGs for the City's compost programs was 4,921 tonnes CO₂e. Together this is equivalent to removing more than 8,000 cars from Saskatoon roadways. The GHG impact for Household Hazardous Waste and Charity Bins are not calculated.

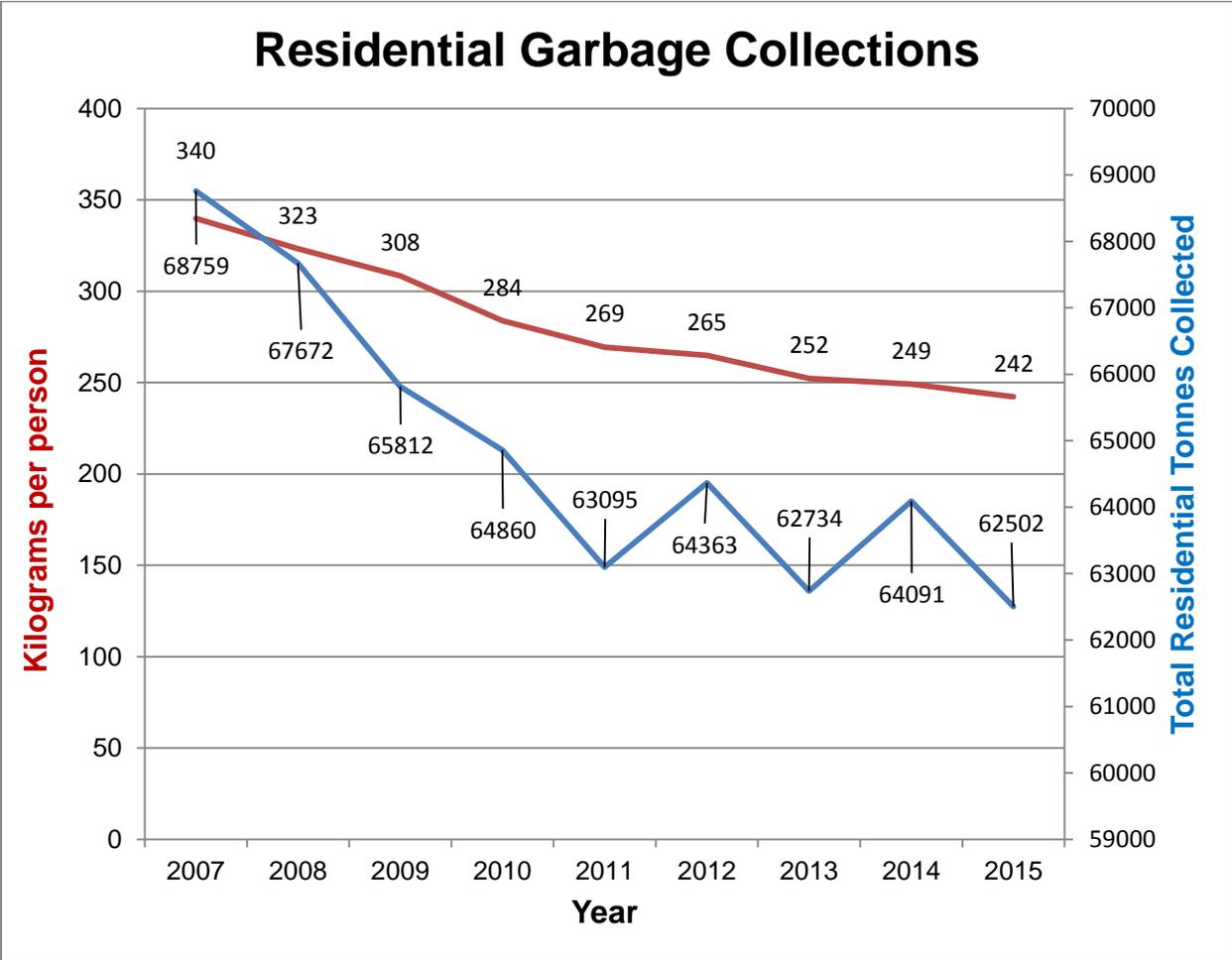
Waste Disposal Services

Saskatoon's Waste Disposal

The amount of garbage that is collected and disposed of is decreasing every year. In 2015:

- 157,091 tonnes of materials were collected at the landfill
- 112,418 tonnes of garbage was disposed of at the landfill from all sources, once recyclable materials and clean fill were separated
- Residential collections by the City accounted for 62,502 tonnes
- 242 kg of residential garbage was disposed of per person
- This residential waste rate is high for major urban centres in Canada

As shown in the figure below, the rate of garbage disposal per person has been declining over time. The total tonnes of residential garbage collections has also generally shown a trend of decline, with some fluctuation over the past four years.



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

| Region | Year | Total Waste Disposed (tonnes) | Total Waste Rate (kg/capita) | Residential Component (tonnes) | Residential Rate (kg/capita) |
|---------------------|-------------|--------------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|
| Saskatoon | 2012 | 117,660 | 486 | 64,363 | 265 |
| Saskatoon | 2015 | 112,418 | 436 | 62,502 | 242 |
| Saskatchewan | 2012 | 957,669 | 881 | 315,987 | 290 |
| Canada | 2012 | 25,013,204 | 720 | 9,586,511 | 276 |

Source: Statistics Canada

Saskatoon's Residential Waste Disposal Rate was also compared to other cities in Canada using data from the National Solid Waste Benchmarking Initiative. The tonnes of residential garbage collected per household was higher than the median for reporting municipalities.

Containers

Black Carts

The City of Saskatoon owns and maintains the black roll-out carts provided to street-oriented residential properties. In 2015:

- 69,000 black carts were managed in the field
- 1,330 new carts were delivered to new homes
- 953 carts were repaired and 4,362 were replaced (381 were stolen and 250 could not be recovered)

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

The cart failure rate has been reduced to 0.55% due to improvements in purchasing specifications made in 2012. In neighbourhoods with carts purchased under older specifications, failure rate can be as high as 15%.

Multi-Unit Residential Containers

The City of Saskatoon does not provide garbage containers for multi-unit dwellings and instead offers a multi-unit dwelling waste bin grant to offset the costs borne by condominium associations and property managers for the purchase and maintenance of metal waste bins.

The grant provides \$8 per year per residential unit. Over \$164,000 was paid to 500 buildings as part of this program in 2015.

Garbage Collections

Garbage Collections from Residential Properties

Garbage collection services are provided to 69,000 single-family homes. 62,502 tonnes of residential garbage was collected and there were 1,974,659 individual back cart lifts ('tips').



Scheduled garbage collection occurs from Monday to Friday, including Stat holidays, except Christmas Day and New Year's Day. In 2015, weekly collections were provided from May to September, with the remainder of the year on a bi-weekly collection schedule. Additional garbage collections were also provided for two weeks during the Christmas holiday season.

Garbage Collection from Multi-Unit Residential Properties

The City of Saskatoon provides one collection per week for each multi-unit residential property as part of regular service supported by property taxes. Additional levels of service may be contracted with the City or through a private waste management company. Multi-residential properties may also opt-out of City-provided garbage collection. The City does not currently keep records of properties that opt-out.

A multi-unit residential property may have a black cart or a metal waste bin depending on the type of property. The City does not keep a separate record of residential multi-unit collections.

Commercial Collections

713 commercial customers with 1,128 containers used the services of the City of Saskatoon in 2015. The City of Saskatoon also requires the collection of 135 containers for corporately generated waste. Rates were last set in 2011 and have remained unchanged. The number of commercial customers has shown gradual increases over the past 3 years.

Efficient Waste System

The Efficient Waste System Project provides improved service and cost savings in the delivery of garbage (black cart) and leaves and grass (green cart) collections. The main components of the project are:

Efficient Routes

A route efficiency exercise was completed in 2015 and calculated the most effective grouping of neighbourhoods for waste collections. Collection dates for residents changed on January 4, 2016. The new routes are expected to save fuel and time and defer the need for additions to the fleet of garbage trucks.

Cart Collection - Tags Scanned to Verify Pick-Ups

New equipment was installed on each waste collection truck in order to automatically log information. The system records the location and time every time the truck arm moves up and down (e.g. tipping a cart), scanners read the unique ID numbers that have been put on carts and the time and location of cart collection and truck driving path is recorded



on maps. The system does not measure the weight of the garbage or any information about carts not lifted by the truck.

Identification Tags

Tagging of carts was done during regular cart collection days in 2014. If a resident did not put their cart out for collection when City staff were in the area, tagging could not occur. Of the 70,000 collection carts in the field, 95% received identification tags in 2014. There were also several issues with tags supplied by the vendor, which resulted in project delays. The vendor performed warranty work in 2015 to replace problem tags, successfully replacing 95% of them.

Accurate Commercial Billings and Collection

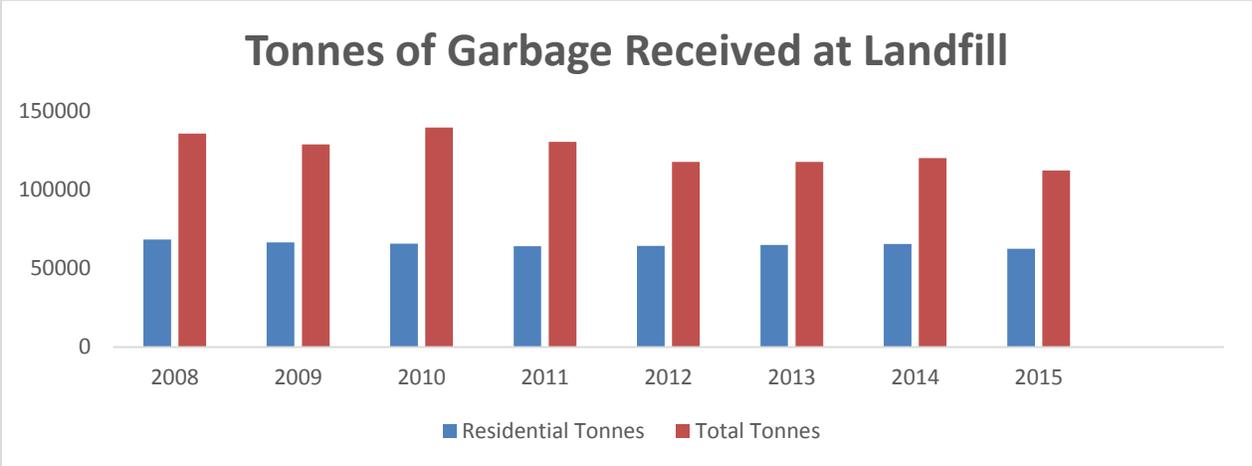
New software replaces the outdated database and software previously used to manage commercial collections contracts. It stores the contracts, records service as it is provided, and automatically generates invoices. This component of the project was necessary to comply with the Garbage Collection Revenue Audit of 2011.

Saskatoon Regional Waste Management Facility

The Saskatoon Regional Waste Management Facility (landfill) has been in operation since 1955. It is a sophisticated facility that is designed and operated to maximize available space and ensure solid waste is managed in a safe and environmentally sound manner. The Saskatchewan Ministry of Environment currently regulates the operations of the Facility under a Permit to Operate a Waste Disposal Ground.



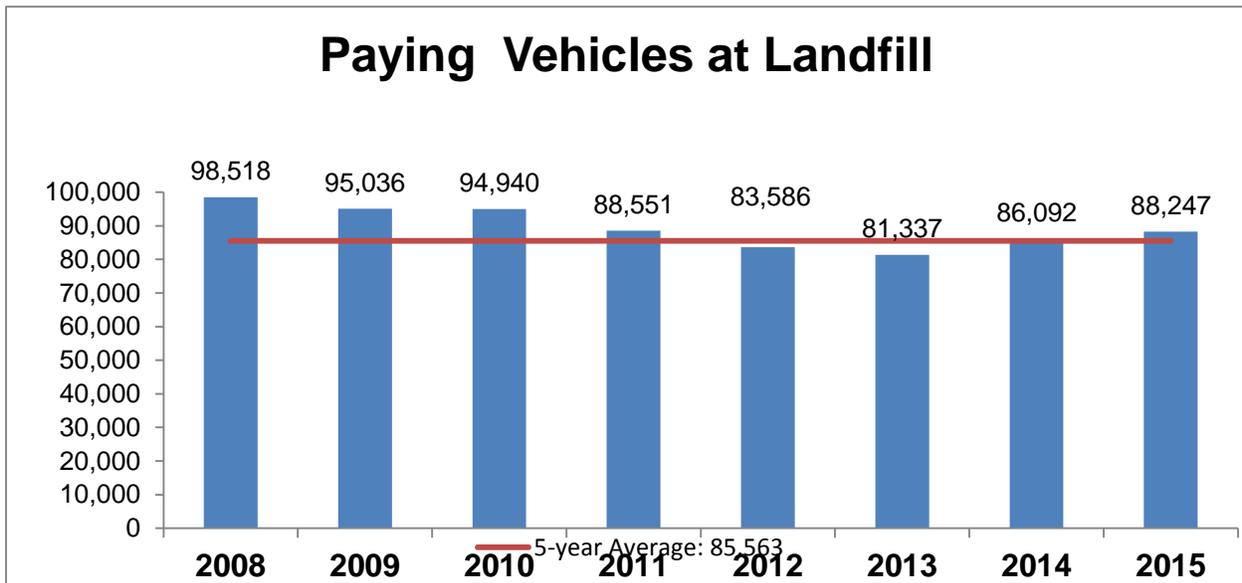
In 2015, approximately 157,091 tonnes of material was accepted at the landfill, 112,418 tonnes of garbage requiring burial and 44,673 tonnes of clean earth fill used for construction purposes or landfill cover. Over 900 tonnes of metals, white goods, propane tanks, and batteries, and 51,716 litres of used oil were removed from the site for recycling or disposal as hazardous waste.



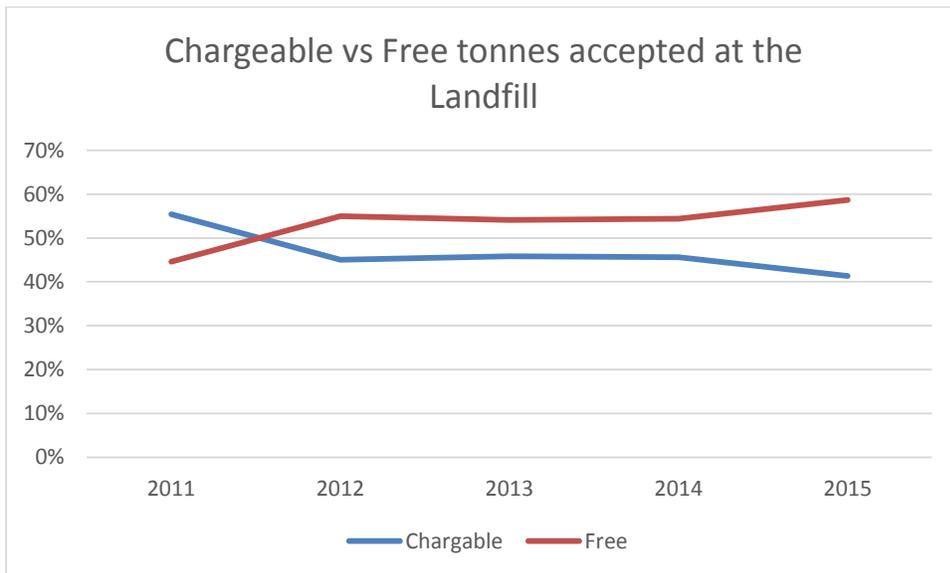
The landfill is open to the public every day of the year except for Christmas Day and New Year’s Day. The site is a secure compound with fencing and security checks after-hours. Six transfer bins are located on site for public waste disposal. In addition, several public drop-off areas are provided for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

Landfill Customers

The number of paying customers at the landfill increased slightly in 2015 with a total of 88,247 visitors. More customers using the landfill has not meant more revenue, however, as the number of commercial haulers has decreased and is being replaced by subsidized loads (mostly small residential loads).

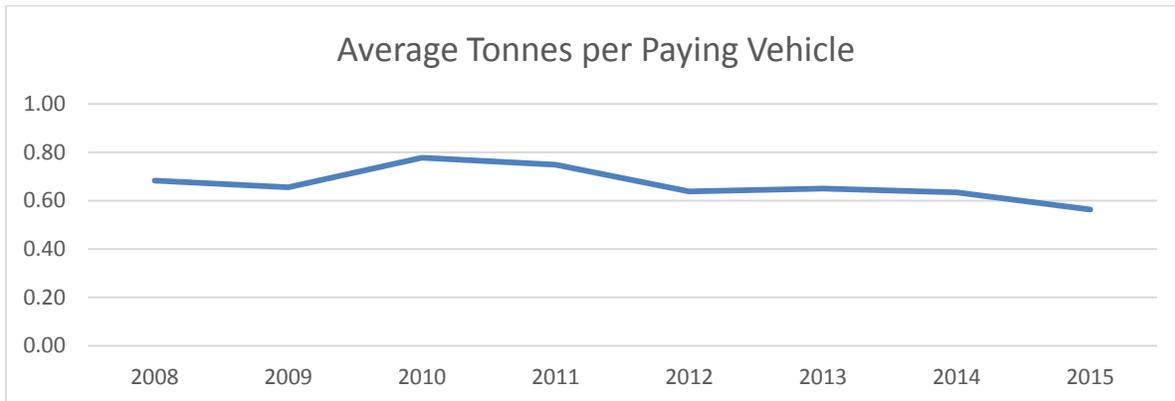


The tonnes of garbage that are hauled to the landfill as a result of municipal garbage collections are tracked, but the costs of disposal are not incurred by the operating budget for collections. This is atypical compared to other municipalities. The amount of chargeable tonnes as a percentage of the total tonnes has been declining since 2011. This is a significant financial risk to the sustainability of landfill operations.



Saskatoon has one of the highest rates of residential garbage self-hauled to the Landfill in Canada. The average size of chargeable loads delivered to the Facility has been

shrinking and was approximately 0.6 tonnes in 2015 (meaning the costs of service per tonne are increasing).



A review of rates and subsidies in 2012 led to changes to the schedule of fees. As of January 1, 2013, all subsidies previously available to customers at the Landfill were removed with the exception of a 75% subsidy, which is applied to small loads weighing less than 250 kilograms. The rationale for this subsidy is to offer options to residents in the absence of a curbside service for the handling of bulky items that may not fit in City-provided roll-out garbage carts. This subsidy, however, is contributing to the shrinking sizes of average loads at the landfill. This, in turn, increases demands for traffic management and can increase wait-times for customers. Some of the decline in commercial visitors may be a result of competition from the Northern Landfill operated by Loraas Disposal and more recently, competition from Green Prairie Environmental, the new owner and operator of the former South Corman Park Landfill.

According to nation-wide benchmarking for 2014, the range of fees for tipping waste among 31 municipal landfills across Canada is \$36.15 to \$140 per tonne. Saskatoon's fees at \$100 per tonne in 2015 fall in the middle of this range.

Customer Service

18,500 phone calls were received regarding containers, missed collections, and other inquiries. In addition, the garbage@saskatoon.ca webmail address received more than 3,400 emails, which were all responded to in a timely manner.

In 2015, collections staff responded to over 2,950 residential calls and 171 commercial customer calls about missed garbage collections. Each call was investigated and waste collected if it was determined to be missed. With close to 2 million cart collections conducted on an annual basis, this equates to a 99.9% residential garbage collection reliability.

Waste management customer service is being improved through Service Saskatoon, a new and improved model of service to help citizens get what they need quickly, simply and seamlessly. Service Saskatoon formally launched in April 2016. In 2015, Public Works began to make improvements including developing an interim process for tracking information, implementing a new phone technology, and creating a customer follow-up and call back process.

Environmental and Greenhouse Gas Implications

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

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

Ground water monitoring results are reviewed by an independent party each year to ensure the landfill is not impacting the environment beyond its site. In 2015, there were 49 monitoring locations analyzed, up from 43 monitoring locations in 2014. 27 hectares of the waste footprint at the Landfill Facility is unlined and leachate interception is therefore an important environmental protection measure.

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

Landfill gas management began in 2012 with the completion of the clay cap on the north mound of the site. Since then, 29 vertical gas collection wells have been drilled into the waste, the Landfill Gas Collection and Power Generation Facilities were completed and the system was fully commissioned in late 2013. In 2014, the landfill gas system collected and combusted over 190,000,000 cubic feet of landfill gas, reducing the greenhouse gas emissions from the landfill by more than 49,000 tonnes of CO_{2e} or the equivalent of removing 10,200 vehicles off Saskatoon roads. In 2015, the estimated volume of landfill gas captured was 203,729,300 resulting in an estimated emissions reduction of 52,660 tonnes CO_{2e} or the equivalent of taking 10,900 vehicles off Saskatoon roads.



Greenhouse gas emissions reduction efforts occur at two levels at the landfill. The destruction of landfill gases (which have greenhouse gas concentrations up to 25 times stronger than carbon dioxide) is addressed through landfill gas management. And as equipment is replaced, Tier IV emissions-compliant equipment is being selected to significantly reduce the impacts of fuel used for on-site transportation.

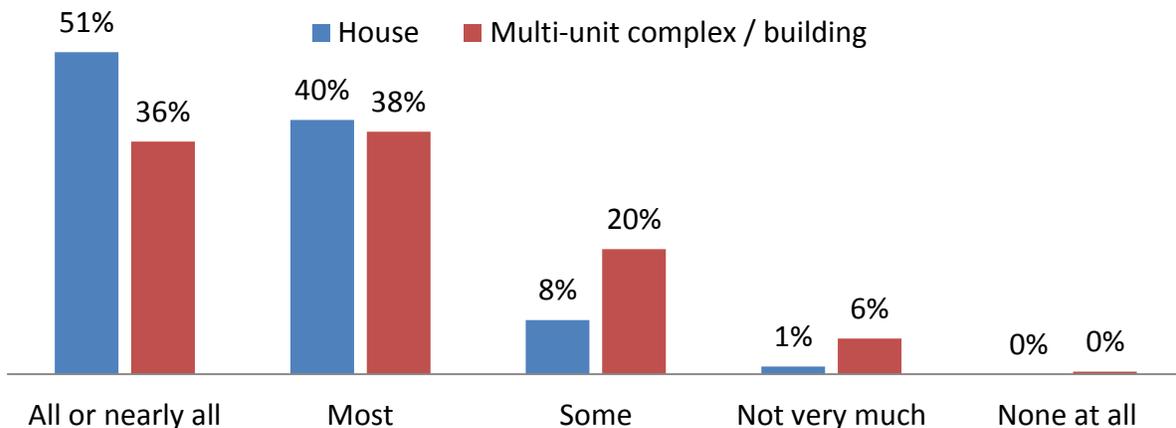
Education and Engagement Services

City-Wide Recycling Survey

In 2015, the City conducted a quantitative study about recycling among Saskatoon residents to measure recycling knowledge and program satisfaction, identify where residents go for information about recycling, and to look at ways to enhance the programs. The survey was conducted between October 21 - November 20, 2015, asking a mix of 1000 single-family and multi-unit residents by Insightrix Research Inc.

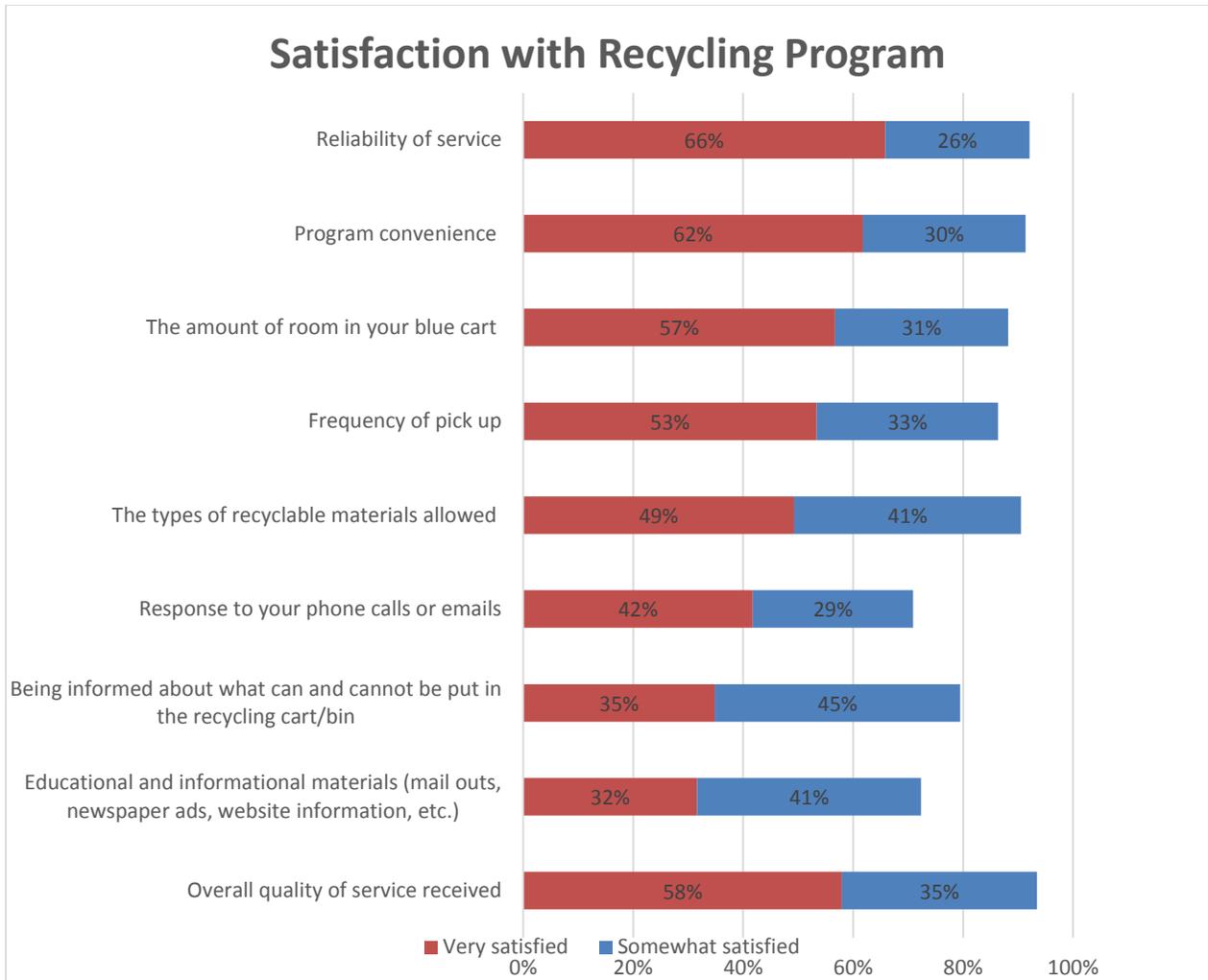
Overall, program participation was reported as being fairly high with most Saskatoon residents claiming that they recycle all or most of their household's recyclable items.

Proportion of Recyclable Items Recycled by Type of Household



More than eight in ten Saskatoon residents correctly identify that most items can or cannot be recycled in curbside carts / multi-unit bins. Areas of weaker knowledge include recycling of hard plastics, plastic grocery bags, Styrofoam, plastic toys, foil paper, and foil containers.

Broad-level satisfaction exists with most aspects of the recycling program. However, many are only somewhat satisfied, particularly with communications elements and responding to inquiries.

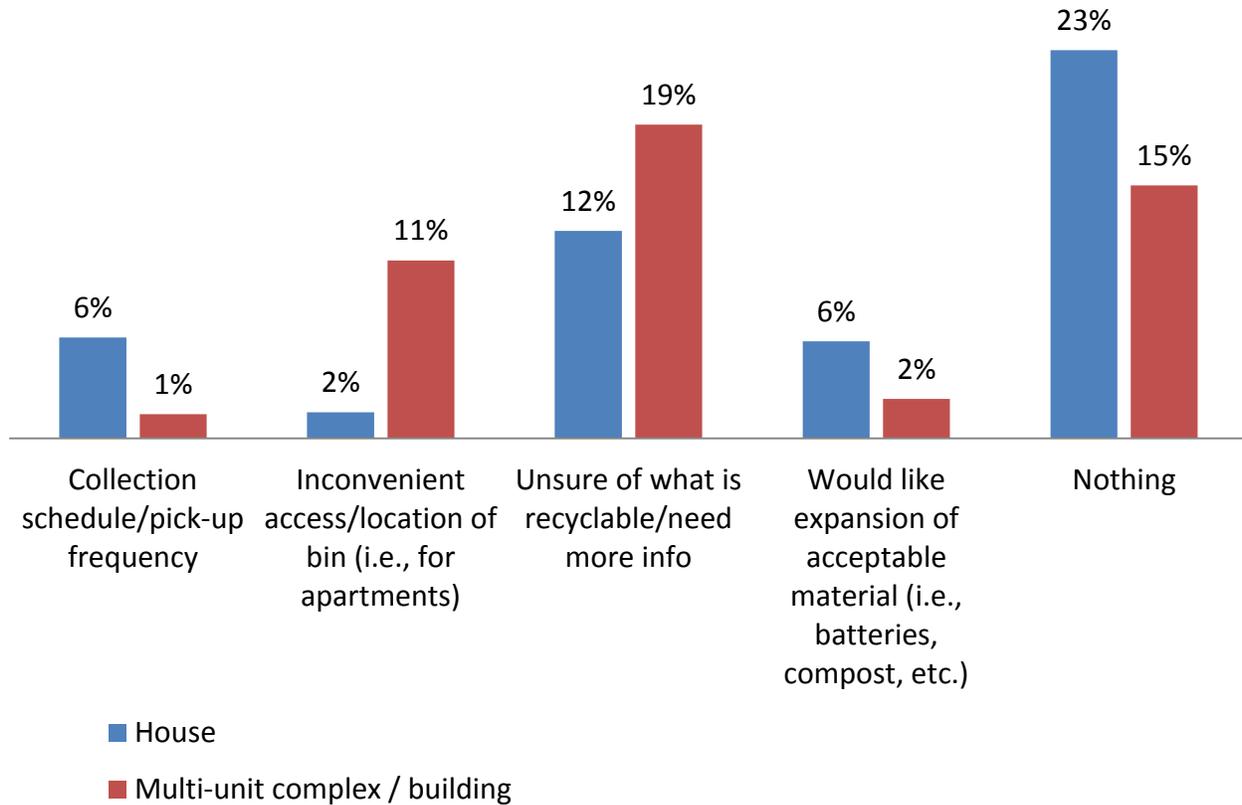


Residents who live in a house are more likely to feel constrained by collection schedules and types of acceptable items when it comes to household recycling. Those who live in a multi-unit building are more likely to cite inconvenience and lack of knowledge as barriers to recycling household items.

Those with curbside pick-up tend to be more satisfied with the City’s recycling service compared to those who live in multi-unit buildings, particularly in the areas of communications, responses to inquiries, and satisfaction with items allowed in the program.

Key self-reported barriers to household recycling include situation (e.g. capacity issues, pick-up frequency), knowledge, and behaviour (e.g. cleaning items, laziness).

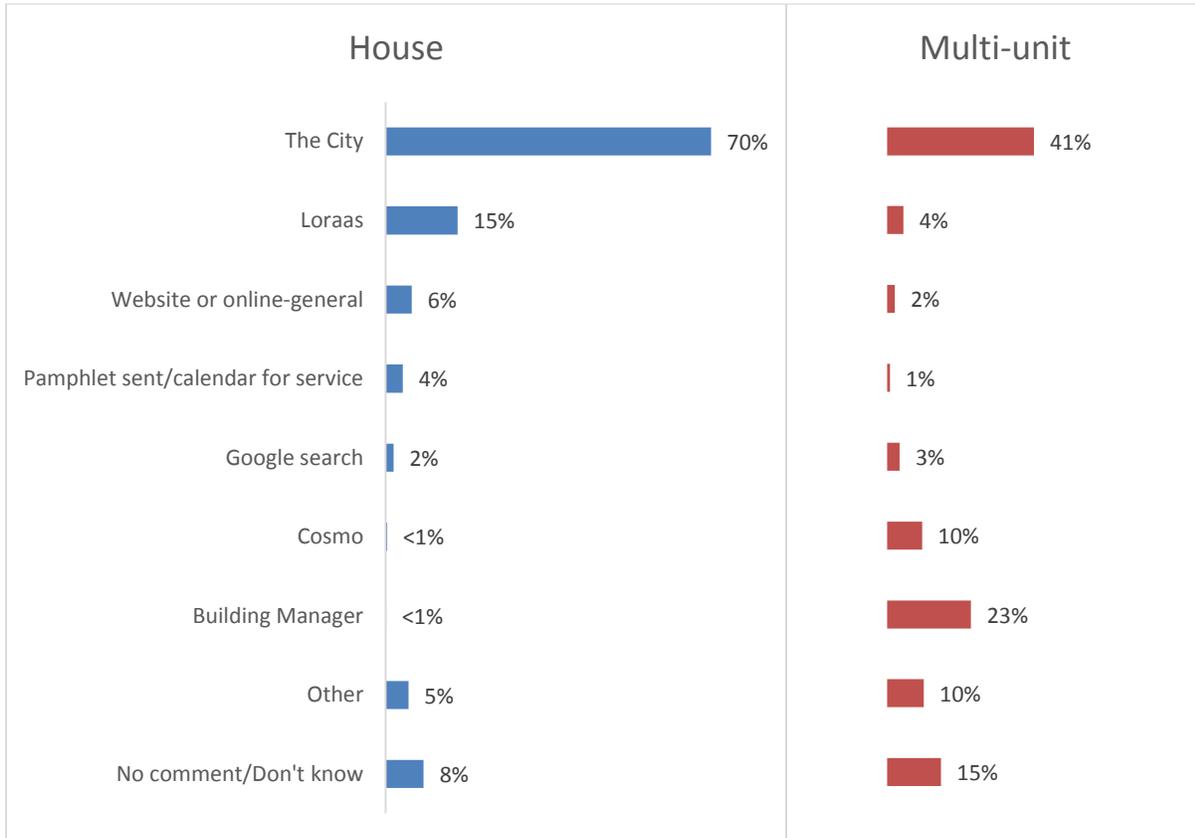
Barriers to Recycling by Type of Household (Open-ended question)



More than three quarters of Saskatoon residents claim to recall receiving a printed copy of the Waste & Recycling Collection Calendar, most of whom say they have it available at home for easy reference. Roughly one half are aware that the Waste & Recycling Collections Calendar is available on the City's website yet few are aware that they can sign up for collection reminders.

Despite Loraas and Cosmo being the proper contact points for curbside and multi-unit dwelling recycling program inquiries, most say they would still contact the City if they needed to speak with someone. Further, the City's website is the most commonly referenced source for program information.

Recycling Information Sources by Type of Household



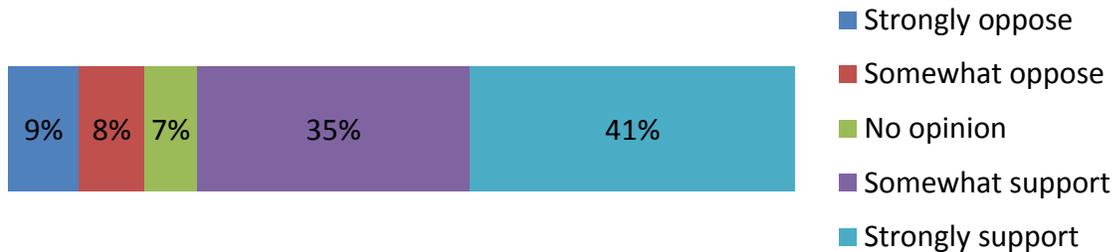
Older citizens are more likely to turn to traditional means for recycling information, such as the printed collection calendar, newspaper, and news report. Younger generations are more inclined to obtain information using digital means (such as the internet and social media) and through family and friends.

Few claim to place items such as used appliances, clothing, furniture, hazardous waste or electronics in the garbage. Most commonly, unwanted clothing and furniture are given to local charities and household waste and electronics are taken to SARCAN.

Six in ten citizens drop off items at a City of Saskatoon Household Hazardous Waste Day, most commonly once a year. While most place kitchen scraps in the garbage, residents who live in a house are more likely to compost such items. Findings are generally consistent with the Green Cart study conducted in the spring. Yard waste is commonly placed in the garbage, composted at home or taken to compost depots.

Three quarters of residents support a city-wide food and yard waste collection program for all households. These findings are generally consistent with the Green Cart Subscriber study conducted this spring.

Support for City-wide Food and Yard Waste Collection Program



The perceived importance of most environmental challenges presented to respondents is high. Energy efficiency, waste treatment, air quality, conserving natural areas, and water conservation top the list, based on importance. Initiatives for adapting to climate change and better transit, biking, and walking options are deemed to be comparatively less important.

Webpage and Online Engagement

Information about the City's waste, recycling, compost, and other diversion programs are available online through the City's website (Saskatoon.ca), Facebook, and Twitter.

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

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

In 2015, there were 125,412 visits to the Waste & Recycling section of the City's webpage. The webpage was in the top ten visited webpages on Saskatoon.ca. The following improvements were made to the webpage:

- All waste, recycling and compost information was brought together on Saskatoon.ca. The previous micro-site for recycling (SaskatoonRecycles.ca) has been discontinued and now redirects to Saskatoon.ca
- "Waste Wizard" has been added to help residents sort household waste. It is a searchable database for recycling or disposal information on common household materials.

Waste Wizard
Need help?

Home / Search Results / Light bulbs

Light bulbs

There is no curbside collection for this item.

Household Hazardous Waste Days

You can drop this item off at one of the City of Saskatoon's Household Hazardous Waste Days. For upcoming event dates, times and location, visit our website.

Special Instructions

The Saskatchewan Waste Reduction Council's recycling database lists drop off locations for many reusable and recyclable items. For more information on how to dispose of this item, visit <http://www.saskwastereduction.ca/recycle/db?location=Saskatoon&materials=Light+Bulbs&keywords=>

← Back

[List of Materials](#)

Powered by **ReCollect**

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

2015 Collection Calendar

Each household received a personalized print calendar with the garbage, recycling, leaves and grass, and household hazardous waste schedules. The calendar also includes information on what items are accepted by each program, information on how to use carts to ensure successful collections, and customer service contact information. In 2015, 69,000 calendars were distributed by mail.

Collection Schedules and Reminders
Need help?

Please type your home address:

Example: 222 - 3rd Avenue North, Saskatoon

Powered by **ReCollect**

Residents can also:

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

The use of online calendars and reminders has increased in 2015. In 2015, there were 49,987 webpage visits. Personalized online collection calendars were viewed by 37,345 unique households in 2015, up from 24,589 in 2014. In 2015, there were 9,504 calendar PDF downloads compared to 5,455 in 2014. Approximately double the number of collection reminders were provided in 2015, with 8,996 receiving reminders compared to 4,418 the previous year.

Curbside Recycling Program Education

The education program that targets residential single-family homes is a partnership between the City of Saskatoon and Loraas. The program aims to increase recycling by raising awareness through mass marketing on what and how to recycle, change behaviours, and establish recycling as a social norm.

Programs and tactics in 2015 included marketing campaigns like 'Blue Approved', promoted through social media, web-site, and media relations; as well as in-person education such as neighbourhood cart blitzes, workshops for newcomers, a school program, and the Rolling Education Unit.



The impact of the education program in 2015 included:

- more than six million impressions and Star Phoenix readers
- 27,050 views of recycling web pages
- Over 13,392 interactions with residents at community events
- 3,000 participants in Loraas school program
- 3,416 bylaw notices
- 8,669 'Oops' correction notices
- 1,250 carts checked resulting in 12% reduction in contamination
- 5,000 utility flyers distributed
- 84% of survey respondents indicated they were satisfied with information on what can and can't be recycled
- 76% of survey respondents indicated they were satisfied with educational and informational materials

Loraas Education Room

Elementary students are brought to the Education room at the Loraas facility to learn how material is processed at the material recovery facility (MRF), to increase awareness on how and why to recycle, and emphasize the importance of waste diversion and environmental stewardship.

Mayfair Neighbourhood Cart Blitz

Staff inspected recycling carts on three consecutive collection days in Mayfair and provided an education notice highlighting incorrect items or providing positive feedback. A material audit was performed before and after the cart inspections to measure changes to contamination. Contamination was reduced by 12%. This program will be expanded in 2016.

Newcomer Workshops

Using recycling awareness as the subject for English as a Second Language training, new Canadians were provided both language training and information about their recycling program during two pilot workshops. This program will be expanded in 2016.

Multi-Unit Residential Recycling (MURR) Program Awareness

The City of Saskatoon and Cosmopolitan Industries worked together on an education program to inform building owners and managers on how the program works and encouraging them to work with their tenants and condo residents.



2014 and 2015 MURR communications focused on getting information to residents and engaging directly with building/property managers. While this was successful in many cases, challenges such as identifying who the appropriate site contact is, posters and brochures not being distributed by building managers, and a high proportion of residents not speaking English as their first language meant that not all residents received the information they required to properly recycle.

The impact of the education program in 2015 included:

- 2,279 posters placed in buildings
- 11,491 brochures distributed to residents
- 2,164 handbooks provided to building managers
- 216 building managers and residents participated in presentations
- 63% of survey respondents indicated they were satisfied with information on what can and can't be recycled
- 59% of survey respondents indicated they were satisfied with educational and informational materials

Rolling Education and the Let's Roll Recycling Team

In 2015, the City of Saskatoon and the Saskatchewan Waste Reduction Council (SWRC) collaborated to provide Waste and Recycling education to Saskatoon through the City's mobile education trailer, the Rolling Education Unit (REU). Four students from the University of Saskatchewan were hired for 16 weeks to be the Let's Roll Team.



The Let's Roll Recycling Team attended 22 events in 2015, where they encouraged children and adults to learn about waste management through interactive activities. Citizens were engaged at events using the “Spin and Sort” and “Yep, Nope” sorting game. The team kept track of interactions with the public. They estimate that they made contact with a total of 13,392 people over the summer. The top events by attendance include: The Children's Festival, The Taste of Saskatchewan, the Saskatoon Ex, The Fringe Festival, Canada Day, and Kinsmen Day at the Zoo.

Home Composting Education

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



Compost education, research, and incentives provided in 2015 in partnership with the SWRC included:

- nine new Master Composters were trained and they, along with existing Master Composter volunteers, attended seven events and made 24 home visits.
- 55 compost bin rebates of \$20
- A Compost Hotline, with a commitment to a 24 hour turn-around, was established. There were 18 inquiries.
- Completion of the “Dishing the Dirt” research, which outlines the pros and cons of various composters for different types of yards.

Composting and the use of compost was encouraged through the Healthy Yards program started in 2015. The program is a partnership with the University of Saskatchewan Master Gardeners, the Food Bank and Learning Centre, and the SWRC. Compost education included in the 2015 Healthy Yards program included:

- A Compost 101 course at Hort Week that had 58 attendees
- A Healthy Yards How-To Guide on Compost Bins
- A Healthy Yards Demonstration Site located at the Food Bank and Learning Centre’s “Garden Patch”.

Saskatoon Curbside Swap

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

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.

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

What is a Curbside Swap?

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

What will I find at a Curbside Swap?

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

Where can I find more info?

saskatoon.ca/curbsideswap



NEIGHBOURHOOD

DATE

TIME

Watch for the signs!

SASKATOON

**CURBSIDE
SWAP**

The September 12th 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 individuals indicated that they were participating 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. 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. 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 and coordinating several individual neighbourhood-level events.

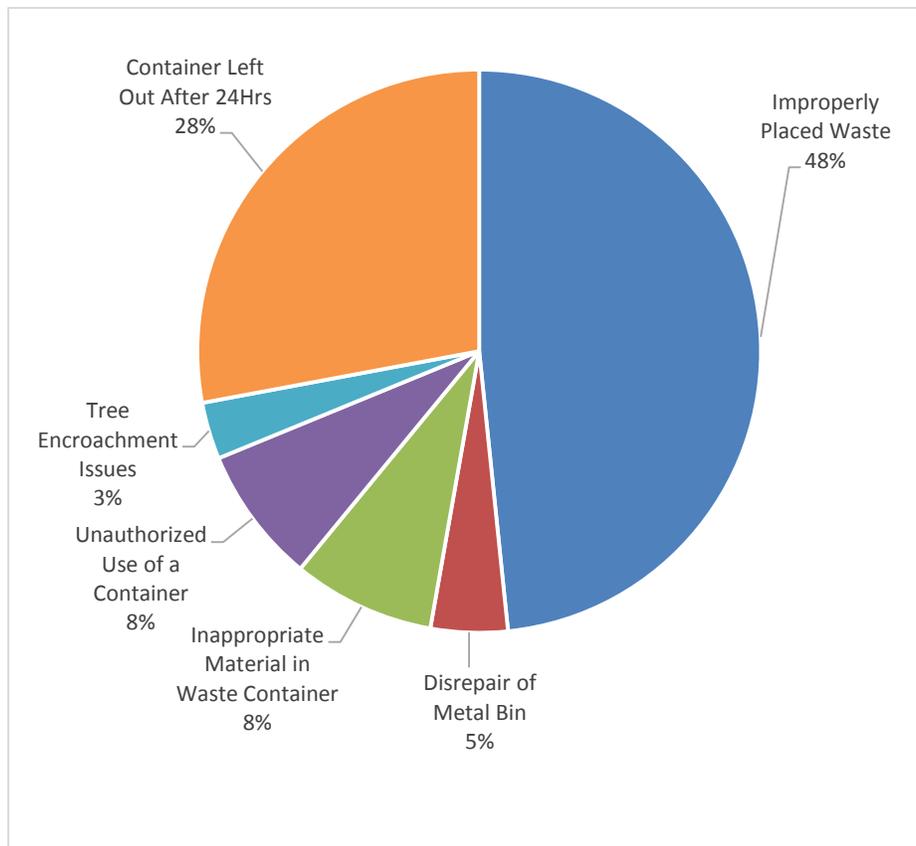
Customizable communication materials are now available on the City’s website to assist residents and Community Associations wishing to take part in future swap events.

Waste Bylaw Enforcement

The role of waste bylaw enforcement is to provide education and enforcement to ensure garbage and recycling are managed by the community in a way that is safe for people and the environment.

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

In 2015, the EPOs addressed more than 612 individual complaints. A breakdown of the types of complaints received are identified below.



In 2015, the neighbourhood blitzes for cart placement requirements under the Waste Bylaw continued. Inspections were carried out on a total of 3416 residential units in the following four neighbourhoods:

- Holliston (1066 residential units)
- Haultain (1220 residential units)
- City Park (780 residential units)
- Mayfair (350 residential units with back lane collection)

The EPOs delivered 1430 education notices to residents whose black or blue carts were left out for more than 24 hours. These were followed by 551 warning notices of violation and 36 notices of violation (\$100 ticket) if subsequent inspections showed that compliance was not achieved. Over the six week period that each neighbourhood was targeted by the blitzes, all neighbourhoods showed great improvement in reducing non-compliance.

Green Cart Program Education and Marketing

The Green Cart program continues to accept new subscribers. Promotional efforts in 2015 were focused on encouraging additional subscribers using on-line and social media. The program is included in a number of other education efforts (e.g. Rolling Education Unit, 'Healthy Yards').

The impact of the education and marketing program in 2015 included:

- 69,000 households through the Waste and Recycling Collection calendar
- more than 350,000 online impressions with 1,000 click throughs
- more than 280,000 social media impressions and 11,000 engagements
- 26,112 webpage visits for both green cart and compost depots
- 11 newspaper ads and three PSAs



Budget Adjustment Request - Capital Project #625-22 – Trunk Sewer – NE Sector – Lift Station to Central Avenue Trunk

Recommendation

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

1. That the Administration be given approval for Contract #14-0058, Central Avenue and Fedoruk Drive to exceed 25% of the contract value; and
2. That a budget increase of \$868,000 for additional funding from the Trunk Sewer Reserve for Capital Project #625-22 – Trunk Sewer – Northeast Sector – MI – Force Main – UH2 – Lift Station to Central Avenue Trunk be approved.

Topic and Purpose

The purpose of this report is to request approval to exceed 25% of the contract value and to request City Council approval for a budget adjustment to Capital Project #625-22 – Trunk Sewer – Northeast Sector – MI – UH2 – Lift Station to Central Avenue to be funded by the Trunk Sewer Reserve.

Report Highlights

1. The completion of Capital Project #625-22 in 2015 was identified as a priority to enable Aspen Ridge lot sales.
2. Capital Project #625-22 requires an increase in funding allocation to complete Contract #14-0058. Contract completion is scheduled for the 2016 construction season.
3. Incomplete work from Contract #13-0643, Aspen Ridge Force Main, was transferred to Contract #14-0058, Central Avenue and Fedoruk Drive.

Strategic Goals

The recommendations support the Strategic Goals of Sustainable Growth as the work done under this contract will provide sanitary and water main infrastructure.

The recommendations also support the Strategic Goal of Quality of Life as the installation of a new force main sewer with a vortex flow structure (controls odour release) will help alleviate odour issues that area residents could otherwise experience.

Background

Contractor failure on the Aspen Ridge Force Main resulted in the Administration removing incomplete work from that contract and adding the work to another contract.

Report

Scope of Work

In 2013, the City awarded Contract #13-0643, Aspen Ridge Force Main. The scope of the work was to install a force main along Central Avenue to the newly installed lift station in Aspen Ridge. Due to contractor issues regarding performance and safety, a significant portion of the work from Contract #13-0643 was removed from the contractor.

At that time, Acadia Construction was working on an adjacent contract, Contract #14-0058, Central Avenue and Fedoruk Drive. Acadia Construction was approached regarding completion of the remaining work on Contract #13-0643. Completion of the Aspen Ridge Force Main was identified as a corporate priority. Acadia Construction accepted this work under a contract extension to Contract #14-0058. The force main is now repaired, completed and fully commissioned.

Communication Plan

Due to the complexity and delays associated with this project, and the expression of concern from residents, a communication plan would be beneficial. In addition to construction notices in advance of work, this plan could include a letter to the community providing basic project history. This will help residents feel more included in the process and aware of the project's progress.

Financial Implications

Details of the estimated project cost that pertain to the contract and individual projects are as follows:

Contract #14-0058 - Central Avenue and Fedoruk Drive:

| | |
|------------------------------|-----------------------|
| Original Contract | \$4,578,683.80 |
| Contingency | 650,000.00 |
| GST | <u>261,434.19</u> |
| Total Original Contract Cost | \$5,490,117.99 |
| GST Rebate | <u>261,434.19</u> |
| Net Cost to City | <u>\$5,228,683.80</u> |

Estimated Contract Value Upon Completion:

| | |
|-------------------------------|-----------------------|
| Estimated Final Contract Cost | \$6,523,608.45 |
| GST | <u>326,180.42</u> |
| Total Contract Cost | \$6,849,788.87 |
| GST Rebate | <u>326,180.42</u> |
| Net Cost to City | <u>\$6,523,608.45</u> |

Budget Adjustment Request - Capital Project #625-22 – Trunk Sewer – NE Sector – Lift Station to Central Avenue Trunk

Contract Cost Analysis:

| | |
|---------------------------------|-------------------------------|
| Anticipated Final Cost | \$6,523,608.45 |
| Original Contract Cost | <u>5,228,683.80</u> |
| Cost Over the Original Contract | <u><u>-\$1,294,924.65</u></u> |

The above shows that Contract #14-0058, Central Avenue and Fedoruk Drive, is projected to be 24.78% over the original contract award total. Administration requires Council approval to exceed 25% of an original contract amount, so is seeking formal approval in the event the final cost does exceed 25%.

Regarding the budget for Project #625-22 Force Main, Lift Station to Central Avenue Trunk Installation, additional funding is required as follows:

| | |
|---|------------------------------|
| Current Project Charges (Force Main only) | \$4,531,510.00 |
| Further Costs to Completion | <u>78,000.00</u> |
| Total Estimated Cost | \$4,609,510.00 |
| Budget Allocated from Trunk Sewer Reserve | <u>3,742,000.00</u> |
| Budget Adjustment Required | <u><u>-\$ 867,510.00</u></u> |

Even with this overage, the total cost for Project #625-22 will be less than the original estimate of \$5.3 Million. This project is funded from development levies.

A budget adjustment to Capital Project #625-22 is requested to be funded from the Trunk Sewer Reserve.

Environmental Implications

The project has been executed in full consultation with Meewasin Valley Authority. Therefore, the minimum environmental impact possible has been achieved.

Other Considerations/Implications

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

Due Date for Follow-up and/or Project Completion

Contract #14-0058, Central Avenue and Fedoruk Drive, will be completed in late 2016.

Public Notice

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

Report Approval

Written by: Jim Donohoe, Project Engineer, Construction & Design
Reviewed by: Matt Jurkiewicz, Senior Project Management Engineer
Reviewed by: Celene Anger, Director of Construction & Design
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities

EUCS JD - Budg Adjust-CP625-22 Trunk Sewer - NESector-Lift Station-Central Ave Trunk

Smart Grid Control System - Award of Contract

Recommendation

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

1. That a contract with Survalent Technology Corporation for the supply of a Smart Grid Control System for Saskatoon Light & Power at a cost of \$281,778 (including GST) be approved; and
2. That the City Solicitor be requested to prepare the appropriate agreement and that His Worship the Mayor and the City Clerk be authorized to execute the contract under the Corporate Seal.

Topic and Purpose

The purpose of this report is to request City Council approval for the award of contract to supply a Smart Grid Control System for Saskatoon Light & Power (SL&P).

Report Highlights

1. A Request for Proposal (RFP) was posted on the SaskTenders website for the supply of a Smart Grid Control system.
2. The requested deployment of the Smart Grid Control system is broken down into four phases: 1) Supervisory Control and Data Acquisition (SCADA) system and Support; 2) Geographic Information System/Advanced Metering Infrastructure (GIS/AMI) Data Integration; 3) Load Flow and Optimal Operation; and 4) Outage Management and Others.
3. Administration recommends awarding the Smart Grid Control System project to Survalent Technology Corporation which had the highest scoring proposal.
4. This award will cover the first two phases only. Future budget approvals will be required in order to award Phases III and IV, and at that time Administration will take the appropriate steps to award the remainder of the contract.

Strategic Goal

This report supports the long-term strategy to leverage technology and emerging trends under the Strategic Goal of Continuous Improvement. Through a Smart Grid Control System, SL&P can optimize energy usage and reduce outage time, which supports the long-term strategy to reduce lost revenue under the Strategic Goal of Asset and Financial Sustainability.

Background

A new Smart Grid Control System is needed for SL&P to build a smarter energy infrastructure and an advanced energy delivery system. SL&P's existing SCADA system has diminishing vendor support and is not compatible with long-term smart grid strategies such as integration with the City of Saskatoon's GIS/AMI systems. SL&P intends to upgrade its existing SCADA system to a new Smart Grid Control System.

State-of-the-art master station hardware and software, and workstation software, is to be installed and interfaced with existing field Remote Terminal Units. The new system will leverage existing field devices and integrate with GIS/AMI assets. Long-term plans are to continue investing in new technologies and implement other modules that further deliver the benefits of the Smart Grid Control System.

Report

The purpose of the RFP was to invite interested proponents to prepare and submit a competitive proposal for the following components:

- Phase 1: SCADA System and Support;
- Phase 2: GIS/AMI Data Integration;
- Phase 3: Load Flow and Optimal Operation; and
- Phase 4: Outage Management and Others.

Request for Proposal

On February 26, 2016, an RFP was advertised on the SaskTenders website to invite appropriate vendors to supply a Smart Grid Control system. Proposals were received from the following three companies:

- Survalent Technology Corporation (Brampton, ON)
- Advanced Control System, Inc. (Norcross, GA, USA)
- Willowglen Systems Inc. (Edmonton, AB)

The proposals were evaluated by a committee including operations, metering and engineering groups using the following criteria points as outlined in the RFP:

- 30 points – Features and documentations
- 20 points – Total cost of ownership
- 20 points – Integration with third party software
- 20 points – Future expansion
- 10 points – Company experience and reviews

Following the evaluation, the proposal with the highest score was the one submitted by Survalent Technology Corporation.

Options to the Recommendation

Administration could split the two major portions of work (Phases I and II, and Phases III and IV) and re-issue as two separate RFPs. As the presented bid is within the capital project budget, this option is not recommended as some work would have to be duplicated and it would not yield a lower price.

Financial Implications

The net cost to the City for the consulting services, as submitted by Survalent Technology Corporation would be as follows:

Smart Grid Control System - Award of Contract

| | |
|---|---------------------|
| Phase 1 (Basic SCADA System and Support) | \$199,660.00 |
| Phase 2 (GIS/AMI Data Integration) | 68,700.00 |
| Phase 3 (Load flow and optimal operation) | 386,000.00 |
| Phase 4 (Outage management and others) | <u>226,000.00</u> |
| Sub-total Upset Fee | \$880,360.00 |
| GST (5%) | 44,018.00 |
| PST (5%) | <u>44,018.00</u> |
| Total Upset Fee | \$968,396.00 |
| GST Rebate | <u>(44,018.00)</u> |
| Net Cost to the City | <u>\$924,378.00</u> |

The Smart Grid Control System installation is scheduled to begin in 2016, with Phases I and II operational in 2017. Phases III and IV are expected to span the next five years. Adequate funding for Phases I and II is available in the approved 2016 Capital Project #1018 – SLP – Monitoring System Upgrade (SCADA). Phase III and IV funding is allocated in capital plans for SL&P Capital Project #1018 SLP - Monitoring System Upgrade (SCADA) through the end of 2020. Administration will take the appropriate action at that time to award Phases III and IV to Survalent Technology Corporation.

Environmental Implications

The immediate environmental implications for this project are minimal as the initial proposed installations are computing devices and software. Long-term positive environmental impacts may be realized through reduction in electric energy losses and optimized energy distribution.

Other Considerations/Implications

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

Due Date for Follow-up and/or Project Completion

Phases I and II of this project are expected to be complete and operational in 2017. Phases III and IV are expected to commence within the following five years.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C91-021, Public Notice Policy, is not required.

Report Approval

Written by: Wutao Yin, Senior Project Management Engineer
Brendan Lemke, Engineering Manager
Reviewed by: Trevor Bell, Director of Saskatoon Light & Power
Approved by: Jeff Jorgenson, General Manager Transportation & Utilities
Department

EUCS WY – Smart Grid Control System – Award of Contract