

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

Monday, February 7, 2022, 9:30 a.m.

via teleconference, hosted from Council Chamber, Saskatoon City Hall

Committee Members:

Councillor H. Gough, Chair, Councillor M. Loewen, Vice Chair, Councillor S. Gersher,  
Councillor T. Davies, Councillor D. Hill, His Worship, Mayor C. Clark (Ex-Officio)

Pages

1. CALL TO ORDER

2. *CONFIRMATION OF AGENDA*

5 - 6

Recommendation

1. That the letter from Sherry Tarasoff dated February 6, 2022 be added to Item 7.1.2; and
2. That the agenda be adopted as amended.

3. DECLARATION OF CONFLICT OF INTEREST

4. ADOPTION OF MINUTES

7 - 11

Recommendation

That the minutes of regular meeting of the Standing Policy Committee on Environment, Utilities and Corporate Services held on January 10, 2022 be adopted.

5. UNFINISHED BUSINESS

6. COMMUNICATIONS (requiring the direction of the Committee)

6.1. Delegated Authority Matters

6.2. Matters Requiring Direction

6.2.1. 2022 Work Plan - Diversity, Equity and Inclusion Advisory

12 - 18

## **Committee [File No. CK 225-83]**

The Diversity, Equity and Inclusion Advisory Committee 2022 Work Plan is provided.

### **Recommendation**

That the 2022 Work Plan of the Diversity, Equity and Inclusion Advisory Committee be received as information and forwarded to City Council for information.

## **6.3. Requests to Speak (new matters)**

## **7. REPORTS FROM ADMINISTRATION**

### **7.1. Information Reports**

#### **Recommendation**

That the reports contained in Items 7.1.1 to 7.1.2 be received as information.

<b>7.1.1. Promising Practices in Food Reclamation in Saskatoon [File No. CK 7830-1 x 220-9]</b>	19 - 94
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A report of the General Manager, Utilities and Environment is provided.

<b>7.1.2. Public Wi-Fi Pilot Project Update [File No. CK 261-18]</b>	95 - 102
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A report of the Chief Strategy and Transformation Officer is provided, along with correspondence from Sherry Tarasoff dated February 6, 2022.

### **7.2. Approval Reports**

<b>7.2.1. Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education [CK 7830-1]</b>	103 - 121
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A report of the General Manager, Utilities and Environment is provided.

#### **Recommendation**

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

1. That \$159,400 from the Multi-Unit Organics project (P.10019) be directed to Waste Reduction Initiatives

(P.01964) for implementation of the ICI compliance and education work plan outlined in Appendix 2, and the work scope for P10019 is adjusted as outlined in this report;

2. That Administration bring the following recommendation to the 2023 budget deliberations for approval: that \$284,400 from Solid Waste Reduction & Diversion Plan Development and Plan Implementation (P.10016) be directed to Waste Reduction Initiatives (P.01964) for implementation of the ICI compliance and education work plan outlined in Appendix 2, and the work scope for P10016 is adjusted as outlined in this report;
3. That the ICI recycling and organics regulation compliance and education work plan outlined in Appendix 2 be approved for 2022 and 2023 pending funding approval; and
4. That Administration report back in 2023 with a service-level and program strategy for the sustained operation of the ICI waste diversion regulation program to commence in 2024.

#### **7.2.2. Assisted Waste Collections Program [File No. CK 7830-3]**

122 - 140

A report of the General Manager, Utilities and Environment is provided.

##### **Recommendation**

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council that the Assisted Waste Collections Program be expanded as outlined in this report.

### **7.3. Decision Reports**

#### **7.3.1. FCM Funding Decision for Home Energy Loan Program [File No. CK 752-2]**

141 - 184

A report of the General Manager, Utilities and Environment is provided.

##### **Recommendation**

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

1. The income-qualification cut-off for the HELP program be calculated at 2.5 times Statistics Canada Low Income Cut-Off;

2. Option 2: Income-qualified households eligible for all base/free items, standard rebates, and additional rebates; and participants with homes built in 1990 or prior eligible for standard rebates; be approved for the HELP program;
3. Table 3: Rebate categories and values per item be approved for application in the HELP program while rebate funding is available; and
4. Capital Project P1956 – Property Assessed Clean Energy Financing Program be increased by \$3,666,600 for the grant portion and \$7,333,200 for the loan portion (subject to an intent to borrow report and public notice) of FCM’s Community Efficiency Financing Program Funding.

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

**9. GIVING NOTICE**

**10. URGENT BUSINESS**

**11. IN CAMERA AGENDA ITEMS**

**12. ADJOURNMENT**

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**Subject:** FW: Email - Communication - Sherry Tarasoff - Public Wi-Fi Pilot Project Update - CK 261-18

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**From:** Web NoReply <[web-noreply@Saskatoon.ca](mailto:web-noreply@Saskatoon.ca)>

**Sent:** Sunday, February 6, 2022 3:07 PM

**To:** City Council <[City.Council@Saskatoon.ca](mailto:City.Council@Saskatoon.ca)>

**Subject:** Email - Communication - Sherry Tarasoff - Public Wi-Fi Pilot Project Update - CK 261-18

--- Replies to this email will go to [REDACTED] ---

Submitted on Sunday, February 6, 2022 - 15:07

Submitted by user: Anonymous

Submitted values are:

Date Sunday, February 06, 2022

To His Worship the Mayor and Members of City Council

First Name Sherry

Last Name Tarasoff

Phone Number

Email [REDACTED]

Address [REDACTED] Peterson Cres

City Saskatoon

Province Saskatchewan

Postal Code [REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject 7.1.2 Public Wi-Fi Pilot Project Update

Meeting (if known) SPC-EUCS on Monday, February 7th

Comments

I have some questions about this Pilot Project:

How is the funding being spent (planning, implementation, operations, administration)?

The RFP will indicate that the signal coverage will allow unrestricted access to the internet. Why are there no restrictions? Even the complimentary Wi-Fi at City facilities has limits.

Does this report aim to provide all 1,453 residents with internet service speeds of 50 Mbps download and 10 Mbps upload simultaneously? I ask that the final assessment report respond with the actual number of unique users serviced and the minimum service speeds provided at any moment.

Since 2016, the City has had an agreement with Shaw Communications for free public Wi-Fi at civic facilities. Under this agreement, the City neither pays fees for the service nor receives revenue. This proposed Wi-Fi pilot project will be built from scratch and delivered by the City itself instead of using the qualified private service providers already in this area. Is this the best use of taxpayer dollars?

Thank you for your consideration,

Sherry Tarasoff

Attachments

Will you be submitting a video to be vetted prior to council meeting? No

The results of this submission may be viewed at:



## **PUBLIC MINUTES**

### **STANDING POLICY COMMITTEE ON ENVIRONMENT, UTILITIES AND CORPORATE SERVICES**

**Monday, January 10, 2022, 9:30 a.m.**

**Via Teleconference Hosted in the Council Chamber, Saskatoon City Hall**

**PRESENT:** Councillor H. Gough, Chair  
Councillor M. Loewen, Vice Chair  
Councillor S. Gersher  
Councillor T. Davies  
Councillor D. Hill  
His Worship, Mayor C. Clark (Ex-Officio)

**ALSO PRESENT:** General Manager, Utilities & Environment A. Gardiner  
Solicitor B. Bleakney  
Deputy City Clerk S. Bryant, in Council Chamber  
Committee Assistant V. Saini

#### **1. CALL TO ORDER**

Deputy City Clerk Bryant called the meeting to order on Treaty 6 Territory and the Traditional Homeland of the Métis people and confirmed roll call of the members in attendance via teleconference.

#### **2. APPOINTMENT OF CHAIR AND VICE CHAIR**

Deputy City Clerk reported that City Council, at its Regular Business Meeting held on September 27, 2021 made the following appointments for 2022:

##### SPC on Environment, Utilities and Corporate Services

Councillor T. Davies  
Councillor S. Gersher  
Councillor H. Gough  
Councillor D. Hill  
Councillor M. Loewen

The Committee was requested to appoint a Chair and Vice Chair for 2022.

Councillor Gersher was appointed Chair for 2021 and Councillor Gough was appointed Vice Chair for 2021.

**Moved By:** Councillor Loewen

That Councillor Gough be appointed Chair of the Standing Policy Committee on Environment, Utilities and Corporate Services for 2022.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

Councillor Gough assumed the Chair and opened nominations for Vice Chair.

**Moved By:** Councillor Gersher

That Councillor Loewen be appointed Vice Chair of the Standing Policy Committee on Environment, Utilities and Corporate Services for 2022.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

### **3. CONFIRMATION OF AGENDA**

**Moved By:** Councillor Gersher

1. That the letter from Sherry Tarasoff, dated January 7, 2022 be added to Item 8.1.2; and
2. That the agenda be confirmed as amended.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

### **4. DECLARATION OF CONFLICT OF INTEREST**

There were no declarations of conflict of interest.

### **5. ADOPTION OF MINUTES**

**Moved By:** Councillor Hill

That the minutes of regular meeting of the Standing Policy Committee on Environment, Utilities and Corporate Services held on December 6, 2021 be adopted.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

**6. UNFINISHED BUSINESS**

**7. COMMUNICATIONS (requiring the direction of the Committee)**

**7.1 Delegated Authority Matters**

**7.2 Matters Requiring Direction**

**7.3 Requests to Speak (new matters)**

**8. REPORTS FROM ADMINISTRATION**

**8.1 Information Reports**

**Moved By:** Councillor Davies

That the reports contained in Items 8.1.1 to 8.1.2 be received as information.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

**8.1.1 Referral List – Standing Policy Committee on Environment, Utilities and Corporate Services – January 2022 [File No. CK 2275-79]**

A report of the General Manager, Utilities and Environment was provided.

General Manager Utilities, and Environment Gardiner presented the report.

**8.1.2 Curbside Organics Program Update [File No. CK 7830-7]**

A report of the General Manager, Utilities and Environment was provided, along with communication from Sherry Tarasoff, dated January 7, 2022.

General Manager Utilities, and Environment Gardiner presented the report and together Director of Water and Waste Operations Lemke responded to questions of the committee.

**Moved By:** Councillor Hill

That the Administration include in a future report dates of full implementation and program review for curbside organics. In addition, that Administration provide the Standing Policing Committee on Environment, Utilities and Corporate Services with a review of all curbside organics education materials prior to them being distributed.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

**Moved By:** Councillor Gersher

That the information be received and forwarded to Saskatoon Environmental Advisory Committee for information.

In Favour: (6): Councillor Gersher, Councillor Gough, Councillor Davies, Councillor Hill, Councillor Loewen, and Mayor C. Clark

**CARRIED UNANIMOUSLY**

## **8.2 Approval Reports**

## **8.3 Decision Reports**

## **9. MOTIONS (NOTICE PREVIOUSLY GIVEN)**

### **10. GIVING NOTICE**

### **11. URGENT BUSINESS**

### **12. IN CAMERA AGENDA ITEMS**

### **13. ADJOURNMENT**

The meeting was adjourned at 11:13 a.m.

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Councillor H. Gough, Chair

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Deputy City Clerk, Bryant

## **ANNUAL REPORT AND WORK PLAN**

January 13, 2022

Secretary, Standing Policy Committee on Environment,  
Utilities and Corporate Services

**Re: 2021 Annual Report and 2022 Work Plan  
Diversity, Equity & Inclusion Advisory Committee  
(File No. CK 225-83)**

The mandate of the Diversity, Equity & Inclusion Advisory Committee is to provide advice to City Council on policy matters relating to the following:

- diversity and inclusion of all citizens within the community
- emerging equity or diversity issues or trends arising in the community
- initiatives to combat racism, acts of prejudice or hate in the community
- initiatives to promote acceptance of all citizens of Saskatoon
- consideration of the Calls to Action of the Truth and Reconciliation Commission in formulating City policies and initiatives
- diversity in naming streets and City infrastructure
- explore barriers faced in accessing city services, information, programs and facilities
- explore barriers to participation in public life and achievement of social, cultural and economic wellbeing of residents
- proposed City of Saskatoon policies, initiatives, and civic programs and services to meet changing needs of a diverse community
- employment and employee awareness policies, initiatives, and civic programs

The Committee also supports education and awareness programs on diversity, equity and inclusion of all citizens in the City of Saskatoon in consultation with the Administration and within the budget allocated by City Council.

### **Committee Membership**

Membership on the Committee for the year 2021 was as follows:

- Namarta Kochar, Chair, Citizen Member
- Amanda Guthrie, Vice Chair, Citizen Member
- Julie Yu, Citizen Member
- Ali Abukar, Saskatoon Open Door Society
- Rashid Ahmed, Citizen Member
- Darryl Isbister, Board of Education, Saskatoon Public Schools

- Julia Jones, Citizen Member
- Cornelia Laliberte, Board of Education, Greater Saskatoon Catholic Schools
- Connie Masuskapoe, Ministry of Social Services (June – December)
- Maria Soonias Ali, Citizen Member
- Superintendent Dave Haye, Saskatoon Police Service
- Jess Hamm, Saskatchewan Intercultural Association
- Howard Sangwais, Ministry of Corrections, Public Safety and Policing
- Manvi Ghai, Citizen Member
- Pamela Beaudin, Citizen Member
- Dr. Hortense Tabien, Saskatchewan Health Authority

The 2022 membership on the Committee is as follows:

- Namarta Kochar, Chair, Citizen Member
- Julie Yu, Vice Chair, Citizen Member
- Ali Abukar, Saskatoon Open Door Society
- Rashid Ahmed, Citizen Member
- Darryl Isbister, Board of Education, Saskatoon Public Schools
- Julia Jones, Citizen Member
- Cornelia Laliberte, Board of Education, Greater Saskatoon Catholic Schools
- Maria Soonias Ali, Citizen Member
- Superintendent Dave Haye, Saskatoon Police Service
- Jess Hamm, Saskatchewan Intercultural Association
- Manvi Ghai, Citizen Member
- Pamela Beaudin, Citizen Member
- Amanda Guthrie, Citizen Member
- Dr. Hortense Tabien, Saskatchewan Health Authority
- Hillary Gamelin, Ministry of Social Services
- Rhonda Johansson, Ministry of Social Services

### **Work Plan Goals and Accomplishments**

The work plan goals and status for the Committee in 2021 are listed in Appendix 1.

### **2021 Reports and Communications**

#### **Matters Referred by SPC or City Council**

1. Truth and Reconciliation Commission of Canada Calls to Action Update - April 2021 – Standing Policy Committee on Environment, Utilities and Corporate Services.

2. Governance Review - Advisory Committees - Terms of Reference - The Governance and Priorities Committee.
3. 2020 Diversity and Inclusion Report - Standing Policy Committee on Environment, Utilities and Corporate Services.
4. College Corridor Plan - Progress Update - Standing Policy Committee on Planning, Development and Community Services.

**Reports/Recommendations Submitted by the Standing Policy Committee on Environment, Utilities and Corporate Services:**

1. 2020 Diversity and Inclusion Report – November 1, 2021.
2. Triple Bottom Line and Local Energy Access Partnership Update - November 1, 2021.

**Work Plan for 2022**

In 2022 Committee will:

***Subcommittee to complete***

1. **Continue to explore and monitor emerging equity or diversity issues or trends arising in the community to advise City Council on diversity and inclusion of all citizens within the community.**

- Action:
  - Through the standing item on the agenda, the Committee members will continue to provide lived experience or feedback received from others relating to discriminatory practices or policies related to municipal jurisdiction. Issues or trends that are compiled will then inform the Committee on areas of focus.

2. **Collect Information and Evaluate:**

- Action:
  - That the Administration provide a draft of the updated Cultural Diversity and Inclusion Policy.
  - Request that the Administration to review the impact, effectiveness, and mission of the Living in Harmony Awards and present to the Committee for review and consideration.
  - Evaluate how the annual budget of Committee has been allocated and used, and consider whether revisions should be made.

3. **Training**

- The committee will take part in:
  - Saskatchewan Intercultural Association - Anti-racism Education

**4. Request, review and provide feedback on proposed and adopted City of Saskatoon policies, initiatives, and civic programs and services to meet changing needs of a diverse community and reducing barriers to participation, public life and achievement of social, cultural and economic welling of residents, including:**

- Procurement Policy – indigenous procurement framework;
- Increasing diversity in naming of streets and City infrastructure;
- Gender inclusion within City facility washrooms and change rooms; and
- Receive updates on work being conducted as per 2020 City Council motions to identify and eliminate racist and systemic barriers in areas of engagement, committees of council and within Human Resources

**5. Communications**

- Action:
  - Revisit the Communications Sub-committee and discuss what initiatives we should be communicating and whether a sub-committee is necessary or if a larger group discussion can identify targets.

**ATTACHMENTS**

1. Appendix 1 – 2021 Diversity, Equity and Inclusion Advisory Committee 2021 Work Plan – Schedule and Status Report

Yours truly,



**Namarta Kochar, 2022 Chair**  
Diversity, Equity & Inclusion Advisory Committee

**Diversity, Equity and Inclusion Advisory Committee**  
**2021 Work Plan - Schedule and Status Report**  
**December 23, 2021**

Work Plan Item	Action	Priority	Progress	Assigned To	Completion Date
1. Explore and monitor emerging equity or diversity issues or trends arising in the community to advise City Council on diversity and inclusion of all citizens within the community.	Committee members are encouraged to provide lived experience or feedback received from others relating to discriminatory practices or policies related to municipal jurisdiction. Issues or trends that are compiled will then inform the Committee on areas of focus.	Ongoing agenda item	Has been added as a standing agenda item.		2021
2. Collect Information and Evaluate	<p>Review the Cultural Diversity and Race Relations Policy and related initiatives in preparation for providing advice and recommendations on the development and contents of a new Diversity, Equity &amp; Inclusion Policy.</p> <ul style="list-style-type: none"> <li>• All Committee members provided with the Cultural Diversity and Race Relations Policy.</li> <li>• Intentionally schedule meeting time for open discussion, if necessary create sub-committee, forward recommendations on to Administration.</li> </ul>	2	Focus and review the CDRR Policy for updating. Will be a top priority in 2022.		

Work Plan Item	Action	Priority	Progress	Assigned To	Completion Date
	Collect information on the Living in Harmony Awards and evaluate the impact, effectiveness, and mission of the awards. <ul style="list-style-type: none"> <li>Request data from Administration on the number of nominations, number of attendees, number of schools involved, and number of nominators for the past five years.</li> <li>Intentionally schedule meeting time for an open discussion on the data and the mission/goals of the awards.</li> </ul>	4	Deferred to 2022.		
	Collect information on how our annual budget has been used in the past and evaluate the mission and vision of these funds.	5	Deferred to 2022.		
3. Training	The Committee will take part in: <ul style="list-style-type: none"> <li>Anti-Racism training provided by the Saskatchewan Intercultural Association.</li> <li>Two Spirit, Trans, and Queer inclusion training provided by OUTSaskatoon.</li> </ul>	1	OUTSaskatoon provided 2SLGBTQ training on November 24, 2021.  Anti-racism training to be provided in 2022.		
4. Request, review, and provide feedback on proposed and adopted City of Saskatoon policies, initiatives, and civic programs and services to meet changing needs of a diverse community and reducing barriers to	The Committee will request information on policies and gather feedback: <ul style="list-style-type: none"> <li>Request information from Administration on timelines for implementation or estimated progress, impact, and outcomes on the following:</li> </ul>	3	Reviewing information in this section will come after training and reviewing the updated DEI policy. Deferred to 2022.		

Work Plan Item	Action	Priority	Progress	Assigned To	Completion Date
<p>participation in public life and achievement of social, cultural and economic wellbeing of residents, including:</p> <ul style="list-style-type: none"> <li>• Employee awareness policies, initiatives and civic programs</li> <li>• Employment equity targets and progress</li> <li>• Anti-racism work and communications</li> <li>• Ethno-cultural network</li> <li>• 2SLGBTQ inclusion work</li> <li>• Equity lens review</li> </ul> <p>Response to Calls to Action of the Truth and Reconciliation Commission, Calls to Justice of the MMIWG Final Report</p>	<ul style="list-style-type: none"> <li>○ Procurement Policy – Indigenous procurement framework;</li> <li>○ Increasing diversity in naming of streets and City infrastructure; and</li> <li>○ Gender inclusion within City facility washrooms and change rooms.</li> </ul> <ul style="list-style-type: none"> <li>• Mayor has proposed 3 motions that he would like support from the Committee.</li> <li>• Intentionally schedule open discussion to hear from groups who can give feedback on the City of Saskatoon's work on anti-racism, ethno-cultural network building, Indigenization and decolonization, and 2SLGBTQ inclusion.</li> </ul>				
5. Communications	Revisit the Communications Sub-committee and discuss what initiatives we should be communicating and whether a sub-committee is necessary or if a larger group discussion can identify targets.	6	We will look at the communication plan once we have enhanced our knowledge base, fund distribution, and policies. This will also be more relevant post pandemic. Deferred to 2022 or 2023.		

# Promising Practices in Food Reclamation in Saskatoon

## ISSUE

*Promising Practices in Food Reclamation in Saskatoon* is a report delivered by the University of Saskatchewan (USask) in collaboration with the City of Saskatoon through the Research Junction program. The USask report proposes immediate and medium-term actions. This administrative report identifies next steps relative to existing strategies, initiatives and business planning.

## BACKGROUND

*Promising Practices in Food Reclamation* project and report was funded by [Research Junction](#) in February 2020. The purpose of this project is to determine promising practices for the City of Saskatoon in diversion of edible food from the landfill. The project builds on food reclamation work that began in 2016 at the University of Saskatchewan and the Saskatchewan Health Authority, and waste diversion work initiated by the City of Saskatoon in 2018. The report includes:

- An environmental scan of promising programs and policies in other municipal jurisdictions for reclamation of otherwise wasted food;
- A small pre/post intervention study of the implementation of a brochure explaining the rights and responsibilities of food businesses in food donation; and
- A key informant interview study to determine what kinds of support are needed for food businesses to reduce the edible food they currently send to the landfill.

## CURRENT STATUS

The final report was completed in October 2021. The Administration is now considering how to incorporate recommendations into ongoing and planned work.

## DISCUSSION/ANALYSIS

To prevent and manage food loss and waste effectively, the food waste hierarchy framework ranks five options. The highest priority is prevention of surplus, followed by re-use, recycling, recovery, and disposal. If surplus cannot be prevented, then redistribution is the next best option. Food redistribution and reclamation rescues edible food that would otherwise be wasted from food services and redirects it to recipient institutions, resulting in environmental, economic, and social benefits.

The report recommendations and next steps are provided in Appendix 1 - Promising Practices in Food Reclamation in Saskatoon – Recommendation and Next Steps. Some of the recommended actions include:

- Using the findings from this study to integrate food recovery into the Industrial, Commercial and Institutional (ICI) organics regulation implementation;
- Including a food donation directory in the ICI “waste wizard” tool;
- Enhancing community awareness of food waste through piloting the [Love Food, Hate Waste](#) campaign; and

- Including food reclamation and the results of this study in the development of the City's *Circular Road Map*, which will be completed through *Circular Cities & Regions Initiative* in early 2022.

The full *Promising Practices in Food Reclamation in Saskatoon* report is available in Appendix 2 - Promising Practices in Food Reclamation in Saskatoon – Full Report.

### FINANCIAL IMPLICATIONS

There are no financial implications of receiving this report for information.

### OTHER IMPLICATIONS

There are no direct environmental or social implications of this report, but food production and consumption are important when considering equity, emissions mitigation, climate adaptation and biodiversity. The report states:

“research estimates that 30-40% of all the food produced in Canada annually becomes avoidable food loss or waste—food that could have been eaten but was instead landfilled. Reducing food loss and waste can benefit Canadians by saving them money, improving the efficiency and competitiveness of the agri-food and agriculture sector, reducing greenhouse gas emissions, and contributing to global food waste reduction efforts.”

Responsible consumption and production are highlighted in United Nations Sustainable Development Goal (SDG) 12, in which a target is set to reduce per capital food waste globally in half by 2030. Canada has committed to the SDG goals, which also form the basis of the 2018 Paris Climate Agreement.

### NEXT STEPS

The recommendations will be progressed as outlined in Appendix 1. Further reporting will occur on the outcomes of Saskatoon's participation in the Circular Cities & Regions Initiative and the circular roadmap once complete in Q2 2022, which is likely to include additional development on food waste reduction opportunities.

### APPENDICES

1. Appendix 1 - Promising Practices in Food Reclamation in Saskatoon – Recommendation and Next Steps
2. Appendix 2 - Promising Practices in Food Reclamation in Saskatoon – Full Report

#### Report Approval

Written by: Katie Burns, Community Leadership and Program Development Manager  
Reviewed by: Jeanna South, Director of Sustainability  
Approved by: Angela Gardiner, General Manager, Utilities and Environment

## Promising Practices in Food Reclamation in Saskatoon – Recommendation and Next Steps

Immediate term (2022-2023)

<b>Recommendation</b>	<b>Status and Next Steps</b>
<p><b>Use the findings from this study to integrate food recovery into the Industrial, Commercial and Institutional (ICI) organics regulation implementation that is planned between 2022 and 2024, including:</b></p> <p><i><b>a. Ensure that food donation is compatible with bylaw enforcement procedures.</b></i></p>	<p>The bylaw enforcement procedure is prepared, and on hold until funding is approved.</p>
<p><i><b>b. Highlight donation of edible food as a preferred option throughout education and programming and specifically address the barriers to edible food donation highlighted in this study.</b></i></p>	<p>Education for the ICI organics regulation to be developed during 2022 based on feedback from recycling regulation education, pending funding approval.</p>
<p><i><b>c. Have a food donation directory embedded in the ICI “waste wizard” tool and work with community partners to ensure information remains current.</b></i></p>	<p>The ICI waste wizard tool has been procured for 2022, update in progress. Funding approval required for ongoing availability on the tool for 2023+.</p>
<p><b>Enhance community awareness of food waste through piloting the <a href="#">Love Food, Hate Waste</a> campaign, integration of food waste reduction education and programming as part of the implementation of the curbside and multi-unit residential organics programs, and other City sustainability programs.</b></p>	<p>Organics education program development started in January 2022, will assess Love Food, Hate Waste and other residential food waste opportunities, anticipated reporting in Q3-4 2022 on curbside organics program education.</p> <p>The multi-unit organics pilot project will assess food waste reduction education.</p>
<p><b>Collaborate with the provincial government as it implements its <i>Solid Waste Management Strategy</i> and participate in engagement on options for reducing organic and food waste.</b></p> <p><b>Share the results of this study as part of that participation.</b></p>	<p>Ongoing monitoring of the provincial government’s plans and engagement on ICI sector waste and organics/food waste.</p>
<p><b>Further develop and seek funding with community partners to:</b></p> <p><i><b>a. Address the barriers identified in this study by organizations accepting food donations to further their capacity to accept recovered food.</b></i></p>	<p>Staff resourcing available through the Solid Waste Reduction and Diversion Plan (SWR&amp;DP) development and implementation capital project.</p>
<p><i><b>b. Pilot a food recovery social enterprise that will improve local capacity to recover more edible food from the waste stream while creating employment opportunities.</b></i></p>	<p>Staff resourcing available through SWR&amp;DP development and implementation capital project.</p> <p>Seek funding for other pilot costs.</p>
<p><b>Include food reclamation and the results of this study in the development of the City’s <i>Circular Road Map</i>, which will be completed</b></p>	<p>In progress. Food has been identified during initial workshop as a topic to develop for the roadmap. The roadmap is anticipated for Q2 2022 and an update will be provided in</p>

through <i>Circular Cities &amp; Regions Initiative</i> in early 2022.	conjunction with the Integrated Waste Management Annual Report.
Add additional questions in the ICI waste and recycling survey on food recovery to better understand the barriers to food donation.	Planned for 2023, pending funding approval.
Medium-term (2024-2025)	
Recommendation	Next Steps
Ensure food waste, including the findings from this study, are included in the <i>Sustainable Food Action Plan</i> planned for 2024-2025. This work will assess the implications of providing municipal support, such as capital, operational or grant funding for food recovery compared to composting through a triple bottom line assessment.	As outlined in the Green Infrastructure Strategy reporting, a Sustainable Food Action Plan is planned for 2024-2025. A capital project option will be prepared for submission into the 2024-2025 multi-year budget process.
Assess food-recovery apps and consider procurement as part of the ICI organics regulation education and communications following additional engagement with both food waste generators and the food donation sector.	A business case will be prepared by 2023 to assess the viability and costs to procure and operate this technology. Depending on the business case outcomes, it could be integrated into the ICI waste diversion education program or be brought forward as a separate capital project option.
Expand the City's annual environmental cash grant for community organizations to have a food waste reduction and recovery component at \$10,000 per year.	Options to expand the annual environmental cash grant will be assessed as part of an environmental cash grant review, that is planned for 2022-2023.
Improve waste characterization studies and other data collection for the ICI sector to get a clearer picture of food waste in Saskatoon and the sectors that programs should target.	The next community-wide waste characterization study is planned for 2024. The business plan option will include an option for more robust ICI food waste analysis.
Request funding to complete a material flow analysis of ICI food waste to better understand the current state of food donation in Saskatoon.	The scope of a material flow analysis will be researched and a business case prepared. Depending on the outcome of the business case, a capital business plan option may be submitted.
As food-service contracts at City facilities expire, integrate food waste reduction and recovery of edible food into the tendering criteria. Integrate this outcome into the sustainable procurement work planned by the Sustainability Department.	This could be integrated into either the ongoing Leading by Example/Green Teams project and/or the Triple Bottom Line/Sustainable Procurement ongoing work, depending on resource availability.



# Promising Practices in Food Reclamation in Saskatoon

Farhad Lashgarara, Rachel Engler-Stringer, Freda Atsuyno, Layane Fernandes de Sousa Moura, Hayley Walkeden, and Gordon Enns



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Since 1999, the Community-University Institute for Social Research (CUISR)—formally established as a university-wide interdisciplinary research centre in 2000—has remained true to its mission of facilitating "partnerships between the university and the larger community in order to engage in relevant social research that supports a deeper understanding of our communities and that reveals opportunities for improving our quality of life."

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2. Social Economy and Social Relations
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4. Indigenous Community Development
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*Student training:* CUISR provides training and guidance to undergraduate and graduate students and community researchers and encourages community agencies to provide community orientation in order to promote reciprocal benefits.

# PROMISING PRACTICES IN FOOD RECLAMATION IN SASKATOON

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The report is authored by the following:

**Farhad Lashgarara** (FL) completed a placement through the Saskatchewan Intercultural Association with the Saskatoon Food Council working on food security and food waste research and is the main contributing author for this paper.

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**Freda Atsuyno** (FA) participated in this project as part of her work towards a Masters of Sustainable Environmental Management (MSEM).

**Layane Fernandes de Sousa Moura** (LFM) participated in this project as a Research Assistant while completing studies at the School of Environment and Sustainability.

**Hailey Walkeden** (HW) participated in this project as a student working in her practicum through the Saskatchewan Health Authority.

**Gord Enns** (GE) is the former Executive Director of the Saskatoon Food Council and serves as Research Coordinator for this project. The mandate of the SFC is to improve Saskatoon's food economy, enrich our food culture, and reduce hunger in Saskatoon. He provided guidance on all aspects of this project and supervised the students and the work placement.

## EXECUTIVE SUMMARY

The purpose of this project was to determine promising practices for the City of Saskatoon in diversion of edible food from the landfill. The project builds on food reclamation work that began in 2016 at the University of Saskatchewan and the Saskatchewan Health Authority and waste diversion work initiated by the City of Saskatoon in 2018. The project includes an environmental scan of promising programs and policies in other municipal jurisdictions for reclamation of otherwise wasted food; a small pre/post intervention study of the implementation of a brochure explaining the rights and responsibilities of food businesses in food donation; and a key informant interview study to determine what kinds of support are needed for food businesses to reduce the edible food they currently sent to the landfill.

One-third of the food produced worldwide and 30-40% (or 11 million tonnes) of all food produced in Canada annually is wasted or lost. This report recommends promising practices for reducing food waste in the city of Saskatoon.

To prevent and manage food loss and waste effectively, the food waste hierarchy framework ranks five options. The highest priority is prevention of surplus, followed by re-use, recycling, recovery, and disposal. If surplus cannot be prevented, then redistribution is the next best option. Food redistribution and reclamation rescues edible food that would otherwise be wasted from food services and redirects it to recipient institutions, resulting in environmental, economic, and social benefits.

This report also includes recommendations for increasing food recovery for the City of Saskatoon:

### Immediate term (2022-2023)

- Use the findings from this study to integrate food recovery into the Industrial, Commercial and Institutional (ICI) organics regulation implementation that is planned between 2022 and 2024, including:
  - a. Ensure that food donation is compatible with bylaw enforcement procedures.

- b. Highlight donation of edible food as a preferred option throughout education and programming and specifically address the barriers to edible food donation highlighted in this study.
  - c. Have a food donation directory embedded in the ICI “waste wizard” tool and work with community partners to ensure information remains current.
- Enhance community awareness of food waste through piloting the [\*Love Food, Hate Waste\*](#) campaign, integration of food waste reduction education and programming as part of the implementation of the curbside and multi-unit residential organics programs, and other City sustainability programs.
- Collaborate with the provincial government as it implements its *Solid Waste Management Strategy* and participate in engagement on options for reducing organic and food waste. Share the results of this study as part of that participation.
- Further develop and seek funding with community partners to:
  - a. Address the barriers identified in this study by organizations accepting food donations to further their capacity to accept recovered food.
  - b. Pilot a food recovery social enterprise that will improve local capacity to recover more edible food from the waste stream while creating employment opportunities.
- Include food reclamation and the results of this study in the development of the City’s *Circular Road Map*, which will be completed through *Circular Cities & Regions Initiative* in early 2022.
- Add additional questions in the ICI waste and recycling survey on food recovery to better understand the barriers to food donation.

#### Medium-term (2024-2025)

- Ensure food waste, including the findings from this study, are included in the *Sustainable Food Action Plan* planned for 2024-2025. Through this work assess the implications of providing municipal support, such as capital, operational or grant funding for food recovery compared to composting through a triple bottom line assessment.
- Assess food-recovery apps and consider procurement as part of the ICI organics regulation education and communications following additional engagement with both food waste generators and the food donation sector.

- Expand the City’s annual environmental cash grant for community organizations to have a food waste reduction and recovery component at \$10,000 per year.
- Improve waste characterization studies and other data collection for the ICI sector to get a clearer picture of food waste in Saskatoon and the sectors that programs should target.
- Request funding to complete a material flow analysis of ICI food waste to better understand the current state of food donation in Saskatoon.

As food-service contracts at City facilities expire, integrate food waste reduction and recovery of edible food into the tendering criteria. Integrate this outcome into the sustainable procurement work planned by the Sustainability Department.

## INTRODUCTION

Globally, while in the poorest nations, 805 million people do not have enough food to lead a healthy active life, in the richest nations one-third of all food produced is thrown away. Food is lost or wasted along the whole value chain (Capodistrias, 2015). That approximately one-third of the food produced worldwide is wasted or lost leads to considerable environmental, economic, and social costs (De Gorter et al., 2020).

All 193 United Nations (UN) member states signed a consensus in August 2015 that listed 17 Sustainable Development Goals (SDGs). The current patterns of the food supply chain are deemed unsustainable and global efforts towards meeting the SDGs are taking place. The UN agreed on the need to educate consumers on sustainable consumption and lifestyles, providing them with adequate information through standards and labels and engaging in sustainable public procurement, among other strategies. The UN SDG 12 highlights the need for "responsible consumption and production" and sets a target to reduce by half the per capita food waste in a global scenario by 2030 (Hecht & Neff, 2019). Canada has committed to achieving these SDG targets, which formed the basis of the 2018 Paris (Climate) Agreement and amounts to reducing CO<sub>2</sub> emissions by 28 percent from 2015 levels of 722 megatonnes, by 2030 (Capodistrias, 2015).

Research estimates that 30-40% of all the food produced in Canada annually becomes avoidable food loss or waste—food that could have been eaten but was instead landfilled (Gooch, Felfel & Marenick, 2010). Reducing food loss and waste can benefit Canadians by saving them money, improving the efficiency and competitiveness of the agri-food and agriculture sector, reducing greenhouse gas emissions, and contributing to global food waste reduction efforts (VCMI, 2019).

Given finite natural resources along with the increasing number of hungry people worldwide, the impetus to engage in food recovery practices exists in all developing and developed nations (Otles et al., 2015). There is a trend towards more collaborative interaction among producers, processors, manufacturers, retailers, and consumers (Bortolini et al., 2019). This cooperation creates a window of opportunity to redirect surplus food to alleviate hunger while reducing the amount of edible food sent to landfills (Sgarbossa & Russo, 2017). Whereas surplus food can be

traced at all stages throughout the chain, trends show that in North America the wastage of food is most likely to occur in the consumption stage (De Gorter et al., 2020). According to Holden et al. (2018), the reduction of food waste combined with other techniques such as shifting consumer behaviours (Aschemann-Witzel et al., 2015) could reduce the environmental, economic, and social impacts derived from the system.

The Food Recovery Hierarchy proposed by the US Environmental Protection Agency (EPA) prioritizes efforts that organizations can make to reduce waste within the food system. The first tier of the hierarchy pyramid is to reduce the amount of excess food in the production phase followed by the diversion of surplus food to food recovery organizations (Chen & Chen, 2018).

Waste management is identified as a public utility in the Cities Act, giving municipalities the authority to provide waste management services directly, either through a controlled corporation or by agreement with any person. To achieve this, municipalities often focus on providing residential services such as the collection, recycling, composting, and disposal of household waste. Many municipalities in Canada also contract the private sector to deliver aspects of residential solid waste management services.

Municipalities may play a role in reduction and diversion by providing services directly to residents, enacting policies that encourage waste reduction, and delivering education programs. Specific programs and services in each municipality are influenced by regional factors. The result is slightly different municipal programs across Canada, making a direct comparison between municipalities difficult (City of Saskatoon Sustainability, 2021). For current information on plans and policymaking on waste diversion for the City of Saskatoon, please see the following: <https://www.saskatoon.ca/environmental-initiatives/solid-waste>.

## **Report purpose and organization**

The purpose of this project and report was to determine promising practices for the City of Saskatoon in diversion of edible food from the landfill. The project builds on food reclamation work that began in 2016 at the University of Saskatchewan and the Saskatchewan Health Authority and waste diversion work initiated by the City of Saskatoon in 2018. This report

introduces the concept, causes, and impacts of food loss and waste (FLW). Then, it examines Canada's Food Waste before considering the reasons, practices, and strategies of food waste management. The core of the report focuses on food reclamation benefits, experiences, practices, and programs (with a particular emphasis on Saskatoon), food donation barriers, the required supports for food donation, and the role of social enterprises in food waste diversion. The report concludes with some recommendations.

## **BACKGROUND**

### **Food Loss and Waste (FLW)**

Food Loss refers to food that during its process in the food supply chain gets spilled, spoiled, or otherwise lost, or incurs reduction of quality and value before it reaches its final product stage. According to the Food and Agriculture Organization of the United Nations (FAO, 2015), food loss refers to a decrease in mass (dry matter quantity) or nutritional value (quality) of food that was originally intended for human consumption. Food loss typically takes place at production, postharvest, processing, and distribution stages in the food supply chain. In contrast, Food waste refers to food that completes the food supply chain up to a final product of good quality and fit for consumption, but still does not get consumed because it is discarded whether left to spoil or not. Food waste typically (but not exclusively) takes place at retail and consumption stages in the food supply chain (Bagherzad et al., 2014). Food waste can occur because food has spoiled, but it can also occur for other reasons such as oversupply due to markets, or individual consumer shopping/eating habits.

Broadly, food loss tends to refer to the production side of the food supply chain: food that is produced but does not get consumed by people because it does not make it to market, often (in the developing world, especially) due to inadequate refrigeration, storage, or distribution systems. Most often external factors prevented the food from being consumed—factors such as weather or pests destroying a portion of the harvest, or food rotting due to failed refrigeration (in effect, the producer didn't have a choice in the matter). In contrast, food waste implies that we had the opportunity to consume the food, but we failed to do so. This typically refers to food that

is available for consumption, at market, or at homes, which was ultimately discarded rather than being eaten. Examples include food that we discard from retail stores as blemished or out of date or food that we discard from our plates and refrigerators. Food waste occurs for several reasons, including over-purchasing, poor preparation, inadequate storage, and excessive serving sizes (Finn, 2018).

The term "food loss and waste" (FLW) refers to edible food suitable for consumption that is either wasted or lost for a variety of reasons and at different stages within the food system (Tavill, 2020). Although FLW can be found at all stages of the chain, the amount of FLW in high-income areas is greater in the downstream stages (processing, distribution, and consumption) when compared to low-income regions where FLW is more present in upstream stages (agricultural production, postharvest handling, and storage) (Buzby & Hyman, 2012).

Wasted food can be divided into three categories (Bagherzadeh et al., 2014):

- 1) *Avoidable*: Food that can be easily prevented from going to waste. Reasons for waste include overpreparation, improper storage, or spoilage. Understanding the cause of this waste is key to preventing it.
- 2) *Possibly avoidable*: Food that may seem inedible but can be used or repurposed.
- 3) *Unavoidable*: Food that cannot be consumed by people and should be used for animal feed, compost, or anaerobic digestion.

The United States Environmental Protection Agency (EPA, 2010) estimates that approximately 22% of municipal solid waste consists of food waste, which means that food is more likely to be thrown into the landfill than any other single item. Moreover, the EPA also estimates that of the total food waste generated in the USA, only a little over 6% is diverted from the landfill.

Globally, the FAO estimates that the total volume of edible food that is either wasted or lost is approximately 1.3 Gtonnes. In Canada, research conducted by the National Zero Waste Council (2015) has shown that yearly the average Canadian household wastes about 140 kilograms of food that was still suitable to be eaten.

### ***Origin and Causes***

The drivers of food waste are varied and complex and occur at every point along the supply and consumption chain (National Food Waste Strategy, 2017), including:

- A- Primary production.** Product loss due to pests and diseases or weather, damaged or discarded during production, packing or handling, fall in market prices making it unprofitable to harvest, inability to meet contracted produce specifications, such as quality or size, and changes in consumer tastes and preferences.
- B- Processing and manufacturing.** Product damaged during handling, spoilage due to contamination or inadequate temperature control, excessive trimming of vegetables for processed foods, changes in production due to consumer demand, equipment failure, spillage on conveyor belts and transfer points, inefficient inventory management, and damage to packaging resulting in food unfit for sale.
- C- Distribution.** Spoilage due to inadequate temperature control in transport and storage and damage due to improper handling.
- D- Retail.** Poor stock management, including over-ordering, improper stock rotation, storage, and handling practices, produce no longer meets quality standards, last-minute order changes that can leave suppliers with excess product, and limited access to facilities to recycle or repurpose food waste.
- E- Hospitality and foodservice.** Poor stock management, storage, and handling practices.
- F- Households.** Confusion over 'use-by' and 'best-before date' labeling, over-purchasing of food that is then thrown away, limited knowledge of how to safely repurpose or store food leftovers, and limited access to food waste collection systems.

The main drivers and sources of waste from viewpoint of the World Biogas Association (2018) are shown below:

- A- Manufacturing.** Over-production resulting from pressure to meet contractual requirements, appearance quality standards for produce, damaged products, cheap disposal alternatives, inedible parts of produce.
- B- Wholesale and retail.** Temperature changes leading to spoilage, aesthetic standards expected by the consumers and retailers, packaging defects making produce not fit for

sale, over supply due to consumer choices, overstocking due to poor planning and excess surplus.

**C- Food services.** Lack of flexibility in portion sizes, insufficient planning in forecasting and ordering ingredients, consumer attitudes towards taking leftovers home, refused food due to not meeting customer preferences.

**D- Households.** Buying too much due to poor planning, bad storage resulting from lack of awareness, confusion over freshness and safety labels, discarding edible parts of products like bread crusts or apple peels, discarding leftovers, large portion sizes.

### *Consequences*

Food is the largest contributor to solid waste, causing states and municipalities concern over dwindling landfill space. While in the landfill, food waste also causes significant environmental harm through its methane emissions. The growing, processing, packaging, and transport of food that will eventually end up in the landfill also wastes a significant amount of time, energy, money, water, and fossil fuels. Food waste is a drain on the environment, economy, and communities. The social harms caused by food waste make a governmental investment in food waste reduction money well spent (Uzea et al., 2014).

According to the World Biogas Association (2018), the primary impacts of food waste are as follows:

**A- Environmental impacts of food loss and waste.** FLW causes impacts on climate change due to GHG emissions throughout all stages of the supply chain as well as impacts on biodiversity due to land and water usage (Scherhauser et al., 2018). Apart from the well-known impacts of greenhouse gas emissions on biodiversity, the waste of edible food also causes a considerable loss of resources used along all stages of the food supply chain (Tonini et al., 2018). Food waste is also a major component of waste going into municipal landfills, a significant source of methane.

**B- GHG emissions and climate change.** In the stage of agricultural production, the processes of fertilizer application and livestock farming are known to generate emissions of nitrous oxides and methane, respectively (Scherhauser et al., 2018). In the Food Wastage Footprint (FWF) report FAO (2013), it is estimated that the carbon footprint of

food waste and loss is approximately 3.3 Gtonnes of CO<sub>2</sub> equivalent which makes food wastage the third top emitter after the United States and China. Examples of greenhouse gas emissions from food waste include change in land use from forests to agriculture causes and the release of carbon that was stored in the cleared biomass; emissions from livestock and manures and slurries; from burning fossil fuels to produce energy for - operating farm machinery; heating farm buildings and greenhouses; processing food (e.g., pasteurization); and refrigerating and transporting of food. When wasted food is disposed of in landfill sites or dumpsites, it decomposes and releases further emissions into the atmosphere.

**C- Water footprint.** Wastage of food results in the waste of water extracted from the ground or surface water bodies for irrigation. It is estimated that the blue water footprint for the agricultural production of food that ends up being wasted is approximately 250 km<sup>3</sup> which is three times the volume of Lake Geneva. The use and subsequent runoff of fertilizers and pesticides harm the water quality of ground and surface water bodies. Leachate from dumpsites and landfills pollutes the groundwater as well as surface water. Where poorly regulated, untreated wastewater from food processing industries pollutes surface water bodies.

**D- Nutrient loss.** With a growing population and increasing wealth and consumption, there is increasing pressure on already limited agricultural land supplies to produce even more food. Recycling food and agricultural waste and human excreta to soil have been a continual practice. Only in the last century have soils been subjected globally to intensive agricultural practices and the use of synthetic fertilizers.

**E- Other Ecological impacts.** Increased food production to support the growing global population has resulted in widespread ecological damage from change of land use from forests, prairies, peat, marshes, etc., to agriculture; loss of biodiversity of species, including mammals, birds, fish, and amphibians; and over exploitation of marine life. The impacts of this damage from food production at the global scale have been felt in the form of loss of biodiversity, soil quality, marine population, and many other such indicators.

**F- Socioeconomic Impacts.** The second most prominent level of the food recovery hierarchy (EPA) is "feed hungry people". According to the United Nations, in 2018

approximately 821 million people experienced hunger around the world (Friedrich, 2018). In Canada alone, according to the Canadian Community Health Survey (CCHS), more than 12 % of households suffered from hunger in 2012 (Brown & Tarasuk, 2019). In total, approximately four million people in Canada had experienced some level of food insecurity that year, which compromised their life quality and health outcomes (Mendly-Zambo & Raphael, 2019; Tarasuk et al., 2019). Food insecurity is understood as the insecure or unsuitable access to quality and/or sufficient food due to financial reasons since it is closely tied to socioeconomic vulnerability (Loopstra et al., 2019). In developing countries with significant political and economic instability (Spiess et al., 2013), FLW causes even larger and unprecedented impacts especially for low-income individuals and vulnerable households (Seaman et al., 2014). FLW generates a loss of roughly \$750 billion per year from the global economy (MacRae et al., 2016). In Canada alone, this deficit is estimated at \$49 billion per year (Gooch et al., 2010); although, some studies estimate this figure to be even higher due to other inputs embedded in the process (Gooch et al., 2010). In the worldwide context of Covid-19, the levels of food insecurity globally are expected to be far higher when compared to the years before the pandemic situation (Gundersen et al., 2020).

## **Food Waste in Canada**

In Canada, the equivalent of 30-40% of the food produced annually along the value chain is wasted. Much of this food ends up in landfills or as compost. This food waste has been estimated to be worth approximately \$31 billion each year or 2% of Canada's GDP (Gooch & Felfel, 2014). However, when all costs of food production are factored in, including land, water, transportation, energy, etc. the cost of Canada's food waste exceeds \$100 billion annually (Macdonald, 2019; Gooch et al., 2010). Gooch et al. (2010) report the following percentages of food waste throughout the chain (field to home) in Canada: field 9%, packaging/processing 18%, transportation/distribution 3%, retail store 11%, foodservice/ HRI 8%, and home 51%. 70% of this waste occurs in stores, restaurants, and homes.

The FAO estimated that the cumulative cost of associated wastes (energy, water, land, labour, capital investment, infrastructure, machinery, transport, etc.) represents only 29% of the true cost

of food waste and is approximately two and a half times greater than the "face value" of wasted food. Using this formula, the true cost of food waste in Canada would be \$107 billion. In addition, the greenhouse gas emissions footprint of food waste is significant, including about 20 percent of Canada's methane emissions, a more potent greenhouse gas than carbon dioxide, coming from landfills.

Food insecurity affects more than 4 million Canadians (Brown & Tarasuk, 2019). This figure represents approximately 1 in 8 households struggling to afford the food they need. Evidence continues to mount that the health and well-being of Canadians experiencing food insecurity is jeopardized as a result. Food insecurity erodes people's health, predisposing them to the development of physical and mental health problems and making them less able to manage any chronic health conditions they have (Brown & Tarasuk, 2019).

### **Food Waste Reduction and Reclamation**

The terms food reclamation, recovery, rescue, diversion, reuse, recycling, retrieving, restoring, rehabilitation, and renewal refer to "the act of rescuing edible food—that would otherwise be wasted—from food services and redirecting it to recipient institutions" (Vilariño et al., 2017). Recipient institutions include food waste transformation organizations, food banks, and other not for profit and charitable organizations that rely on the donation of surplus food through growers, processors, retailers, and the general population (Tarasuk, Fafard St-Germain and Loopstra, 2019).

Food recovery and redistribution is the process of obtaining surplus, edible food from across the supply chain and redistributing it to local food programs or commercial enterprises that can use this resource, maintaining the highest value of food as nourishment for people. While recovery and redistribution of safe, surplus food that would otherwise be lost or wasted across the supply chain makes the best use of resources that have gone into growing and producing it, this activity is not proposed as a solution to addressing food insecurity (Tarasuk et al., 2019).

Although reducing food waste in medium and high-income countries may not directly help tackle food insecurity in low-income countries, it reduces competition for limited water, land,

and biodiversity resources, making these resources available for other uses. Edible food that would otherwise be wasted could be redistributed in local communities in medium and high-income countries, and low-income countries alike. Reducing food waste can increase the efficiency of the food supply chain and bring economic benefits, including lower costs for businesses and lower prices for consumers (Bagherzadeh et al., 2014).

### ***Food Waste Hierarchy: A Framework for Food Waste Management***

In recent years, food waste has become widely recognized as a massive global problem. To effectively prevent and manage food loss and waste, the food waste hierarchy framework was introduced and applied within national law in many countries. The hierarchy was originally known as The Revised EU Waste Framework Directive 2008, which provides the basic concepts and the guideline to manage waste by ranking from the five most to least favorable options that would negatively affect the environment and human health.

The highest priority option is **prevention**, followed by preparing for **re-use**, **recycling**, **recovery**, and **disposal** as the last option (Environment and Climate Change Canada, 2019). It also states that the most desirable practice is to avoid food and edible materials being wasted at the beginning of the food supply chain that primarily aims to achieve the best environmental impacts. Nevertheless, WRAP (Waste and Resources Action Programme) adds the suggestion to the second-best option of the hierarchy that If surplus cannot be prevented, then *redistribution* to people and then animal feed is the next best option. The later steps of WRAP's food waste hierarchy are to recycle food waste by sending it to anaerobic digestion and composting, bring food waste to undergo energy recovery, and the worst action is to dispose of food waste to landfill (Environment and Climate Change Canada, 2019).

Food waste reduction strategies have been classified according to the categories of the inverted 'food waste pyramid', which represents the most to the least environmentally friendly categories (Figure 1).

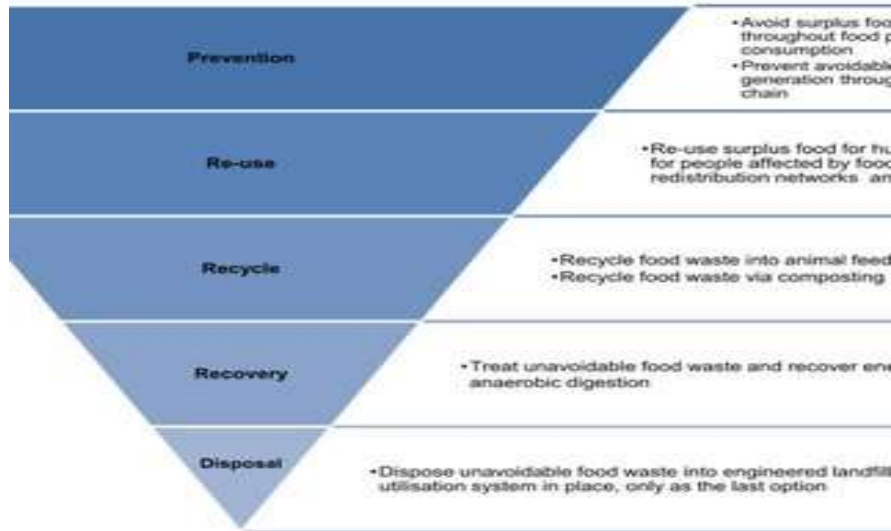


Fig. 5. The food waste hierarchy.

Figure 1: Food Waste Hierarchy

(Environment and Climate Change Canada, 2019).

- A- Reduce (Prevention).** Preventing food waste reduces the use of resources required for food production, labour and disposal costs, and reduces all the environmental, economic, and social impacts linked to food waste disposal. As the impact of food production on natural resources is enormous and increases while the food progresses on the food value chain, reducing food wastage is by far the best way of reducing the waste of natural resources. Prevention is the most efficient way to deal with food wastage, as it is about limiting food wastage on the front end, while the other categories are about food wastage management.
- B- Reuse.** Reusing food waste mainly involves redistributing it to alternative markets and, for example, using the surplus for new business options, charities, clearance houses, or animal feed. Reuse is the next best option after source reduction. Reuse finds a secondary way to obtain value from an item that would otherwise be wasted. In foodservice, the most common reuse opportunities involve 1) redeploying overproduced food elsewhere on the menu and 2) donating to a food recovery program that will transform the food or provide it to those in need.
- C- Recycle/Recover.** Recycling means turning waste into a new substance or product, such as compost, while recovering implies the production of energy from waste (i.e., through

anaerobic digestion). This category, therefore, comprises the processing of wastage into nutrients and/or energy. The main recycling and recovering options are by-product recycling, anaerobic digestion, composting, incineration with energy recovery, and rendering. All these options allow energy or nutrients to be recovered. Recovery is the final good option before disposal by diverting the waste from the landfill or elsewhere in the solid waste stream and ensure ongoing value when the item is converted into something useful, such as a soil amendment with composting (LeanPath, 2008).

**D- Landfill.** Landfills should be the last resort option for food waste management.

Landfilling organic waste causes the emission of gases such as methane and potentially pollutes soil and water, let alone odour and other societal nuisance (FAO, 2015).

According to the EPA (2010), food waste reduction policies should include the following:

- A- Food purchasing policies.** Create guidelines and goals to reduce spoilage and waste, Specific policies can include a system to identify over-purchased food items and avoid excess wasted food, purchase pre-cut food to reduce prep waste, implement a "just-in-time" purchasing system to order only what is needed when it is needed and use the Food and Packaging Waste Prevention Tool to determine areas of over-purchasing and waste.
- B- Storage techniques.** Ensure that food products are stored under the proper conditions (for example, temperature); use older products first and find products when needed.
- C- Food reuse/repurposing.** As long as proper food safety and handling practices are followed, reusing leftover food can save money and reduce waste. Creative repurposing of leftovers and trimmings to efficiently use excess food for other meals is important.
- D- Training staff.** While individual managers can influence the amount of food wasted, foodservice staff is ultimately responsible for day-to-day food storage, organization, preparation, and disposal. Continuous training and acknowledgment of staff is crucial to ensure proper training of all employees, especially if there is high turnover. Foodservice managers should educate staff on basic steps to minimize food waste, including proper storage and organization practices to ensure food does not spoil before use; cooking and preparing food to reduce prep waste and food sent back to the kitchen; refining knife skills to reduce improper preparation, reducing batch sizes when reheating foods like

soups or sauces to avoid leftovers, plating practices to reduce unnecessary food waste and waste tracking efforts.

FOODWIN (2018) offers these tips for food waste management:

- A- Developing communication campaigns.** Many public and private actors have started campaigning against food waste to reduce food waste and reuse food when waste wasn't avoidable, and multiple events such as public banquets have been organized all over Europe to raise awareness among businesses, governments, and the public on the levels of international food wastage and to showcase positive solutions to the issue. Retailers have also started campaigns on better shopping and better food management at home.
- B- Promoting food wastage audits.** Rigorous, ongoing, and consistent food wastage tracking is the best way to identify opportunities, make adjustments, and reduce food wastage. However, a good first step on this path to prevention is a food waste audit. Typically conducted over a short period, an onsite audit involves weighing and tracking all waste to get a "snapshot" of the amount of waste generated. This can be done at all supply chain stages and can be as easy as taking notes on what food you waste the most and weighting your waste or can be more sophisticated using company toolkits.
- C- Improving communication along the supply chain to match demand and supply of food.** The discrepancy between demand and supply, a major cause of food wastage, ranges from farmers not finding a market for their products and leaving them to rot in the field, to cooking in quantities that are too large, to supermarkets downsizing product orders at the last minute, leaving producers with unsalable products. As a result of miscommunication and perverse signals and incentives all along the supply chain, food is lost or wasted and, together with it, all the natural resources used to create it. Tackling food wastage requires better communication between the different parts of the supply chain to better balance supply and demand.
- D- Improving communication between the different stakeholders in the supply chain.** The different actors involved in the food supply chain (e.g., producers, food processors, retailers, consumers) are heavily interdependent and their actions and practices influence each other's decisions. Supply chain efficiency could be greatly improved by enhancing communication among the different stakeholders. In addition to increasing business

among the parties, sustained dialogue also helps reduce product rejection by buyers and, at the same time, increases the stability of the offer for the buyer.

**E- Developing improved food harvest, storage, processing, transportation, and retailing**

**processes.** Food losses that occur during harvest, post-harvest, and processing phases are most likely in developing countries, due to poor infrastructure, low levels of technology, and low investment in the food production systems. In developed countries, food waste mostly occurs further along the supply chain, at the retailing and consumption levels.

Harvest losses have several causes, including the timing of the harvest, as well as harvesting techniques, equipment, and conditions. Sometimes, poor farmers must harvest crops too early due to food deficiency, or their desperate need for cash during the second half of the agricultural season. As a result, the food loses both nutritional and economic value and may be wasted if it is not suitable for consumption.

It is the same for post-harvest losses. Fresh products can spoil quickly in hot climates due to a lack of infrastructure for transportation, storage, cooling, and markets. New technologies have been developed to improve storage as have green technologies, such as solar dryers that improve the lifetime of products in storage and, in turn, increase food security and economic benefits for the producers.

**F- Improving processing techniques.** Lack of processing facilities causes food losses in developing countries. In many situations, the food processing industry can't process and preserve enough fresh farm produce to meet the demand. Part of the problem stems from the seasonality of production and the cost of investing in processing facilities that will not be used year-round. In developing countries, investment and capacity-building initiatives are key to improving processing facilities. In developed countries, processing facilities are also a major source of waste. This happens mainly during trimming, which removes both edible portions (e.g., skin, fat, peels, end pieces) and inedible portions (e.g., bones, pits) from food.

**G- Improving transportation.** Improving transportation to reduce food waste through improving the means of transportation (e.g., boat, rail, and roads), the condition of transportation (e.g., refrigerated vehicles), and eventually reducing the number of kilometers to be covered by creating market options closer to the production place.

According to Saha and Nande (2015), the benefits of food waste reduction and diversion include those related to the **environment** (i.e., reduction of greenhouse gases and other air pollutant emissions, water conservation, renewable energy), **economics**, and **society**.

**A- Environmental benefits.** Reducing food waste offers environmental benefits by avoiding emissions and other impacts of producing, processing, and transporting food. According to Rethink Food Waste Through Economics and Data (ReFED), avoiding the agricultural inputs and transportation of 1 ton of food through prevention has on average a 2–10 times larger greenhouse gas (GHG) reduction compared to recycling 1 ton of food. Improved land, air, and water quality would result from reductions in leachate and greenhouse gas emissions, as more edible food is diverted from landfills.

**B- Economic benefits.** Every ton of food waste diverted contributes to potential annual savings of thousands of dollars in landfill costs. Reducing food waste also reduces trash pickup costs. By decreasing the amount of food wasted, businesses pay less to dispose of their trash. Some haulers charge less if the food waste is separated from the trash and sent for composting rather than landfilling.

By making strides to prevent food waste, businesses can reduce costs by purchasing only the food that will be used or decreasing improperly prepared foods. Additionally, reducing food waste can increase staff efficiency and reduce energy and labor associated with disposing of food. A recent study estimates that our food industry could reduce its operating costs by 15% – 20% by reducing food waste. Cities would cut food waste management costs by an estimated \$41.5 million per year. The broader economy would also save money, owing to lower consumption of water and other resources, used in production and storage, and greater food security.

**C- Societal benefits.** Job creation and feeding hungry people is the second tier of the hierarchy, where manufacturers, supermarkets, wholesalers, farmers, and food brokers can give "expired" or otherwise unmarketable, but still viable food to food rescue and transformation organizations or food banks. By feeding people and not landfills, we can help mitigate the worst effects of poverty and save money from landfilling edible food. We can also create jobs in food transformation and sales for people struggling to find jobs, thereby giving opportunities to get out of poverty.

Donating surplus commercial food is an effective method to simultaneously reduce food waste, create jobs in food transformation and feed hungry people. However, donating food can be expensive because it requires money to harvest, package, store, and ship food that otherwise would be discarded. Tax credits or deductions can help offset that expense by offering food donors an economic incentive for food donations (Harvard Food Law and Policy Clinic, 2016). One reason that healthy, wholesome food goes to waste is cost. Food donation is costly and can be challenging; it is not as simple as just taking surplus food from one place to another. Businesses and organizations generally bear the cost of harvesting or preparing food for donation, storing it, transporting it, and ensuring it complies with food safety and labeling laws (Harvard Food Law and Policy Clinic, 2016).

According to Braham et al. (2014) the main barriers to food donation are as follows:

- A- Lack of awareness.** This awareness issue represents the most significant hurdle to increasing restaurant food donations. Many restaurant managers and operators claimed that they did not generate enough leftovers to be able to donate. Some restaurant managers identified alternative methods to reduce food waste, including incorporating excess ingredients into soups, salads, and daily specials and allowing employees to take home leftovers. In addition, many of the restaurant managers did not know that they could donate their surplus food or know to which organizations they could donate. Restaurant patrons and the public also have low awareness of food waste and do not expect food donation or food waste reduction practices. Restaurants do not advertise their food donation practices, and consumers do not pressure them to donate.
- B- Costs and logistical barriers.** In terms of the factors holding food donors back, retailers are largely influenced by the idea that it is cheaper and easier to send wastage to the landfill, although higher landfill taxes are now working as a deterrent. Lack of funds for the organization of logistics, namely transportation, is one of the most limiting factors in food redistribution (Thang, 2009). For many restaurant owners and operators that do overcome the first awareness barrier, the following cost and logistical challenges may still inhibit regular food donation:

*Inefficiency:* Most restaurant operators are willing to donate their surplus food if it did not increase their expenses. Many would prefer volunteer-led pick-ups to minimize restaurant

staff time required. However, nonprofit recipient organizations and some food recovery intermediaries may also lack the volunteer base to provide such labor.

*Equipment constraints:* Food donors and/or recipients need cold storage units to safely keep perishable food items. They also need insulated containers and refrigerated vehicles to transport food. These equipment costs can prohibit donations.

*Incompatible Scheduling:* Restaurants can have unpredictable availability of leftovers and may need the flexibility to arrange ad hoc donations. Limited storage space may necessitate that food donations be picked up the same day that leftovers become available. This can create difficulties in coordinating with recovery or recipient organizations since restaurants often close down after midnight.

**C- Food Safety Concerns.** Many restaurant managers, even those with both the awareness and the capability to take on regular food donation activities, are nevertheless put off. The factor that has most restrained businesses from donating food surplus is undoubtedly the risk of being held legally liable in case of intoxication, illness, or other injuries due to the consumption of (mishandled) donated food. To incentivize food donations and avoid, at the same time, great quantities of edible food being thrown away, many governments have implemented acts and regulations aimed at protecting food donors from criminal and civil liability should the product—given away in good faith—cause any injury to a person. In Canada, this is the Donation of Food Act 1994. However, restaurants are frequently unaware of the legal food safety requirements related to donating leftovers. Charitable organizations may also omit restaurants from food donation program sourcing due to perceived legal issues.

**D- Relationship barriers.** Bridging the gap between restaurants that have food to donate and charitable organizations that want it requires time and effort to build and maintain relationships. Strong relationships between restaurants and recipients are often built on a personal basis, which presents a challenge to scaling up existing food donation programs. Trust between food donors and recipients can also be crucial. Both restaurants and nonprofits mentioned concern that partners might not handle food safely or might be otherwise unreliable in terms of coordinating donation logistics. Forging strong relationships between restaurants and recipients can be vital to both initiating and sustaining food donation efforts.

The World Biogas Association (2018) has also proposed some regulatory incentives for better food reclamation:

- A- Food date labeling.** While some date labels on food bought from grocery stores refer to food safety (for example, 'use by'), others are targeted towards food quality (for example, 'best if used by' and 'display until'). The meanings of these labels are often unclear to the consumers and lead to wastage of food that is still edible and safe to consume. There has been a call for action to use only one date label on a product and educating the consumers on its meaning via in-store displays, web service, and public service announcements.
- B- Supermarket food waste recovery requirement.** Regulatory requirements, such as banning the destruction of edible food by the addition of water or bleach unless it poses a real food safety risk, may be enacted to encourage redistribution and energy/ nutrient recovery from the food.
- C- Banning of organic waste to landfills.** The EU Landfill Directive obliges member states to reduce the amount of biodegradable waste going to landfills to 35%. Some EU member states have gone further and banned any food waste from landfills (such as Germany, Austria, and Sweden). Such laws have been enforced in some states in the USA, and also in the City of Vancouver, Canada.
- D- PAY-AS-YOU-THROW (PAYT).** 'Pay as you throw (PAYT) schemes charge the producers of food waste for the disposal of the waste they generate based on the waste's weight/volume. Seoul (South Korea) has reported a 10% reduction in food waste generation after the implementation of such a collection method. PAYT schemes have a direct impact on the profit or expenditure of the business or household and are an effective tool for food waste prevention, as well as contributing towards the funding of collection/ treatment.

## METHODS

This report is the culmination of a project that includes three components. The first component is an environmental scan of promising programs and policies in other municipal jurisdictions for reclamation of otherwise wasted food (see Questions 1-3 below). The second component is a small pre/post intervention study of the implementation of an already developed brochure explaining the rights and responsibilities of food businesses in food donation, and listing when, where and what to donate (see Question 4 below). The third component is a key informant interview study to determine what kinds of support are needed by food businesses to reduce the edible food they currently send to the landfill (see Question 5).

In order to determine promising practices for the City of Saskatoon in diversion of edible food from the landfill, we answered the following questions:

- 1) What are promising practices for food reclamation from other Canadian cities (and beyond)?*
- 2) What roles do municipal governments play in food waste mitigation in other Canadian cities (and beyond)?*
- 3) What are promising practices for funding of food waste mitigation from other Canadian cities (and beyond)?*
- 4) How does the volume and quality of food donations to charitable organizations change upon distribution of a brochure to food businesses explaining how to donate edible food that would otherwise be wasted?*
- 5) How can restaurant owners/managers and small and large grocery store owners/managers in Saskatoon be supported to reduce the edible food wasted from their businesses?*

### Data Collection

For the environmental scan (answering questions 1-3) we collected data in several ways. First, we reviewed the peer reviewed and grey literature on the topic of food waste reduction at the municipal level. LFM took the lead on the initial review which was then supplemented by FL. We developed our literature search terms in partnership with a University of Saskatchewan

Health Sciences Librarian. We examined policies, practices and interventions in cities in Canada, and beyond where needed, with a focus on cities that are comparable to Saskatoon. We also examined any literature specifically discussing how municipal governments are involved in reducing food waste.

Once we conducted a thorough examination of the peer reviewed and grey literature, we supplemented our literature review by calling relevant municipal officials from various Canadian cities, with a focus on medium-sized cities most comparable to Saskatoon (done primarily by LFM). Given that we did not expect to find a lot of published literature on this topic (whether peer reviewed or grey) we found that calling city officials and conducting short interviews supplemented our data. We asked questions about food waste mitigation strategies, the role of their municipal governments in these strategies and how initiatives are funded.

The preliminary pre/post intervention study aspect of this project addresses the question (number 4 in our questions) of how the volume and quality of food donations to charitable organizations changes upon distribution of a brochure to all food businesses in Saskatoon explaining how to donate edible food that would otherwise be wasted. The brochure was previously developed in partnership with the former Saskatoon Health Region, now Saskatchewan Health Authority (SHA) and describes the regulations around edible food donation, where to donate, what different organizations accept and when they are open to receive food. The SHA used their food services businesses list for public health inspection to create a list of businesses to send the pamphlet to and mailed out the pamphlets to all food businesses on their list. The original plan for this project was to have Public Health Inspectors distribute the pamphlet directly to food service establishments during regularly scheduled inspections; however, due to the increased workload of the COVID-19 pandemic, this was not possible.

We developed a short interviewer-administered survey with both open-ended and closed-ended questions that examined donation practices by food businesses to recipient community-based organizations which were conducted by LFM (see Appendix A). Prior to the food donation pamphlet being sent out, we conducted interviews with relevant staff at the Saskatoon Food Bank and Learning Centre, the Friendship Inn, The Lighthouse, and EGADZ. The same interview questions were asked again six months after the pamphlet was mailed out to all food businesses, this time by GE. We consider this a preliminary study given we were not able to

measure quantitatively the changes in food donations pre/post intervention, but rather we asked the organizations to identify qualitative and quantitative changes that they perceived.

To answer our final question determining what kinds of support are needed by food businesses to reduce the edible food they currently send to the landfill, FA and HW conducted key informant interviews with managers/owners of various types of food businesses in Saskatoon. Through our partnership with the Saskatoon Food Bank and Learning Centre and the Friendship Inn, as well as cold calling additional businesses, we sampled independent and chain restaurants, convenience stores, medium and large grocery stores, independent and chain cafes, and hotel and banquet facilities (n=15 total). We developed a semi-structured interview guide to collect information on the barriers to food donation and what sorts of supports these food businesses might need to increase their edible food donations (see Appendix B).

## **Data Analysis**

Analysis of the data examining policies and practices of municipal governments and organizations primarily involved examining and summarizing by asking four questions: 1) What are the described program/policy successes and challenges? 2) Have any formal evaluations of the program/policy implementation been conducted and if so, what have their results shown? 3) What has been the role of the municipal government in the program/policy and what do municipal staff perceive the benefits and challenges of their role to be? 4) How has the program/policy been funded, has evaluation of this funding model been conducted and what have been the benefits and challenges of this funding model?

The pre and post intervention interview responses were audio-recorded, notes were taken and analyzed and themes were developed. A similar process was used for qualitative analysis of the key informant interviews with food business managers and owners.

## FINDINGS AND DISCUSSION

First, we summarize policies and programs in Canada that contribute to food reclamation. Next, we present a few examples of international programs and policies that also might be helpful for development of food reclamation policies and programs for Saskatoon. Next, we discuss the changes in food donation practices as a result of our mini-intervention and the main barriers reported by food service industry owners and managers.

No national policies focus on food waste within Canada. However, Environment and Climate Change Canada (2019) offers some actions that could contribute to reducing FLW, including:

- A- **Improving awareness and education.** Several resources have been developed by governments, industry, and non-governmental organizations to improve awareness of the causes and solutions to household and consumer food waste. Of note is the [Love Food Hate Waste \(LFHW\) Canada](#) national awareness campaign launched in 2018 by the National Zero Waste Council (NZWC) with retail and municipal partners. British Columbia's Ministry of Environment and Climate Change Strategy's [resources on food waste](#) were developed to raise consumer awareness regarding the impact of food waste and to share solutions for reducing wasted food. Educational resources on food loss and waste, developed by [Second Harvest](#), [La Tablée des Chefs](#), [Halton Food Council](#), and others, are available to support elementary and secondary school teachers. The [Commission for Environmental Cooperation](#) (CEC) recently published a [Food Matters Action Kit](#) that contains informative resources and hands-on, creative activities to inspire North American youth to prevent food waste at home, at school, and in their communities. The Quebec Ministry of Agriculture has published [consumer guides](#) (French only) on date labels, food storage, food preparation, and food cleaning.
- B- **Increasing food literacy.** One pillar of Health Canada's [Healthy Eating Strategy](#) is an effort to improve the food literacy of Canadians. Improved food skills can help decrease household food waste by helping consumers to shop wisely and make the best use of the food they purchase. There are many Canadian initiatives focused on improving food literacy – one example is "[Regroupement des cuisines collectives du Québec](#)" which

coordinates small collective kitchens to enable people to share time, money, and skills in planning, purchasing, and preparing healthy and economical dishes for their families.

- C- **Standardization and education on date labels.** Improving clarity and understanding of "best before" date labels could contribute to better decision-making regarding the edibility of food and reduce premature disposal. The Canadian Food Inspection Agency (CFIA) is reviewing national "best before" and "expiry" date labelling requirements and will introduce education programs to improve consumer understanding. Food processors Kellogg's, Walmart, Campbell Soup, Nestlé, Unilever, and other multinationals have signed a [Call to Action](#) to standardize food date labels worldwide in 2020.
- D- **Packaging.** Food waste can be reduced by packaging products in quantities that can be consumed within their expiry date, and in shapes that encourage full use.
- E- **Product innovations.** Canadian research has focused on developing innovative approaches to prolonging shelf life. For example, Agriculture and Agrifood Canada has done research on packaging and decontamination processes to identify technologies that will increase storage and shelf life, such as antimicrobial coatings for food packaging films to decrease food contamination risks. The McGill Research and Innovation Consortium on Food Processing studies approaches to increase the shelf life of foods including natural antimicrobials, high-performance packaging, nanoparticles, and encapsulation. The Quebec Agrifood Innovation Centre (QAIC) research on optimizing meat packaging and using hydrostatic high-pressure processes to prevent meat losses and increase product shelf life.

## Provincial Policies and Programs

Some provincial governments recognize food recovery practices as an opportunity to reduce environmental impacts and at the same time address food insecurity or create jobs. Nova Scotia and Prince Edward Island have implemented organic waste disposal bans, and Quebec and Ontario will be following suit by 2022 (MacDonald, 2019). The Government of Nova Scotia enacted a ban on landfilling materials that can be diverted, including recycling and organics. The ban applies to both the residential and ICI sectors. After the adoption of an organic waste ban, Nova Scotia saw a drop between 231,400 and 261,900 tonnes over 12 years in greenhouse gas CO<sub>2</sub>-eq emissions (MacDonald, 2019). Nova Scotia has the lowest waste rate in Canada,

and that is because of the early efforts made by the government to combat this growing issue (Wagner & Arnold, 2008). However, a notable gap identified in Nova Scotia's regulation is the lack of a Food Donation Care Act. All provinces, except Nova Scotia and Quebec, have a Food Donation Care Act freeing persons or corporations from any liability for the foods donated.

The provinces of British Columbia, Ontario, Quebec, and Nova Scotia provide tax credits or deductions for farmers to help offset the cost to harvest, package, and store food for donation. Quebec additionally provides a tax credit for the donation of certain foods by food processors. Two key pieces of Ontario provincial legislation facilitate the redistribution of food for donation. As part of the Local Food Act, 2013, the Taxation Act, 2007 has been amended, providing farmers with a tax credit of up to 25% of the market value for donated produce, in addition to the existing charitable donation tax credit.

In 2016, the government of Ontario published the Resource Recovery and Circular Economy Act, which required the development of a strategy named "Waste-Free Ontario: Building the Circular Economy" within 90 days of the Act published. The Waste-Free Strategy cites as one of its many actions the creation of the "Food and Organic Waste Framework" plan to reduce the amount of food waste sent to the landfill. In developing this action plan, the province considers food donations and recovery practices as one of the measures to achieve a significant reduction in food waste in the province.

To achieve the circular economy, Ontario plans to focus on reducing food waste, recovering resources, supporting resources recovery infrastructure, and promoting beneficial uses of said recovered resources (MacDonald, 2019). With over 2.2 million tonnes of terminal food waste occurring in the province, the province proposed a food and organic waste framework in November 2017. Most notably, the document states that the province will develop and implement a food and organic waste disposal ban, which will be added to the Environmental Protection Act.

Ontario also has a feed-in-tariff (FIT) program, which was developed in 2009, that provided a preferential revenue stream to electricity generated from sources such as biogas from anaerobic digestion of organic waste. Provincial regulation 101/94 requires any municipality with a

population of over 5,000 to provide home composters to residents, with green bin collection in municipalities with a population greater than 50,000.

Ontario has also recently begun a new initiative especially focused on improving food recovery in the commercial sector. The project, titled "Improving Food and Food Waste Recovery in the Non-Residential Sector Through Co-operative Collection", aims to aid in collaboration between the waste generators and waste services. The primary goal is to build a successful collection model that will not only be cost-effective but also allow for maximum food recovery (MacDonald, 2019).

In British Columbia, the Ministry of Environment has produced a toolkit for Residential Food Waste Prevention where it is mentioned the donation of surplus food as a sustainability benefit for food waste prevention.

The Province of Saskatchewan does not regulate the diversion of industrial, commercial or institutional waste and is expected to maintain its current focus on residential waste diversion programs; however, in 2020 it did release a [Solid Waste Management Strategy](#) that specifies significant waste reduction targets (30% by 2030 and 50% by 2040). The strategy does not specifically discuss food waste.

## **Municipal Policies and Programs**

[Canada's National Zero Waste Council \(NZWC\)](#) began in Vancouver, BC, in 2013, and works in collaboration with the Federation of Canadian Municipalities. The organization's mission is to "act collaboratively with business, government and the community, at the national and international level, as an agent of change for waste prevention and reduction in the design, production, and use of goods." NZWC has developed a Food Loss and Waste Strategy for Canada to outline how Canada can combat food waste nationally. The council has also called on the federal government to support a tax credit to encourage businesses to donate what would be food waste to food recovery organizations. Ontario, British Columbia, and Nova Scotia have initiated a Farmers Tax Credit for food donations, but there is no credit in place for retailers.

The National Zero Waste Council developed a campaign called "Love Food Hate Waste" to help reduce avoidable food waste in Canada. This campaign/initiative is currently partnering with other municipalities such as the City of Vancouver, the City of Toronto, the City of Victoria, Guelph-Wellington, as well as a government-corporation organization in Quebec called RECYC-QUEBEC, the province of British Columbia, and Metro Vancouver. This campaign encourages households to plan their meals, use all their products, and shows ways to keep food fresh longer, in addition to other recommendations and tips on how to reduce food waste. This campaign does not mention practices to redirect surplus food to recipient organizations (MacDonald, 2019).

According to the Vancouver Food Strategy report (2013), the city has a mid-term food waste management action to "Explore pilot food recovery programs and initiatives to channel surplus edible food to people". According to a telephone interview with the City of Vancouver Zero Waste Council, the municipality does not have a food reclamation policy. The informant described the Vancouver Organics Disposal Ban and explained they had not noticed a difference in edible food donations since the implementation of the ban in 2015 and they were not sure what the impact of the ban would eventually be over time. The ban might encourage food businesses to redirect inedible food onto charitable organizations to reduce their composting costs. The Vancouver city council has other plans that include policies and actions to help stimulate, support and allow Vancouver to become a zero-waste community.

In Alberta, both Calgary and Lethbridge have or are in the process of implementing source separation requirements for the ICI sector. This means that separate containers for garbage, recycling, and organics are required. Calgary's program is fully implemented and Lethbridge was scheduled to begin implementing its program in 2020. Calgary has an education-first model for compliance verification, which has resulted in a very low instance of issuing fines for non-compliance.

In Calgary, according to [Calgary's Food System Assessment and Action Plan](#), the Calgary Inter-Faith Food Bank is the main player in terms of food recovery practices, and most programs and initiatives are closely linked to the Food Bank Distribution System. Some community-led organizations work in food reclamation and food redirection and The City of Calgary has provided them with some funding, but these organizations are mainly and primarily funded

through grants. The city of Calgary is currently working to reduce food waste through food redirection, but so far they do not have a food redirection strategy or list of guidelines in place.

Edmonton has traditionally been a service provider for ICI sector waste, however with recent changes including the closure of their post-collection sorting facility, the City is in the process of re-evaluating the ICI waste services it provides.

The City of Regina does not yet have any ICI diversion policies or programs in place but is working on developing some.

The City of Toronto has implemented Community Reduce & Reuse Programs. One of these programs is called Urban Harvest and it is based on collecting excess vegetables and fruits from people's houses and redirecting them to organizations and food banks. The City's Long Term Waste Management Strategy (Waste Strategy) recommends developing a Food Waste Reduction Strategy. The document does not mention food recovery practices as one of the actions to reduce food waste.

According to an interview with The City of Guelph project coordinator of the Smart Cities initiative and her team, the city does not have a food reclamation policy; however, they support food security, food provision, and community-building such as an Open Food Network and Composting programs as part of their mandate. According to the coordinator, the Guelph municipal government is currently working on a food waste flow study (gaps in food waste).

Halifax was the first municipality in Canada to implement an organics program in response to a provincial ban on organics disposal in landfills that requires all businesses and organizations to separate their recyclable and organic waste by requiring separate containers with clear signage. However, this program focuses on composting and does not mention food recovery practices.

The City of Montreal plans to divert 85% of its residual waste from the landfills by 2030. To achieve this target, the City's executive committee member said that they "will prohibit large grocery chains, educational institutions, and hospitals from throwing away food they no longer think is fresh". The city also plans to encourage food services to donate surplus food to food banks and community institutions (CBC, 2019). These diversion measures are part of the city's new plan for waste management, which could include a fine for disposal of food if the rules are

not followed (CBC, 2019); although, Councillor Jean-François Parenteau said that the first goal is not to fine, but to change the mentality (Banerjee, 2019).

### **International Examples of Food Waste Reduction Initiatives**

Multiple European countries including France, Germany, Greece, Italy, and Poland give tax and fiscal incentives for the donation of food as a goodwill gesture and to encourage donations. For example, in Italy, value-added tax (VAT) is not imposed on food that is donated. Similarly, in France and Spain, a proportion (35-50%) of the value of donated food can be deducted from the taxable revenue of the donor enterprise.

Below are some examples of regulations in other jurisdictions that support the diversion of food waste from the institutional, industrial and commercial sectors:

- New York City requires that certain food waste generators source separate their organic waste and either arrange for transportation to a processing facility or compost it on-site. New York State will require the donation of surplus food and diversion of organic waste for processing for certain food waste generators starting in 2022.
- Austin, Texas, requires all businesses that require a public health inspection for food safety to also submit a plan to the City for organics diversion. The plan submission process is online and separate from other City processes.
- Boulder, Colorado, requires businesses to have separate containers and collection services.
- Portland, Oregon's metropolitan area (Metro) has approved a plan to require certain businesses to separate and divert waste. It has gone into effect in 2020.
- Seattle, Washington, requires businesses to sort all food waste into a separate bin for collection and has banned the disposal of food waste in the garbage.
- The state of California requires businesses that generate a large amount of organic waste to source separate waste, compost it onsite or self-haul to a facility, sell or donate surplus food, or subscribe to a waste service that processes organic waste.

- The state of Connecticut requires food waste generators to source separate waste and divert it to an authorized organics processing facility.

## **Non-Governmental Organizations in Canada that Reclaim Food**

Organizations such as [Food Banks Canada](#), [Food Banks of Quebec](#), and [Moisson Montréal](#) have established partnership programs with large grocers. These large retailers have developed systems and invested in refrigerated equipment to recover, store, and deliver surplus food that cannot be sold. Organizations such as [Second Harvest](#), [Feed Nova Scotia](#), and [Refresh Foods](#) operate redistribution systems to recover surplus foods from all stages of the food supply chain. [La Tablée des Chefs](#) operates a system that recovers and redistributes surplus food from the hotel, restaurant, and institutional sectors. Second Harvest developed an online platform called [FoodRescue.ca](#) to facilitate the delivery of surplus food donations across Ontario by connecting food supply businesses that generate surplus food with local social service organizations and charities that can make use of the donated food. Second Harvest and Food Banks Canada rescued a combined total of almost 10 million kilograms of food in 2018.

Community refrigerators are also used in some areas across Canada to collect surplus foods from citizens and households so they can be shared within communities. For example, [Sauve ta bouffe](#) maintains a directory of community refrigerators in Quebec.

Other organizations and companies have focused on utilizing surplus food to create added-value products that are then either donated or sold. For instance, The Greater Vancouver Food Bank (GVFB) launched [Goodly Foods](#), a social enterprise that uses surplus food to produce soups, stews, and sauces for distribution to GVFB members or sale to foodservice partners or the company, Loop, uses surplus fruit, vegetables and bread to create fresh juices, beer and dog treats (Environment and Climate Change Canada, 2018).

Increasingly, social enterprises are tackling food waste by using and distributing surplus foods in diverse ways. For inspiration on what can be achieved, we highlight examples that encourage collaboration amongst social enterprises, municipalities, and businesses in the fight to reduce

food waste. Below is a snapshot of examples from active social enterprises in food reclamation, including:

[Food Cloud](#) was founded in 2014. Using an app that connects businesses with surplus foods to charities that can distribute foods, Food Cloud offers a user-friendly platform to make food donation straightforward. Food Cloud has helped over 9,100 charitable groups get surplus food in Ireland and the UK, equivalent to 50 million meals that have gone to people and not to waste.

[Food Rescue App](#) was rolled out in 2019 to connect volunteers with food redirection routes, making it easier to make sure good food gets eaten and stays out of landfills. The app works with local restaurants, bakeries, grocers, and distributors in Calgary, Edmonton, and Winnipeg to ensure edible food is kept out of the landfill by redirecting it to service agencies and into the hands of people who can eat it. This process requires taking donations of large amounts of one food item (for example very ripe fruit, cheese, or milk that is nearing its best before date) that service agencies can't use quickly enough before the items spoil. Instead of letting this good food go to waste, they work with local chefs to repurpose ingredients into high-quality, marketable cuisine. The purpose of the Food Rescue App is three-fold: 1) Savings for service agencies to enable them to reduce their annual grocery bills and redirect vital funding into education, rehabilitation, and other programs which directly benefit the people they serve; 2) Helping the environment by diverting food from landfills and reducing the overall amount of food waste produced. 3) Savings for food donors who benefit from reduced expenditure associated with the disposal of excess food, reduced food storage costs, and the satisfaction of knowing they are making a valuable contribution to those in need.

[Loop](#), enables food wholesalers, retailers, and producers to divert one hundred percent of their unsaleable food away from landfill, and towards those in their community who can use it best.

[Re-Belle](#) takes fruits and vegetables that have been rejected by grocery stores. It saves the scraps and repurposes items into new products that are then sold.

[La Tablee des Chefs](#) in Québec, through its food recovery program, La Tablee des Chefs acts as a liaison between surplus food donors and local community organizations that will ensure the recovery of the food donated and its distribution to people in need.

[Outcast](#), in Halifax, Nova Scotia, is a sustainable food tech company that makes beautiful food out of ugly produce. Outcast upcycles/ rescues imperfect produce by reforming it into a new, upcycled plant-based supply chain.

[La Transformerie](#) in Montreal reduces food waste by picking up unsold food items from participating grocery stores and greengrocers. It transforms some into fruit spreads that some merchants resell, while others are redistributed to local organizations.

[Food rescue](#), Second Harvest is Canada's largest food rescue charity in Toronto with a dual mission of environmental protection and hunger relief. It redistributes nutritious, unsold food from across Canada to charities, non-profits and Indigenous communities in every province and territory. Their free, service helps nourish people through school programs, seniors' centres, shelters, food banks, and regional food hubs. In over 35 years, Second Harvest has rescued over 177 million pounds of healthy food, keeping it out of landfills and preventing 192 million pounds of greenhouse gases from entering our atmosphere.

[Food Mesh](#), is a private business; operating in BC, provides apps, programs and services that help businesses and charities safely donate, claim donations, buy and sell products. Their services include a Web tool, that lists and allows the claim of specific donations available, listing and allowing the purchase of food sold at a steep discount, coordination of pick-ups 7 days/week and an app for tracking.

[Loop](#), is a private business that started out in Dawson Creek, British Columbia, trying to reduce the operating cost of a family farm. It now works with grocery stores across BC, AB, and SK, diverting unsaleable grocery store food to animal feed, and to registered charities where possible. Services include transporting food waste from retailers, wholesalers & producers to charities and farms (focus on farms).

[Copia](#), is a private business operating in Vancouver. Its technology allows businesses to safely donate their excess food, access enhanced tax deductions, and receive data to inform food purchasing decisions. Services include helping schedule delivery directly to non-profits, handling prepared food, recurring or on-demand deliveries, providing an App for the food recipient intake

process, an algorithm to match donations to non-profits, and scheduling delivery and tracking of donations.

[Leftovers](#), is a non-profit that works with local restaurants, bakeries, grocers, and distributors in Calgary, Edmonton, and Winnipeg to ensure edible food is kept out of the landfill by redirecting it to service agencies and into the hands of those who need it most. It redirects edible food with the help of a small but growing group of volunteers from vendor organizations, service agencies, and the community. In the spring of 2019, they rolled out a new app to connect volunteers with food redirection routes, making it easier to make sure good food gets eaten. Their services include matching food vendors (retail, restaurant, farmers' markets) to service agencies, coordinating volunteers to deliver primarily low-risk food directly from vendors (no meat/fish), providing an App for volunteer drivers to arrange deliveries and to track their impact. They also do education in schools.

To summarize, here are broad categories of food reclamation practices:

- Collecting surplus foods from citizens and households and sharing within communities through community fridge and pantries and other means (example [Sauve ta bouffe](#) in Quebec)
- Facilitating the delivery of surplus food donations by establishing an online platform to connect food supply businesses with social enterprise, local social service organizations and charities (example [FoodRescue.ca](#) and [Second Harvest](#))
- Using surplus food to produce soups, stews, sauces, beer, juices and dog treats for distribution and selling to foodservice partners or companies (example [the Greater Vancouver Food Bank](#) and [Loop](#))
- Using an app that connects businesses with surplus foods to charities to make food donation straightforward (example [Food Cloud](#))
- Working with local chefs to repurpose ingredients into high quality and marketable cuisine (example Upcycling method)

- Making beautiful food out of ugly produce by upcycling/ rescuing imperfect/misfit produce from ending up in a landfill (example [Outcast](#))
- Gleaning practices: Developing markets for products that would not have stayed in the food chain by purchasing food left in the field at a reduced rate and developing new food value chains
- Developing alternative markets for products rejected by retailers but still good to be consumed
- Feeding to livestock food not fit for human consumption: The best use of food surplus unfit for human consumption is to use it for animal feed
- Providing tax credits or deductions to support diversion of large volumes of food from the waste stream
- Encouraging the public to consume products that aren't cosmetically ideal but edible

### **Food Donation Brochure Intervention and Changes in Food Donation Practices**

Student researchers contacted seven Saskatoon-based charitable organizations to request their participation in answering the question about changes in practices. Four organizations participated in the baseline interviews. The initial plan was for the brochure to be distributed to food businesses during food safety inspections. As a result of COVID 19 challenges, this process was not possible, and the brochure was ultimately mailed to food businesses. During the summer of 2021, endpoint interviews were conducted with the organizations that participated in the initial interview. Three organizations participated fully and a fourth was limited in their participation due to staff turnover and lack of capacity.

Recipient organizations reported a wide diversity of sources of donated food. All four organizations received food from grocery stores and large food retailers. There was significant variation in other sources with two of the organizations receiving very significant amounts of leftover food from hotels, banquet facilities, and restaurants. All organizations reported

receiving garden produce in the fall. One organization reported a very significant increase in food donations in the fall months (citing garden produce from individuals) while the other three did not notice much seasonal variation. One organization reported a very significant increase in donations due to the COVID-19 pandemic.

All organizations reported a combination of having food delivered and picking it up; however, they reported that there is not sufficient refrigerated truck capacity in Saskatoon for picking up all potential donations. Larger organizations reported using a refrigerated van or truck that facilitates pickup and contributes very significantly to their ability to respond to offers of donation. The amount of prepared food received by organizations varied and was reported as significantly reduced due to COVID.

The organization staff reported receiving a wide variety of perishable and non-perishable food items. The larger organizations reported having a policy in place regarding what types of food they accept. One organization referred to not being able to receive meat that was harvested in the wild. They reported variation in the percentage of food they receive that is usable, although two reported food received is at least 90% usable. One of the larger organizations credited their communications team with helping the public understand what types of food are most needed and that all donated food is expected to be in consumable condition. Composting donated food that is not usable was cited by one organization. Two organizations commented on their practice of contacting other food organizations in Saskatoon in cases when they receive more of a particular food type than they could use within expiry date limitations.

When asked if and how they kept track of donations, the respondents had varying responses ranging from weighing all food to not keeping track at all. One organization that receives large quantities of food reported that food comes in and out too quickly for tracking purposes and cited a lack of adequate infrastructure for weighing donations. Another organization reported weighing all food received. There was interest in building capacity to weigh or otherwise track food donations.

Two organizations stated that due to the intermittent nature of food donations they were satisfied with their current situation. One of the large organizations also indicated that the volume of food they received was adequate for their operations. Volunteer labour to receive and process food donations was cited as a factor for two of the organizations. Smaller organizations reported a reliance on volunteer labour as a factor that affects their capacity. Larger organizations reported that they had the capacity to absorb some increase in volume of food donations.

One organization specified the need to be careful regarding the kind of food they accept due to serving vulnerable populations with compromised immune systems. An interest in learning more about working with grocers and supply chain management was expressed by one organization. Three of the organizations reported a need for increased storage should the volume of donations increase.

Recipient organizations reported receiving donations from a wide diversity of sources at both baseline and endpoint. Corporate donations had increased significantly for two of the organizations but reported that changes may have been due to the pandemic rather than the project brochure being mailed out. One large organization offered the opinion that at the outset of the pandemic grocery stores experienced a reduction in movement of goods as people stayed home. This resulted in a higher level of donations (particularly perishable goods) from this sector. However, one of the large organizations indicated a belief that the food donation brochure was likely the catalyst for increasing food donations.

All organizations commented on the impact of COVID. The two larger organizations referred to national level efforts that resulted in increased corporate food donations. Second Harvest Canada was mentioned by three organizations as an important partner—particularly since COVID. The small organization reported being notified of available food through email communication from Second Harvest but not being able to access that food primarily due to lack of capacity.

Storage capacity was indicated as a factor by all organizations. Both large organizations have increased storage capacity in the last two years by obtaining donated or in-kind off-site

warehouse space. One of the organizations indicated that their storage is solely for dry goods while the other has obtained use of a freezer facility that allows them to accept and store up to 15,000 pounds of frozen food. The smaller organization highlighted storage as a main limiting factor in their ability to accept donated food.

Changes that were reported by all organizations since the beginning of the study period included increased inter-agency collaboration, but this was more likely due to increased collaboration over the course of the pandemic than a result of the intervention. Another related change was the larger organizations both indicated that their role acting as a sort of ‘food hub’ has increased significantly. They both do more redistribution to smaller agencies on a regular/weekly basis.

Staff emphasized the difficulty of determining the impact of COVID on food donations on their operations. Marked increases in donated produce/perishables were noted at the beginning of the pandemic by the two larger organizations that participated in both baseline and endpoint interviews. This increase was likely due to grocery stores experiencing a reduction in sales at the onset of the pandemic. At the same time organizations reported a decrease in the amount of prepared food that they received—again likely due to COVID and an overall reduction in events that result in leftover prepared foods.

While it is impossible to eliminate the impact of COVID on food donation practices during the study period, there were some relevant themes emphasized by participating community-based organizations (CBO).

- Storage capacity is a clear and common challenge. Larger organizations have arranged offsite storage and the smaller organization is hampered by their lack of storage capacity.
- While not universal, lack of volunteers/people to receive, sort and distribute donated food is a challenge and will be magnified should the volume of food donated increase.
- Perhaps the most significant finding is that all CBOs indicate a desire for increased inter-agency collaboration. The two larger organizations are currently providing a ‘food hub’ function by regularly receiving and redistributing food to other agencies. Smaller agencies report a desire for increased communication – indicating that knowing further

ahead what types and amounts of food will be available would be very helpful to their operations.

- Finally, larger organizations expressed an interest in developing a deeper understanding of how grocery stores and other food businesses operate (particularly in relation to food supply chains) and how CBOs could work more closely with them.

### ***Food Service Industry Food Donation Challenges***

A total of 15 Saskatoon businesses were contacted for interviews regarding food waste reduction and donation practices, and 9 participated in an interview. The interviews ranged from 6 to 12 minutes in length. Consent was received before each interview to record the calls for transcription purposes. Participants included owners, managers, assistant managers, executive chefs and food/beverage directors from local restaurants, grocery stores and hotel centres. Because of the COVID-19 pandemic, many of the business described fluctuations and changes to their donation practices, as well as with policy changes at recipient organizations. In order to reflect what was deemed as “normal practice”, the participants were asked to reflect on both pre- and during COVID-19 practices.

Out of the nine Saskatoon businesses that were interviewed, eight donated food. One business was donating food scraps to local pig farmers but is no longer doing so due to lack of demand. This business was willing to look at donating to an organization that would result in edible food waste being used for human consumption. The one business who was not donating food stated it was due to feeling there was not enough food to donate. There was a trend that restaurant and hotel centres had decreased donations since the COVID-19 pandemic due to decreased product output, cessation of buffets and no large group events/meetings for catering. Grocery stores were unaffected in terms of how much product they had to donate but did have to work around COVID-19 practices in terms of how donations were collected and picked up to reduce contact and exposures.

Tracking food donations in terms of weight, items or frequency of donations was not a common practice, with only 2 businesses tracking this data. In one case, the organization picking up the donations provided donation records every few months to the business. One business was able to track how much product was available for donation but did not actually log the amount that was picked up for donation. Most businesses felt the frequency and quantity of donations was up to their discretion and therefore did not track this data. Other than with the COVID-19 pandemic, there were no reported major times/patterns that causes noticeable fluctuations in donations in terms of holidays, seasons or days of week.

Items being donated included bakery and bread products that were pulled before optimal best before date, dry goods with a best before date, fresh meat that was then frozen, hot meals/restaurant items, over production from buffets/catering and damaged goods. Dairy, meat, and produce were not common donations. It was common practice for the food donations to be picked up by the organization accepting donations, with only one business delivering the donations.

Common barriers to donating edible food waste that were identified included COVID-19 regulations within organizations accepting donations, uncertainty with current regulations, confusion on who to donate to, the times that food donations are accepted, a need for a convenient program that picks up donations when requested, the feeling of not having enough food product that is worth donating, and concerns with liability. Businesses were also cognisant of reducing food waste for their own financial reasons. Four businesses had policies on food donations, whether it be formal or informal. These were set either by the business itself, or management companies and set the tone for what products were donated (i.e.: prepared food, dry goods, raw ingredients). This is a barrier that could be reduced by helping local businesses to create a policy tailored to their needs and capacity that would then streamline the donation process.

Qualities that businesses found to support the donation process were using consistent practices/systems, ensuring all employees are aware of the current practice/system, working with one organization and having windows of times that donations were accepted and picked up. The

overall attitude towards food waste reduction and donating edible food waste was positive and supportive. One participant felt strongly that businesses with large amounts to donate should be cognisant to spread their donations to various organizations to ensure one was not dominating this field. The “Donating Food in Saskatoon” pamphlet was emailed to eight participants who expressed interest in learning more and gave consent to receiving it.

Awareness of the upcoming ban on landfilling organic waste in Saskatoon was low with only two out of nine businesses actively aware of this bylaw. Two out of the nine of the businesses were already composting food waste that was not fit for donation and thus were confident that they were prepared for this bylaw. The “Recycling and Organics Regulation” fact sheet was emailed to participants who were interested in learning more about this bylaw and gave consent to receiving it.

The overall attitude to donating edible food by responding businesses was positive and supportive. Findings can be summarized as follows:

- Of the nine organizations that participated, eight donated food.
- The one organization not donating indicated a lack of food to donate.
- COVID resulted in an overall decrease in food donations.
- Grocery stores were relatively unaffected in terms of the amount of food available for donation but COVID impacted practices and made donating more difficult.
- Tracking food donations is not a common practice with only 2 businesses keeping track.

In terms of needed supports to increase edible food donations, businesses identified a need for consistent policies and practices and the benefit of working with one CBO. The “Donating Food in Saskatoon” pamphlet was cited as important in supporting businesses interest in learning more about how to donate.

## CONCLUSIONS AND RECOMMENDATIONS FOR FOOD WASTE REDUCTION AND FOOD RECLAMATION

Food is the largest contributor to solid waste, causing provinces and municipalities concern over dwindling landfill space. While in the landfill, food waste also causes significant environmental harm through its methane emissions. The growing, processing, packaging, and transporting of food that will eventually end up in the landfill also wastes a significant amount of time, energy, money, water, and fossil fuels. Food waste is a drain on the environment, economy, and communities.

Harvard Food Law and Policy Clinic (2016) believes that governments' roles in food recovery are as follows:

- A- Providing funding for food recovery.** Governments can provide a variety of funds for food recovery programs and infrastructure. This funding can take the form of competitive grants or direct spending. Such funding can go towards supporting food recovery organizations, starting food waste prevention programs, building composting facilities, purchasing transportation equipment, shoring up the operating budget of local food banks, or a host of other projects to support increased food recovery.
- B- Offering grant programs.** Several governments at various levels administer grants aimed at reducing food waste. Eligible grant recipients compete to receive funding on the merits of their proposed use and applicability within the grant program goals. This will not only fund impactful programs and build new food recovery infrastructure; it also incentivizes nonprofits or private companies to develop innovative and effective mechanisms for increasing food recovery.
- C- Encouraging food waste reduction.** In addition to direct funding, provincial and local governments can encourage food waste diversion by organizing food waste challenges to inspire waste producers to reduce their amount of food waste. By challenging businesses to reduce their waste and quantify it publicly, governments can both promote the issue of food waste and reward those taking steps to reduce their waste. Governments can also encourage food waste reduction by passing a law or resolution to encourage food recovery.

**D- Increasing public education.** In addition to funding and encouraging food recovery, governments can provide educational information on food waste and food recovery. Most consumers are unaware of the amount of food being wasted. Provincial and local governments can disseminate information about food waste and donation by publishing on their websites, hosting educational seminars and conferences, providing training sessions, and running media campaigns. Potential food donors often have questions about aspects of food donation that can be easily explained online. Governments can provide answers on a wide range of topics, including food safety, liability protections, how to establish a food recovery program, and how to find potential food recovery partners.

Provincial and local governments can help keep food out of the landfill by incentivizing food waste reduction. They can provide financial support to organizations via competitive grants and direct appropriations. Food recovery program infrastructure, composting capacity, and anaerobic digestion facilities can be expensive. The costs of running food recovery programs, buying equipment, and building infrastructure often act as a barrier to food waste reduction. Governments can also educate their citizens about reducing food waste. Key roles that governments could play in driving effective change include:

- Municipal governments should increase tipping fees to reflect the true cost of hauling waste away (e.g., from a long-term environmental perspective).
- Municipal or provincial governments should introduce legislation that prevents organic waste from going to landfill.
- Governments should separate the definition of food waste from an industrial versus household waste perspective to provide greater transparency about where loss occurs.
- Ministries of education should introduce school curricula to develop knowledge and skills (such as food planning, cooking with leftovers, and food preservation methods) that are important for encouraging the development of attitudes and behaviors that lead to reduced food waste.
- As food waste is linked with over-eating and the quality of food consumed, government and other bodies can influence portion size control and nutritional advice.
- Governments should improve communications around what "best before" and expiry dates mean in terms of food safety and nutritional value (Uzea et al., 2014).

## Recommendations for Increasing Food Recovery for the City of Saskatoon

### Immediate term (2022-2023)

- Use the findings from this study to integrate food recovery into the Industrial, Commercial and Institutional (ICI) organics regulation implementation that is planned between 2022 and 2024, including:
  - d. Ensure that food donation is compatible with bylaw enforcement procedures.
  - e. Highlight donation of edible food as a preferred option throughout education and programming and specifically address the barriers to edible food donation highlighted in this study.
  - f. Have a food donation directory embedded in the ICI “waste wizard” tool and work with community partners to ensure information remains current.
- Enhance community awareness of food waste through piloting the [\*Love Food, Hate Waste\*](#) campaign, integration of food waste reduction education and programming as part of the implementation of the curbside and multi-unit residential organics programs, and other City sustainability programs.
- Collaborate with the provincial government as it implements its *Solid Waste Management Strategy* and participate in engagement on options for reducing organic and food waste. Share the results of this study as part of that participation.
- Further develop and seek funding with community partners to:
  - c. Address the barriers identified in this study by organizations accepting food donations to further their capacity to accept recovered food.
  - d. Pilot a food recovery social enterprise that will improve local capacity to recover more edible food from the waste stream while creating employment opportunities.
- Include food reclamation and the results of this study in the development of the City’s *Circular Road Map*, which will be completed through *Circular Cities & Regions Initiative* in early 2022.
- Add additional questions in the ICI waste and recycling survey on food recovery to better understand the barriers to food donation.

### Medium-term (2024-2025)

- Ensure food waste, including the findings from this study, are included in the *Sustainable Food Action Plan* planned for 2024-2025. Through this work assess the implications of providing municipal support, such as capital, operational or grant funding for food recovery compared to composting through a triple bottom line assessment.
- Assess food-recovery apps and consider procurement as part of the ICI organics regulation education and communications following additional engagement with both food waste generators and the food donation sector.
- Expand the City's annual environmental cash grant for community organizations to have a food waste reduction and recovery component at \$10,000 per year.
- Improve waste characterization studies and other data collection for the ICI sector to get a clearer picture of food waste in Saskatoon and the sectors that programs should target.
- Request funding to complete a material flow analysis of ICI food waste to better understand the current state of food donation in Saskatoon.
- As food-service contracts at City facilities expire, integrate food waste reduction and recovery of edible food into the tendering criteria. Integrate this outcome into the sustainable procurement work planned by the Sustainability Department.

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## APPENDIX A

### Recipient Organization Interview Guide (Baseline and Endpoint)

We are conducting a small intervention study on food donation practices to understand what happens when public health inspectors begin to hand out a pamphlet containing information on the rights and responsibilities of food businesses (restaurants, banquet halls, grocery stores, other food stores), as well as on where to donate and when. This pamphlet will also be accompanied by a letter from the City of Saskatoon encouraging donation and explaining why it is important to the City's environmental goals. We want to know if this small intervention changes food donation practices in the city and how. This is why we are interviewing recipient organizations now, before the implementation of the pamphlet and then again about 6 months later after the pamphlet has been handed out.

- 1) What is your position or role within your organization?
- 2) Can you tell us about how your organization typically receives food donations?
  - a. From what types of businesses? Examples include grocery stores, grocery store delis, specialty food stores, hotels, banquet facilities, restaurants and bakeries.
  - b. How do potential donors make their first contact?
  - c. How do you usually receive it? Is it dropped off or do you pick up or both?
  - d. Is there an increase in donations at different times of the year, month or week? For example, donations may increase during summer, or at the beginning of the month, or on Mondays.
  - e. What do you usually receive?
  - f. Do you have a policy on what type of food is accepted?
  - g. In terms of the food that you receive, what proportion of it is typically useable? And of the food that isn't useable, what is the usual reason for this and how do you dispose of this food?
  - h. Is the food usually prepared (like ready to serve foods) or basic ingredients (foods that will usually be transformed into something else) or both? Can you estimate what proportion is prepared and what is basic ingredients?
- 3) How do you keep track of what you receive?
  - a. Can you show us any logs or other documents you usually use to keep track of donations? We are not interested in names of organizations or individuals but rather in the information you collect on what you receive, when and what types of foods.
  - b. How do you measure or quantify the amount of food donated? Do you estimate the weight of donated food? Or keep track of approximate quantities? We would like to see these so that we can have a better idea of what you receive to see if we can quantify or otherwise keep track of that information so that if after the pamphlet goes out we can see if there are changes to what you receive and how much.
- 4) What is currently working about food donation to your organization and what would you like to see change in terms of food donations?
- 5) How much capacity does your organization have should the volume of donations increase significantly (say if there was a ban on landfilling organic waste in Saskatoon or the provincial government developed new food waste reduction programs)? Would you like to see the amount of food donated to your organization increase?
  - a. Follow-up question: Have you experienced a time where donations have exceeded your organization's capacity? If so, how did you proceed?

- 6) What kinds of support would your organization need should the volume of donations increase significantly?
- 7) Is there anything else you would like to tell us about food donation and your organization?




## **APPENDIX B**

### **Interview Questions for Food Businesses**

1. What is your position or role within your business?
2. Please tell me if and how your organization donates food.
  - a. Do you have a policy on what types of food you donate?
  - b. What do you usually donate?
  - c. Is the food usually prepared (like ready to serve foods) or basic ingredients (foods that will usually be transformed into something else) or both? Can you estimate what proportion is prepared and what are basic ingredients?
  - d. Do you drop it off or does it get picked up or both?
3. Do you have more donations at certain times of the year, month or week?
4. How do you keep track of what you donate?
  - a. Can you show us any logs or other documents you usually use to keep track of donations? We are not interested in names of organizations or individuals but rather in the information you collect on what you donate, when and what types of foods.
  - b. How do you measure or quantify the amount of food donated? Or keep track of approximate quantities?
5. What is currently working about your food donation practices and what would you like to see change in terms of food donations? a. What specific barriers do you currently have to donating edible food? 38
6. It seems likely that policy changes are coming at both the provincial and municipal government levels when it comes to organics. If there was a ban on landfilling organic waste in Saskatoon and/or the provincial government developed new food waste reduction programs how do you think your organization would respond?
  - a. What kinds of support would your organization need to increase the volume of donations you make rather than send edible food to the landfill or for composting?
7. Is there anything else you would like to tell us about food donation and your organization?

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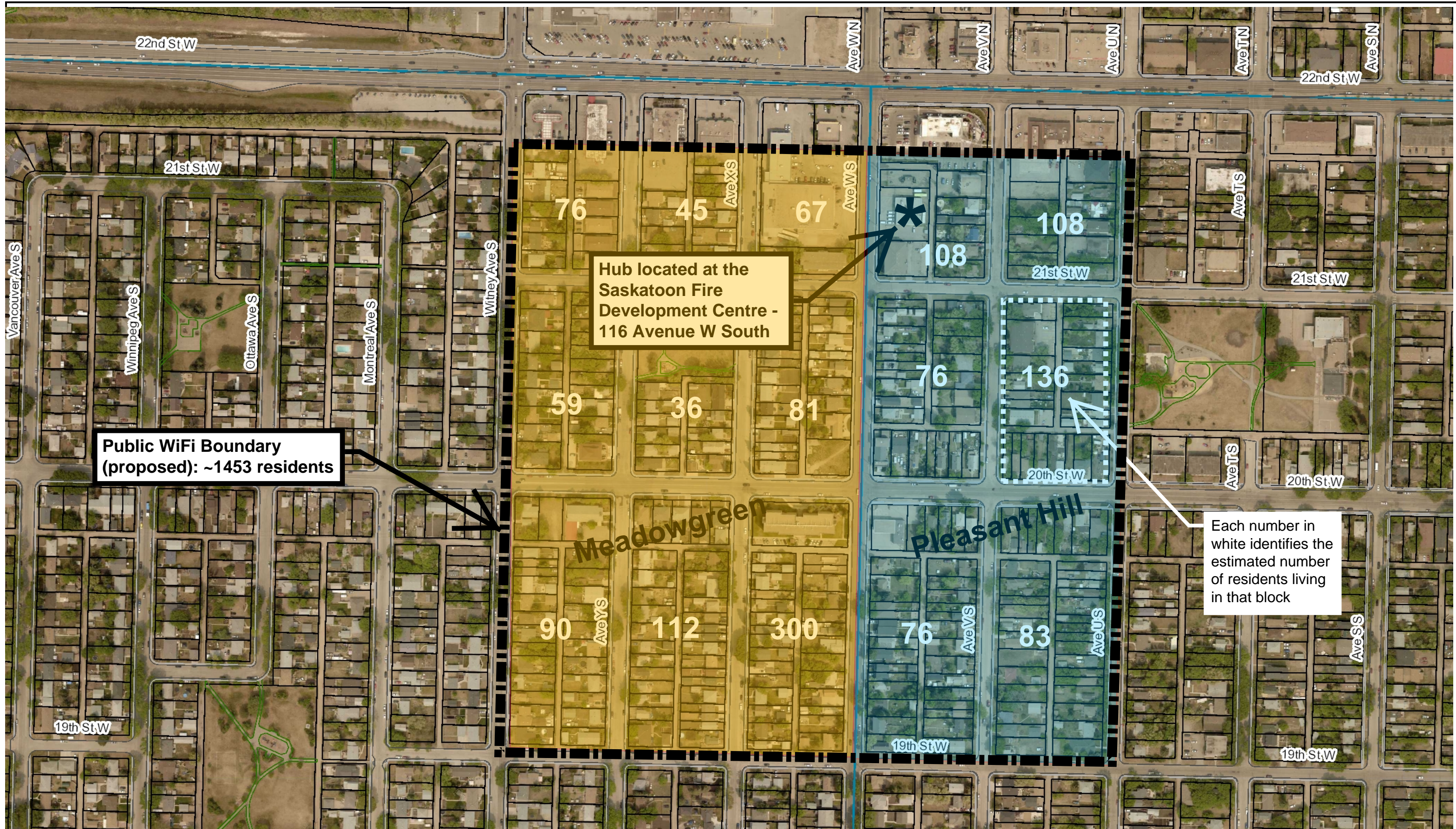
**432 - 221 Cumberland Avenue**

**Saskatoon, SK S7N 1M3**

**Phone: 306.966.2121**

**Fax: 306.966.2122**

**<https://cuir.usask.ca/>**



## EQUITY ANALYSIS

One of the aims of the ATP was to develop a well-connected network for walking and cycling that provides equitable access and serves all areas of the city. The equity analysis determines neighbourhoods with higher concentrations of under-served populations and with relatively low levels of existing active transportation facilities. The result of this analysis identifies under-served areas in the city where there is opportunity to strategically invest in areas that have high demand today, the greatest potential to increase future use of active transportation and where there are higher concentrations of people who are more dependent on active transportation for moving around. The equity analysis examined the distribution of pedestrian and bicycle facilities in relation to under-served populations and identified areas where limited access to walking or bicycle facilities is compounded by socio-economic challenges. The results were used as one of the factors to help prioritize the proposed active transportation networks. The neighbourhoods with the highest equity need were identified as a higher priority for implementation and provided with the highest quality of recommended facilities.

Five indicators were used to examine equity across neighbourhoods, including the percentage of youth populations, seniors populations, immigrant populations, Aboriginal populations and low income populations. The analysis identifies the following neighbourhoods as areas with the greatest need, as shown in **Figure 15**:

- Riversdale
- Pleasant Hill
- Meadow Green
- College Park
- Massey Place
- Mount Royal
- Westmount

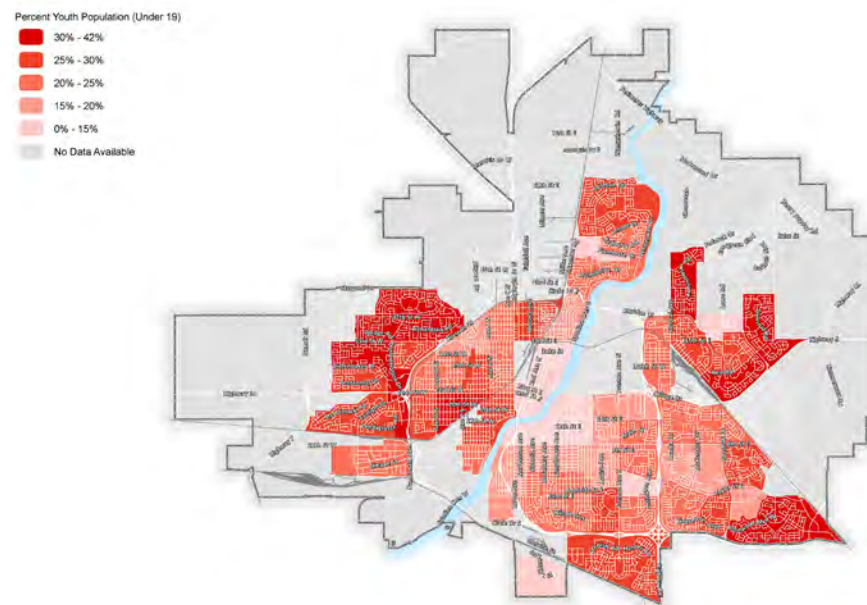


Figure 10 - Youth Population - Equity Analysis

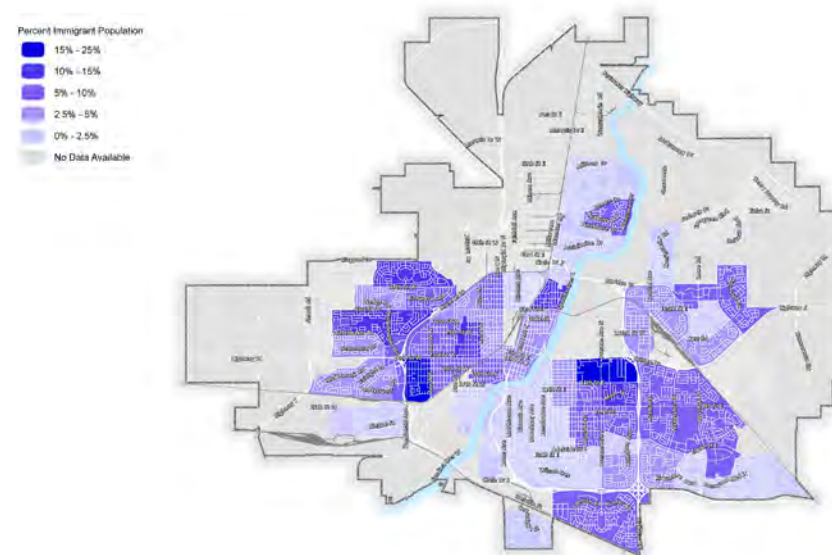


Figure 11 - Immigrant Population - Equity Analysis



Percent Aboriginal Population

- 20% - 48%
- 15% - 20%
- 10% - 15%
- 5% - 10%
- 0% - 5%
- No Data Available

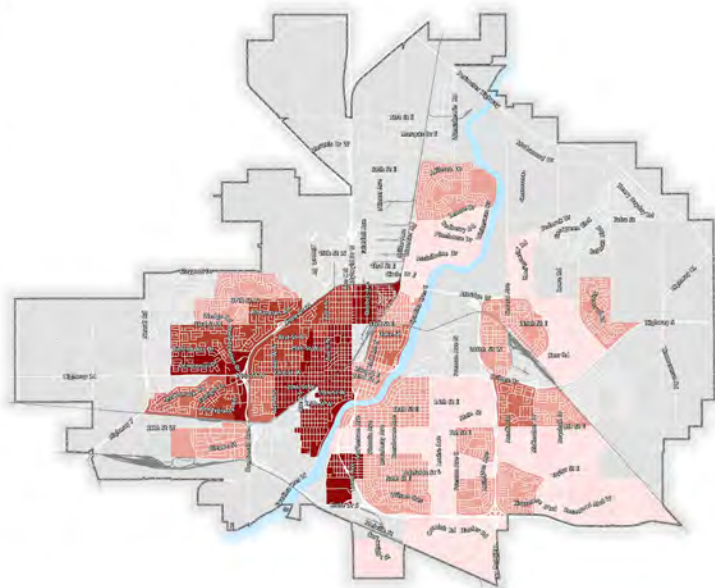


Figure 12 - Aboriginal Population - Equity Analysis

Percent Low Income Population

- 30% - 55.6%
- 15% - 30%
- 10% - 15%
- 5% - 10%
- 0% - 5%
- No Data Available

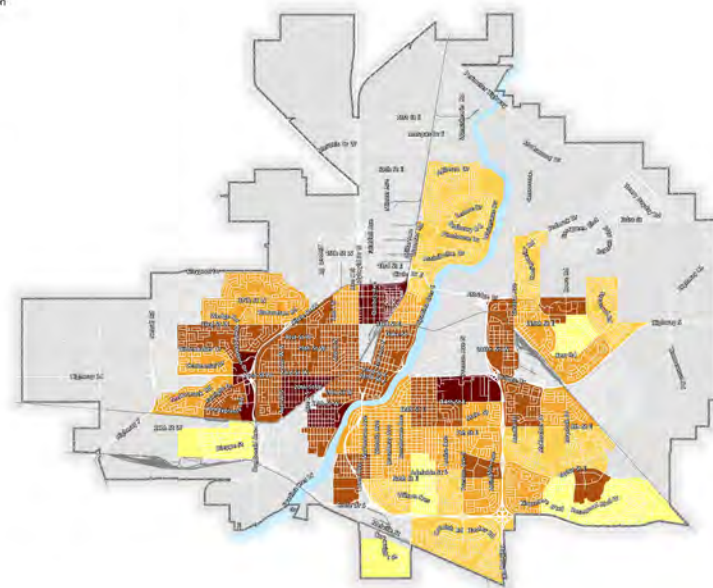


Figure 14 - Low Income Population - Equity Analysis

Percent Elder Population (Over 65)

- 25% - 31%
- 18% - 25%
- 12% - 18%
- 8% - 12%
- 0% - 8%
- No Data Available

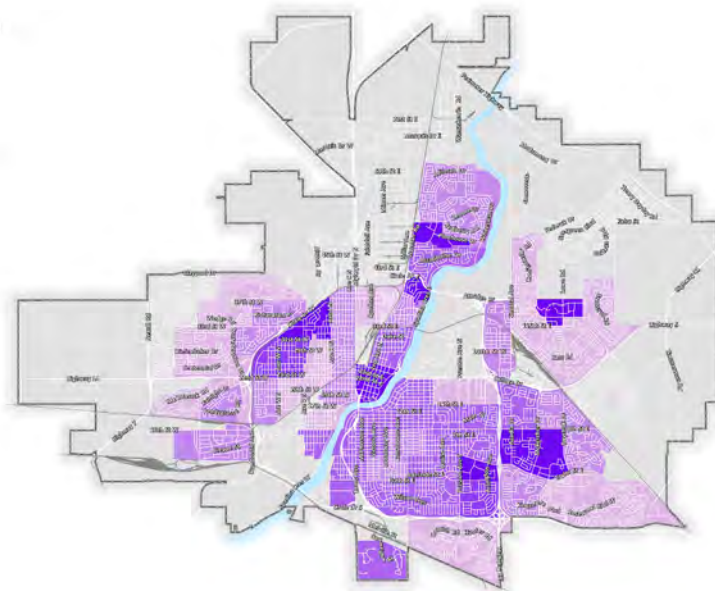


Figure 13 - Senior Population - Equity Analysis

## Overall Equity Need

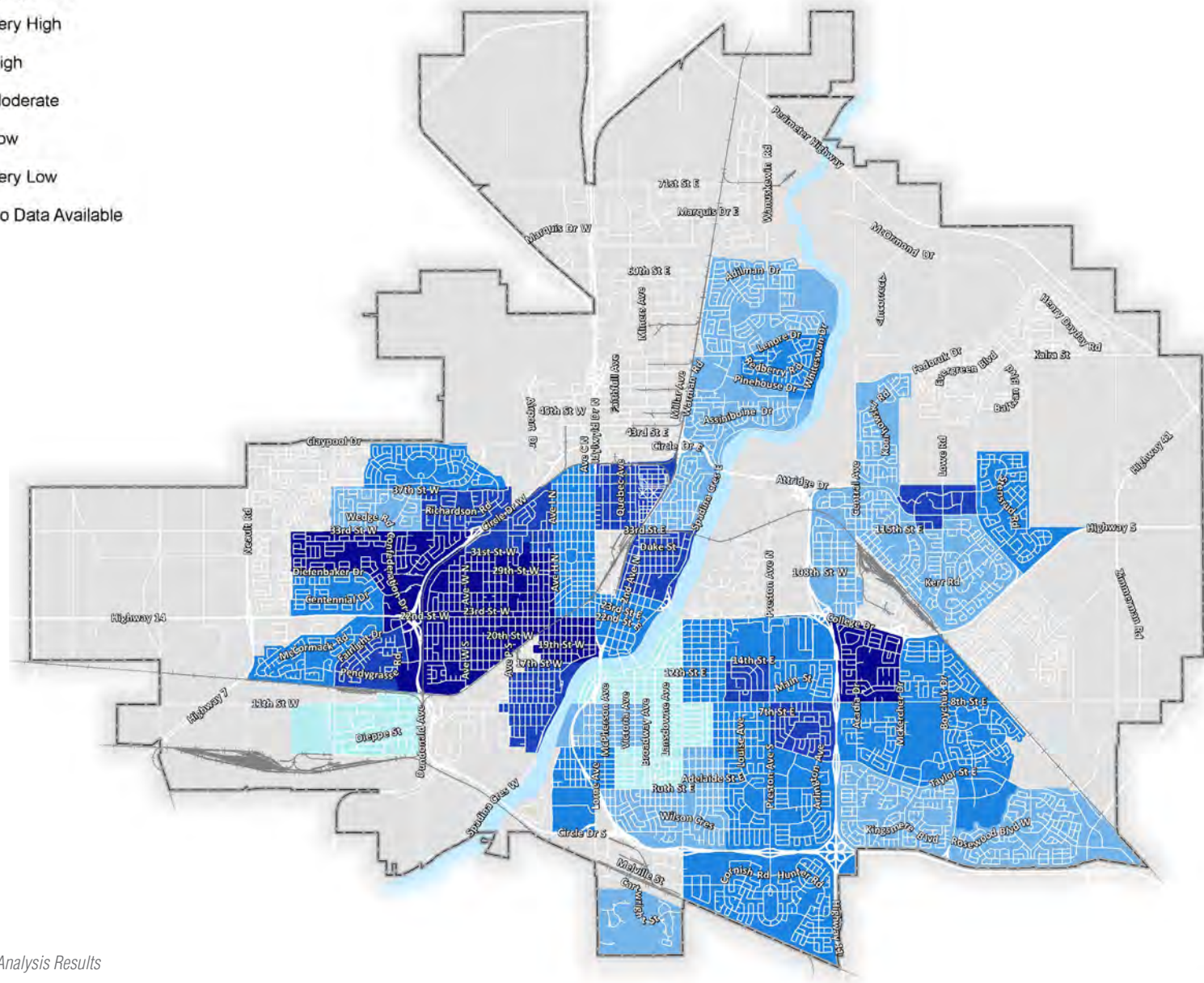
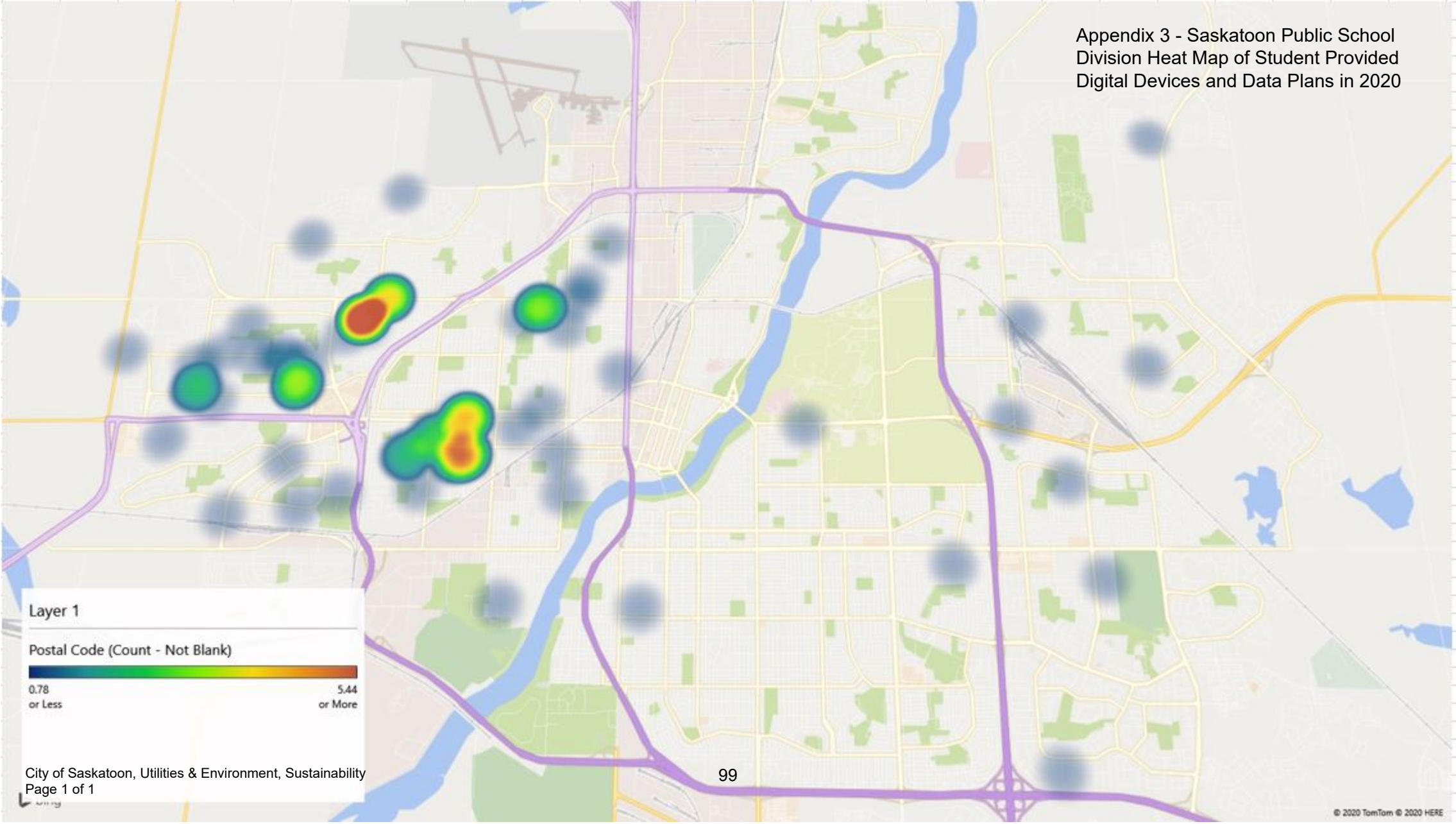


Figure 15 - Equity Analysis Results

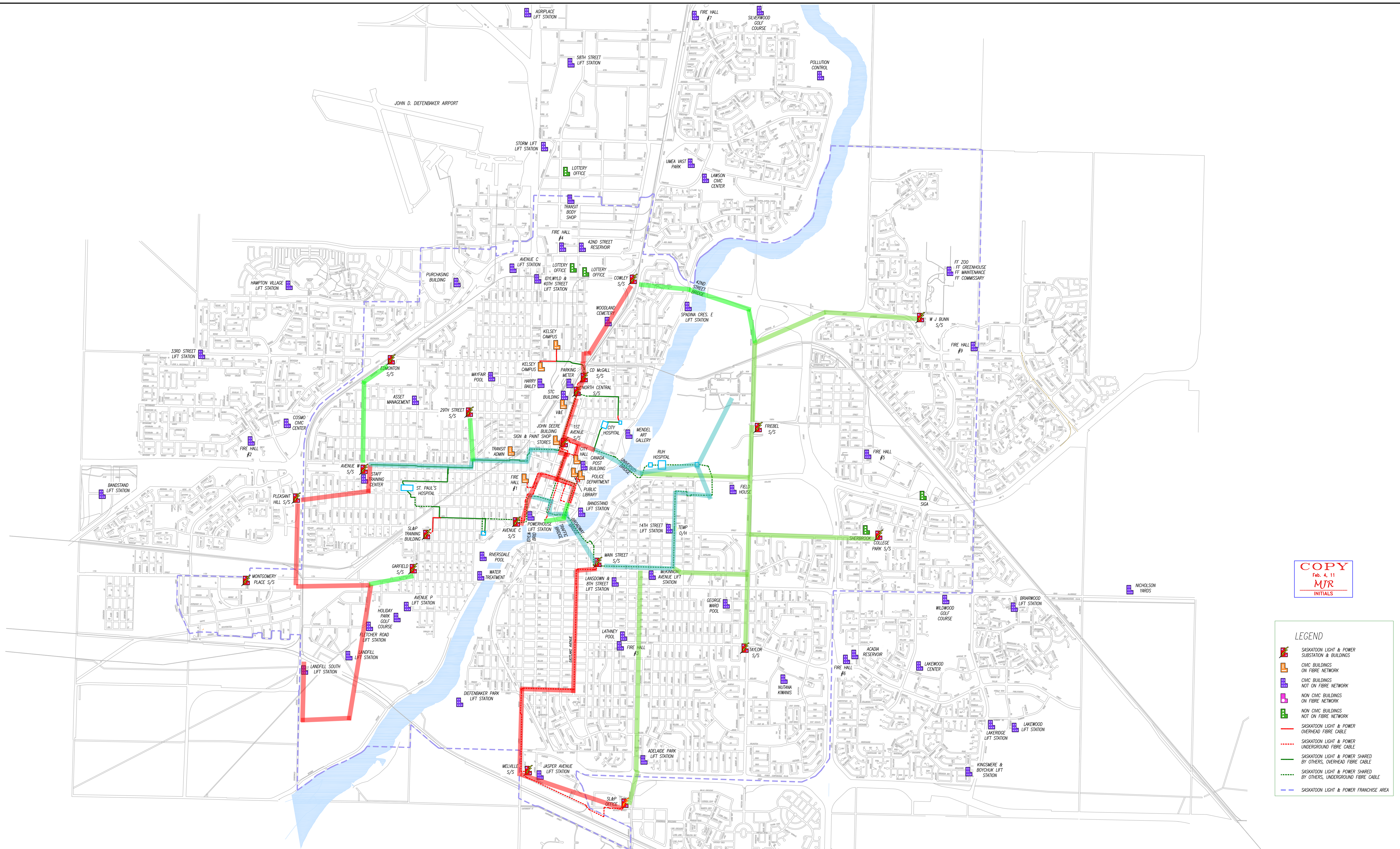






Layer 1

Postal Code (Count - Not Blank)





REF DWG	DESCRIPTION	REF DWG	DESCRIPTION	REVISION DESCRIPTION	LATEST REVISION	ORIGINAL	 	COS FIBRE NETWORK	SCALE	REV NO
				ADDED LIFT STATIONS AND RESERVOIRS MJR	REVISED BY MJR	DRAWN BY MJA			Horizontal NTS	1
					DATE FEB 4/11	DATE JUL 28/10			Vertical	
					CHECKED BY	DESIGNED BY			DRAWING NUMBER	
					DATE	DATE			F2-101	
					APPROVED BY 100	APPROVED BY				
					DATE	DATE				

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**Subject:** FW: Email - Communication - Sherry Tarasoff - Public Wi-Fi Pilot Project Update - CK 261-18

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**From:** Web NoReply <[web-noreply@Saskatoon.ca](mailto:web-noreply@Saskatoon.ca)>

**Sent:** Sunday, February 6, 2022 3:07 PM

**To:** City Council <[City.Council@Saskatoon.ca](mailto:City.Council@Saskatoon.ca)>

**Subject:** Email - Communication - Sherry Tarasoff - Public Wi-Fi Pilot Project Update - CK 261-18

--- Replies to this email will go to [REDACTED] ---

Submitted on Sunday, February 6, 2022 - 15:07

Submitted by user: Anonymous

Submitted values are:

Date Sunday, February 06, 2022

To His Worship the Mayor and Members of City Council

First Name Sherry

Last Name Tarasoff

Phone Number

Email [REDACTED]

Address [REDACTED] Peterson Cres

City Saskatoon

Province Saskatchewan

Postal Code [REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject 7.1.2 Public Wi-Fi Pilot Project Update

Meeting (if known) SPC-EUCS on Monday, February 7th

Comments

I have some questions about this Pilot Project:

How is the funding being spent (planning, implementation, operations, administration)?

The RFP will indicate that the signal coverage will allow unrestricted access to the internet. Why are there no restrictions? Even the complimentary Wi-Fi at City facilities has limits.

Does this report aim to provide all 1,453 residents with internet service speeds of 50 Mbps download and 10 Mbps upload simultaneously? I ask that the final assessment report respond with the actual number of unique users serviced and the minimum service speeds provided at any moment.

Since 2016, the City has had an agreement with Shaw Communications for free public Wi-Fi at civic facilities. Under this agreement, the City neither pays fees for the service nor receives revenue. This proposed Wi-Fi pilot project will be built from scratch and delivered by the City itself instead of using the qualified private service providers already in this area. Is this the best use of taxpayer dollars?

Thank you for your consideration,

Sherry Tarasoff

Attachments

Will you be submitting a video to be vetted prior to council meeting? No

The results of this submission may be viewed at:



# Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education

## ISSUE

New Industrial, Commercial and Institutional (ICI) waste regulations in Bylaw No. 8310, *The Waste Bylaw, 2004*, came into force on January 1, 2022 for recycling, and new ICI organics regulations are scheduled for July 2023.

The 2022-2023 operating budget submission proposed an option for a service level increase to accompany the regulation that included a support and education program to improve bylaw compliance, advance diversion targets and respond to stakeholder expectations. In lieu of approved operating funding, this report requests approval to proceed with the ICI recycling and organics regulation compliance and education work plan in 2022 and 2023 through the reallocation of capital funding.

## RECOMMENDATION

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

1. That \$159,400 from the Multi-Unit Organics project (P.10019) be directed to Waste Reduction Initiatives (P.01964) for implementation of the ICI compliance and education work plan outlined in Appendix 2, and the work scope for P10019 is adjusted as outlined in this report;
2. That Administration bring the following recommendation to the 2023 budget deliberations for approval: that \$284,400 from Solid Waste Reduction & Diversion Plan Development and Plan Implementation (P.10016) be directed to Waste Reduction Initiatives (P.01964) for implementation of the ICI compliance and education work plan outlined in Appendix 2, and the work scope for P10016 is adjusted as outlined in this report;
3. That the ICI recycling and organics regulation compliance and education work plan outlined in Appendix 2 be approved for 2022 and 2023 pending funding approval; and
4. That Administration report back in 2023 with a service-level and program strategy for the sustained operation of the ICI waste diversion regulation program to commence in 2024.

## BACKGROUND

The City of Saskatoon (City) has adopted a target of diverting 70% of waste from the City's landfill. The ICI regulation could result in an estimated 2,400 tonnes of recyclables and 3,000 tonnes of organics diverted from the City's landfill per year, contributing an additional 5% to the City's waste diversion rate. From a community perspective, a total of 17,000 tonnes of recycling and 21,000 tonnes of organics could be diverted from area landfills.

At the 2022-2023 Preliminary Business Plan and Budget meeting on November 29 to December 1, 2021, the motion “That Industrial, Commercial, and Institutional (ICI) Sector Waste Diversion Regulation - Operations and Sustainment \$159,400 in 2022 and \$125,000 in 2023 be approved” was defeated.

At the 2022/23 Preliminary Business Plan and Budget meeting the [2022 and 2023 Environmental Health Business Line Capital Budgets](#) were approved including capital projects P.10016: Solid Waste Reduction and Diversion Development Plan and Plan Implementation, and P.10019: Multi-Unit Organics.

At its meeting on August 30, 2021, City Council passed Bylaw No. 9775, *The Waste Amendment Bylaw, 2021*. The amendment added recycling and organics requirements and program details for the ICI sector waste diversion regulation.

A summary of key decisions, reports and resolutions is provided in Appendix 1 - ICI Waste Diversion – Reporting and Public Engagement Summary.

## **DISCUSSION/ANALYSIS**

### Initiative Status and Engagement

Bylaw No. 8310, *The Waste Bylaw, 2004*, now requires the ICI sector to have separate containers for recyclable materials, provide education to employees on proper waste handling, and ensure materials are taken to an appropriate facility. Similar regulations for organics will come into place in July 2023, for organizations that generate food or yard waste as part of their operations.

The ICI waste diversion service level and program (Appendix 2 - ICI Waste Diversion – Fully Funded Service Level Description) is an operating plan which uses education and enforcement to improve compliance with Bylaw No. 8310, *The Waste Bylaw, 2004*, and progress waste diversion goals. While the regulations within the bylaw can be in place without formal education and enforcement, the likelihood of achieving the waste diversion targets is higher with these components included in the program. As operating funding for long-term sustainment of this work was not approved for 2022-2023, reallocating funding from capital sources for 2022-2023 is an option to provide resources to support the regulations.

There are some funds remaining in Waste Reduction Initiatives (P.01964) to carry-out portions of this workplan in 2022. These funds were earmarked for additional communications during the launch year of each regulation. The available funds are not adequate to fully resource the education and compliance support work needed to support the ICI program and to progress diversion goals for this initiative. The remaining capital funding in P.01964 would allow the following work to occur in 2022:

- Revise and launch ICI Waste Diversion website with information about the new regulations;
- Operate ICI Waste Wizard for 2022;
- Revise and mail out Business Recycling Guide; and
- Develop Business Organics Guide for release (digital download or mail out) in 2023.

This report proposes a capital funding strategy for a work plan informed by the operating service level detailed in Appendix 2 for 2022 and 2023, and summarized below, to ensure the ICI sector is aware of the regulations and supported as they come into force. It also provides time to pilot or test the assumptions of the proposed level of service. Outcomes from this work in 2022-2023 can inform sustainment and service level considerations for the ICI operational program from 2024 onward, which will be discussed in later reporting.

### Engagement

The regulatory approach to ICI sector recycling and organics was developed through extensive stakeholder engagement. [Stakeholder engagement](#) in 2018 and 2019 emphasised both the importance of City led education to address barriers and the need for an option for businesses to seek an exemption from the requirements due to a variety of unique circumstances that could prohibit the ability to comply.

Engagement continued in 2021 through the launch of the ICI Working Group and a [representative survey](#) of the ICI sector. The majority of the feedback suggested that the ICI sector would like to see the City support their waste diversion through awareness and information, closely followed by offering additional diversion services. The ICI Working Group is a forum for stakeholders to discuss and provide recommendations to the City on issues that are related to the implementation of the ICI Recycling and Organics Regulation. Feedback was received on the types of education that would be useful to the sector, barriers to compliance, and the bylaw exemption eligibility and process.

### Best Practices from Other Jurisdictions

During the development of the ICI Waste Diversion Strategy (2018) a comprehensive scan of ICI waste diversion regulations across Canada and in the United States identified a variety of approaches to mandate ICI recycling and organic waste diversion. The results were used during the 2019 YXE talks trash engagement series to develop Saskatoon's program. Notably, the province of Ontario, Halifax Regional Municipality, the City of Lethbridge, and the City of Calgary have similar source separation regulations for the ICI sector.

The City of Calgary launched a similar regulation in 2016 and have provided ICI sector support through a mix of education, compliance, communications, program management and strategy. The first two years of the program focused on education and communications. During the subsequent four years (2018-2021) resources shifted from education to compliance. This work is funded through a mix of tax and reserves. See Appendix 3 - ICI Waste Diversion – City of Calgary Program Summary and Comparison for details.

### ICI Work Plan Overview

Appendix 2 details the ICI waste diversion program elements, which is the basis for the revised capital work plan for 2022 and 2023, including:

- 1) Education, with several services directed to the ICI sector including:

- An ICI specific webpage on Saskatoon.ca;
  - A business focused Waste Wizard and list of service providers;
  - An awareness campaign;
  - Targeted sub-sector education material; and
  - In-person education and troubleshooting opportunities.
- 2) Enforcement for bylaw compliance - begins with a one-year period where non-compliance will be addressed with educational tools and resources. Program staff will work directly with businesses to identify and overcome barriers such as service options, space, odors, and educational opportunities for employees. Following the first year, enforcement will mirror the current Waste Bylaw process; complaint based, education first enforcement, and educational blitzes.
- 3) Bylaw exemption administration. Exemption applications will be verified and approved by City administration. Businesses will be able to apply for an exemption from either the recycling or organic clause of the Bylaw if:
- The premises does not routinely generate recyclable or organic material;
  - There are risks that cannot be mitigated to the satisfaction of local waste processors and that inhibit the ability of the premises to dispose of waste as required;
  - Due to a large production of a single type of organic waste, the premises is unable to find a local waste processor; or
  - For any other reason outside of its control, the premises is unable to satisfy the requirements.
- 4) Data and continuous improvement services:
- ICI sector engagement – survey;
  - Developing a program to collect materials type and volume data from waste haulers;
  - ICI data for annual reporting (Integrated Waste Management Annual Report and National Solid Waste Benchmarking Initiative); and
  - Work with the ICI working group to receive feedback on implementation and support future initiatives.

Customer service can be carried out within existing operations and service levels, through the Customer Care Centre. With approval of additional capital resources, there would be both education and enforcement support to assist with responses to inquiries and complaints received through the Customer Care Centre.

Impact on Multi-Unit Organics: P.10019 and Waste Plan: P.10016 Projects

Funding to implement the recommendations of this report is proposed through the reallocation of capital funds from Multi-Unit Organics: P.10019 in 2022, and Solid Waste Reduction and Diversion Plan (SWR&DP) Development and Plan Implementation: P.10016 in 2023.

The reduced capital funding for Multi-Unit Organics: P.10019 in 2022, would still allow the project to proceed, albeit with an adjusted scope, if no further resources are

**Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education**

identified (Refer to Table 1, below). Scope that is not included in the 2022-2023 term would be included in business case development and capital planning for 2024 onward. External funding opportunities will be pursued for this initiative in the first half of 2022.

This report also proposes seeking approval during the 2023 budget deliberations to redirect capital in 2023 from SWR&DP and Plan Implementation: P.10016 which defines near- and medium-term Plan activities. Refer to Table 1 for a comparison of current and reduced scopes.

*Table 1: Capital Project Scope*

<i>Projects</i>	<i>Approved Current Scope</i>	<i>Proposed Reduced scope</i>
Multi-Unit Organics: P.10019	<p>Multi-unit organics pilot – minimum of 20 buildings</p> <p>Multi-unit organics engagement – phase 2</p> <p>Implementation and funding plan</p> <p>Eco-Ambassador program pilot</p>	<p>Multi-unit organics pilot – minimum of 15 buildings</p> <p>Multi-unit organics engagement – phase 2</p> <p>Implementation and funding plan</p>
Solid Waste Reduction and Diversion Plan Development and Plan Implementation: P.10016	<p>2022-2025 SWR&amp;DP near and middle term activities (4 years):</p> <ul style="list-style-type: none"> <li>• Project Management to advance development of new programs</li> <li>• Plan monitoring and reporting</li> <li>• Data and studies</li> <li>• Business case development</li> <li>• Funding applications</li> <li>• SWR&amp;DP updates</li> <li>• Partnership identification and development</li> <li>• Environmental cash grant annual contribution (\$10,000)</li> <li>• Coordination with projects led by other departments</li> </ul> <p>2022/2023 Projects:</p> <ul style="list-style-type: none"> <li>• Corporate Construction &amp; Demolition waste diversion options</li> <li>• Recovery Park market development</li> <li>• Elm waste behaviour change</li> <li>• Landfill disposal ban research</li> </ul>	<p>2022-2023 SWR&amp;DP near and middle term activities (2 years):</p> <ul style="list-style-type: none"> <li>• Project Management to advance development of new programs</li> <li>• Plan monitoring and reporting</li> <li>• Data and studies</li> <li>• Business case development</li> <li>• Funding applications</li> <li>• SWR&amp;DP updates</li> <li>• Partnership identification and development</li> <li>• Environmental cash grant annual contribution (\$10,000)</li> <li>• Coordination with projects led by other departments</li> </ul> <p>2022/2023 Projects:</p> <ul style="list-style-type: none"> <li>• Corporate Construction &amp; Demolition waste diversion options</li> <li>• Recovery Park market development</li> <li>• Elm waste behaviour change</li> <li>• Landfill disposal ban research</li> </ul>

**Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education**

	<b>2024-2025 Projects:</b> <ul style="list-style-type: none"> <li>• Waste Characterization Study (staff resource only)</li> <li>• Special/Bulky Waste Program feasibility study</li> <li>• SWR&amp;DP Update</li> <li>• Public Space and Event Waste Reduction feasibility study</li> </ul>	<b>2024 Projects:</b> <ul style="list-style-type: none"> <li>• Waste Characterization Study (staff resource only)</li> </ul>
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**Comparison of Recommendation and Current Status**

The advantages and disadvantages of proceeding with the proposed ICI work plan, compared to the basic work scope that can be carried out with the remaining capital funding, are outlined in Table 2 below.

*Table 2: Advantages and Disadvantages*

	<b>Recommendation to Proceed with Revised ICI Work Plan with Additional Capital Funding</b>	<b>Basic Work Scope with Remaining Capital Funding Only</b>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• More likely to meet waste diversion projections</li> <li>• More likely to meet ICI sector expectations to have a support program in place</li> <li>• The regulations of the <i>Waste Bylaw</i> will be enforced</li> <li>• Ability to track ICI sector waste reduction and diversion improvements</li> <li>• No projected workload increases for Service Saskatoon as additional staff available to assist</li> <li>• Residential satisfaction likely to be higher with program that includes enforcement, since the ICI sector will be accountable for diverting the same materials as residents.</li> </ul>	<ul style="list-style-type: none"> <li>• Does not require additional funding</li> <li>• Will eliminate near-term compliance requirements while the ICI sector remains impacted by COVID-19</li> <li>• The regulations can remain in the <i>Waste Bylaw</i> and not be enforced; no bylaw update required</li> <li>• The ICI Waste Diversion program is developed and can be implemented in the future if resources become available</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>• Requires diversion of capital funds from other projects, reducing their scope of work</li> <li>• Risk that program operations would not be funded in 2024</li> <li>• Will have near-term compliance requirements while the ICI sector remains impacted by COVID-19</li> <li>• Temporary staff will be hired for the program increasing the risk of disruption by staff turnover</li> </ul>	<ul style="list-style-type: none"> <li>• Least likely to meet waste diversion projections</li> <li>• Does not meet the ICI sector's expectations to have a City operated program in place</li> <li>• Likely to increase the workload for Service Saskatoon as members of the ICI sector look for information about the new</li> </ul>

**Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education**

		bylaw or complaints of non-compliance are received <ul style="list-style-type: none"> <li>• A period of non-enforcement of the bylaw may make future enforcement more difficult.</li> <li>• Most likely to result in low customer satisfaction if both education and enforcement are not available</li> <li>• No ability to track ICI sector waste reduction and diversion improvements</li> </ul>
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**FINANCIAL IMPLICATIONS**

\$550,000 in capital funding was allocated to The ICI Waste Diversion Regulation in the 2020-2021 Multi-Year Budget and these funds are expected to be fully spent by the end of 2023. From this, \$50,000 in 2022, and \$70,000 in 2023, are earmarked to support the project management and additional communications costs anticipated with the launch of the recycling and organics work plan. As originally defined in the program or level of service, it is estimated that the work plan requires \$284,400 annually for the ongoing staffing and program delivery, with additional capital funds required in the first two years to support the launch of each program. These budgetary assumptions are summarized in Table 3: ICI Budget.

*Table 3: ICI Budget*

Year	Phase	Capital	Operating or Workplan 2022-2023	TOTAL
	Capital Funding	\$(550,000)		\$(550,000)
2020	Program Development	\$ 70,000		\$ 70,000
2021	Program Development	\$ 235,000		\$ 235,000
2022	Recycling Launch	\$ 175,000	\$159,400	\$334,400
2023	Organics Launch	\$70,000	\$284,400	\$354,400
	<b>TOTAL</b>	<b>\$0</b>	<b>\$443,800</b>	<b>\$443,800</b>

Funding to implement the recommendations of this report is proposed through the reallocation of capital funds from the Multi-Unit Organics: P.10019 (\$159,400), and in 2023, Solid Waste Reduction and Diversion Plan Development and Plan Implementation: P.10016 (\$284,400). The capital reallocation plan in Table 4 utilizes the budget and work plan assumptions from Table 3: ICI Budget. To successfully complete this work scope, the reallocation is summarized as follows:

## Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education

Table 4: Capital Reallocation Plan

Project	Approved Budget - 2022	Approved Budget - 2023	Approved Total	Revised Budget - 2022	Revised Budget - 2023	Revised Total	Difference - Total
Waste Reduction Initiatives (P.01964)	\$0	\$0	\$0	\$159,400	\$284,400	<b>\$443,800</b>	\$443,800
Multi-Unit Organics (P.10019)	\$500,000	\$380,000	<b>\$880,000</b>	\$340,600	\$380,000	<b>\$720,000</b>	(\$159,000)
Solid Waste R&DP (P.10016)	\$240,000	\$560,000	<b>\$800,000</b>	\$240,000	\$275,600	<b>\$515,000</b>	(\$284,000)

### Other Financial Implications

When fully implemented, this program is expected to result in the diversion of 5,400 tonnes of recyclable and organic waste from the City's landfill which would result in a landfill tipping fee revenue reduction of \$567,000 and up to \$25,020 reduction in entry fees per year.

Conversely, the diversion would also result in extending landfill life by approximately 5% and preserving approximately \$362,000 of landfill airspace value per year (based on 2018 landfill airspace values).

## **OTHER IMPLICATIONS**

### Environmental Implications

The ICI sector generates 68% of all garbage sent to Saskatoon and area landfills. Approximately 45% (75,800 tonnes) of this waste consists of materials that could be diverted. Compliance with the regulation is expected to result in an estimated 2,400 tonnes of recyclables and 3,000 tonnes of organics diverted from the City's landfill each year, contributing to the City landfill waste diversion target rate of 70% diversion. Diverting 5,400 tonnes of waste from the City's landfill would reduce community greenhouse gas (GHG) emissions by 5,400 tonnes of CO<sub>2e</sub> annually.

An additional 17,000 tonnes of recycling and 21,000 tonnes of organics are projected to be diverted from other landfills in the region each year. This annual reduction compared to landfilling would be approximately 38,000 tonnes of CO<sub>2e</sub>.

The CO<sub>2e</sub> emission reduction estimates for the ICI Waste Diversion program are 43,400 tonnes of CO<sub>2e</sub> annually which represents approximately 1.1% of the 2014 community GHG emission baseline.

### Triple Bottom Line Analysis

TBL analysis of the ICI Regulation Education and Support Program, completed in 2021, is showing it is:

- “on track” in the environmental benefits area;
- “meeting expectations” in the social benefits area;
- “exceeding expectations” in the economic and financial benefits area; and
- “leading the way” in the good governance benefits area.

### **NEXT STEPS**

Following the approval of this report, Administration will begin implementing the program outlined in Appendix 2. Planning and implementation will also continue for the Curbside Organics program, Recovery Park, and the waste utilities. Reporting in Q1 2023 is planned to assess ongoing waste diversion education and enforcement requirements for all waste programs.

### **APPENDICES**

1. ICI Waste Diversion – Reporting and Public Engagement Summary
2. ICI Waste Diversion – Fully Funded Service Level Description
3. ICI Waste Diversion – City of Calgary Program Summary and Comparison

#### **Report Approval**

Written by: Ben Brodie, Environmental Project Manager  
Reviewed by: Katie Burns, Manager, Community Leadership and Program Development  
Dan Gauthier, Manager, Environmental Projects and Protection  
Jeanna South, Director of Sustainability  
Approved by: Angela Gardiner, General Manager, Utilities and Environment

Admin Report - Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Bylaw Compliance and Education.docx

## ICI Waste Diversion – Reporting and Public Engagement Summary

### Reporting History

May 2017	City Council received <a href="#">The Waste Diversion Opportunities report</a> . It noted that ICI waste diversion was critical to increase Saskatoon's waste diversion rate. The consultant report included recommendations to develop diversion requirements for the ICI sector in addition to disposal bans of divertible materials at the City's landfill.
August 2017	City Council approved <a href="#">The Organics Opportunities report</a> recommendation: "That Administration continue research and program development on an organics program for the Residential, Industrial, Commercial, and Institutional sectors".
November 2017	<p>The Standing Policy Committee – Environment, Utilities and Corporate Services received the <a href="#">Industrial, Commercial and Institutional Waste Diversion Opportunities report</a> which provided an overview of waste diversion opportunities for the ICI sector.</p> <p>City Council approved \$156,000 be transferred into Capital Project #2184 for the development of the ICI Waste Diversion Strategy.</p> <p>City Council also resolved "That opportunities for Food Reclamation be considered in the development of a Waste Reduction strategy for the Industrial, Commercial, and Institutional sector; and, that relevant stakeholders be consulted in this consideration, including but not limited to the Saskatoon Food Council, the Saskatoon Food Bank and Learning Centre, the Friendship Inn, the Saskatoon Waste Reduction Council and the Saskatoon Poverty Reduction Partnership".</p>
October 2018	<p>The Standing Policy Committee – Environment, Utilities and Corporate Services received the <a href="#">Industrial, Commercial, and Institutional (ICI) Waste Diversion Strategy – Update and Engagement Strategy</a> report, which provided a strategic framework outlining the proposed scope of the ICI Waste Diversion Strategy that was used for engagement and research.</p> <p>City Council approved <a href="#">the following motion</a> regarding the curbside organics processing Request for Proposals (RFP):</p> <p>"That the Administration amend the draft RFP to reflect the City's intent to implement an organics bylaw for the Industrial, Commercial and Institutional (ICI) sector within the next 2-4 years."</p>
January 2019	The <a href="#">Waste Diversion Plan Update</a> report to the Standing Policy Committee – Environment, Utilities and Corporate Services provided an

	update on all waste management program development, including the ICI sector.
August 2019	The Preliminary <a href="#">Low Emissions Community (LEC) Plan</a> Initiatives for 2020-2021 were brought to the Standing Policy Committee – Environment, Utilities and Corporate Services and the Governance and Priorities Committee. It identified the ICI Waste Diversion Strategy as a planned project in support of the LEC Plan’s waste-related emissions target, which is the equivalent of achieving diversion rates of 90-95% by 2050.
November 2019	In the <a href="#">2020-2021 multi-year budget</a> , City Council approved \$700,000 for waste diversion initiatives. \$550,000 was earmarked for the development of recycling and organics policies and programs for the ICI sector and the remaining \$150,000 for other program development.
January 2020	<a href="#">City Council approved requirements</a> to enhance waste diversion in the Industrial, Commercial, and Institutional sector. The option approved by City Council included: <ul style="list-style-type: none"> <li>• The development of a comprehensive education and support program aimed at increasing compliance by making the process easy to understand, offer resources for the business, and reduce administrative burden for the business as detailed in Appendix 1.</li> <li>• A projected annual operating cost between \$220,000 to \$340,000 (depending on level of enforcement), including 1.2 to 2.2 FTEs for administration and enforcement officers, plus ongoing communications.</li> </ul>
January 2021	City Council received <a href="#">Saskatoon's Solid Waste Reduction and Diversion Plan</a> which provided a detailed picture of the City’s progress on waste diversion and laid out a roadmap for actions needed to achieve the 70% waste diversion target including ICI recycling and organics.
May 2021	The Standing Policy Committee on Environment, Utilities and Corporate Services received the <a href="#">Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Implementation Update report</a> which provided revised timelines due to COVID-19 impacts.
August 2021	City Council passed <a href="#">Bylaw No. 9775, The Waste Amendment Bylaw, 2021</a> . The amendment added recycling and organics requirements and program details for the ICI sector waste diversion regulation.
October 2021	The Standing Policy Committee on Environment, Utilities and Corporate Services received the <a href="#">Waste Diversion Regulation for the Industrial, Commercial and Institutional Sector – Program Service Level</a> report for information.

December 2021	<p>At the <a href="#">2022/23 Preliminary Business Plan and Budget</a> meeting, the motion “That Industrial, Commercial, and Institutional (ICI) Sector Waste Diversion Regulation - Operations and Sustainment \$159,400 in 2022 and \$125,000 in 2023 be approved” was defeated.</p> <p>This results in no operating funds for the Industrial, Commercial and Institutional Sector – Program Service Level.</p>
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## Public Engagement

July 2019	<p>The 2019 ICI Waste &amp; Recycling Survey and the 2019 Waste &amp; Recycling Survey (residential) findings indicate that both residents and members of the ICI sector support programs and policies that require the ICI sector to divert recyclables and organics.</p> <p>The 2019 ICI Waste and Recycling Survey found that of the 96% of the ICI sector that generates recyclable materials, 90% supported the City requiring organizations to recycle their recyclable waste. The same survey found that of the 41% that generate organic waste, 85% supported the City requiring organizations to compost or otherwise divert their organic waste from landfill.</p>
March – December 2019	<p>As part of the YXE Talks Trash engagement series, City Administration engaged with 870 participants from businesses and organizations through workshops, online surveys, and face-to-face meetings to develop this approach. <a href="#">The engagement results</a> and subsequent recommendations were presented to City Council in January 2020.</p>
April 2021	<p>The City launched an ICI Working Group, consisting of 23 community partners, to help guide the development of a Service Level by identifying barriers to complying with the new regulations and educational tools that would be useful to the ICI sector.</p>
June 2021	<p>The City conducted a <a href="#">quantitative study</a> with organizations in the ICI sectors with the following objectives:</p> <ul style="list-style-type: none"> <li>• Determine current recycling, organics, and construction and demolition waste diversion behaviours.</li> <li>• Determine support for mandatory recycling and organics, and program options.</li> <li>• Document preconceived barriers to obtaining recycling and organics services and identify tools and resources that can help businesses and organizations overcome those barriers.</li> </ul>

## ICI Waste Diversion – Fully Funded Service Level Description<sup>1</sup>

### Proposed Service Level for the Industrial, Commercial, and Institutional (ICI) Sector Waste Diversion Regulation

The following describes the proposed service level for the ICI Waste Diversion Regulation Program.

#### Scope

Service Level (SL) documents are prepared to allow customers of the City of Saskatoon (City) to review and understand the services currently provided. This document includes activities completed under the Waste Reduction service line. This service may be completed by various departments in the City.

#### Service Overview – what we do

The ICI Waste Diversion Regulation program focuses on education and compliance services to the ICI sector. The services will ensure awareness of the recycling and organics requirements, education is available through a variety of platforms on how to meet the requirements, a process is available for exemptions, and there is adequate enforcement capacity to follow-up on complaints and assist in education.

This is a new service level. Currently, there is no specific waste reduction or diversion education for the ICI sector and no enforcement program for the updated Waste Bylaw (Bylaw No.8310).

#### Purpose – why we do it

Saskatoon has a waste diversion target of 70%. The ICI sector waste diversion service level is projected to improve the City's diversion rate by 5%. The program aims to increase compliance by making the regulation easy to understand and offering resources and reducing administrative burden for businesses.



<sup>1</sup> The Service Level was presented to the Standing Policy Committee on Environment, Utilities and Corporate Services October 4, 2021.

<b>Programs within Service Line</b>	<b>Service Attributes and Customer Values</b>	<b>Service Level Outcomes</b>	<b>Customer Performance Measures</b>
Customer Service	Responsiveness, Quality	The Customer Service Centre provides centralized 24-hour customer service through phone or email.	<p>24/7 dedicated customer service call centre used to take inquiries, book service requests and dispatch City education and enforcement staff.</p> <p>Emails acknowledged within two business days.</p> <p>Up to date knowledge base and customer relationship management software.</p>
Education	Environmental Responsibility, Quality of Life, Reliability	The education program will provide accessible information regarding waste diversion for the ICI sector.	<p>Education tools and resources for the ICI sector are relevant, accessible, and up to date. For example:</p> <ul style="list-style-type: none"> <li>• Webpage content</li> <li>• Recycling and Organics Guide</li> <li>• Waste diversion directory</li> </ul> <p>Annual communications plan and awareness campaign.</p> <p>Sub-sector targeted education resources (ex. Restaurants, schools).</p> <p>Integration and coordination with residential waste reduction and diversion education programs where appropriate.</p>
Bylaw Compliance	Safety, Responsive, Quality, Efficiency	Bylaw compliance ensures that the Waste Bylaw is being followed by members of the ICI sector.	<p>Complaint follow-ups of non-compliance received through the 24-hour customer service centre.</p> <p>Site-visits for issues. Provide expertise on concerns such as space or odors.</p>

			Education blitz's – site-visits to certain areas of the City or to certain sectors, providing education first with the potential of issuing tickets if compliance is not achieved.
Bylaw Exemption Administration	Responsive, Quality, Efficiency	Exemption process that is cost effective and easy for eligible businesses.	<p>Provide self-declaration exemption form on Saskatoon.ca.</p> <p>Grant eligible businesses or organizations exemption from the Waste Bylaw.</p> <p>Conduct site inspections to verify exemptions are valid.</p>
Data and Continuous Improvement	Quality, Efficiency, Reliability	Provide open and accessible information to the public. Ensure continuous improvement is built into regular operations.	<p>Biannual sector engagement – survey.</p> <p>Create program to collect material types and volume data from waste haulers.</p> <p>Prepare ICI data for annual reporting (Integrated Waste Management Annual Report and National Solid Waste Benchmarking Initiative).</p> <p>Maintain the ICI working group to receive feedback on implementation and support future initiatives.</p>

### Resource Allocation: what does it cost

All costing information presented is estimated based on available data.

Service Line	Programs	Budget
Waste Reduction	<p>ICI Waste Diversion</p> <ul style="list-style-type: none"> <li>• Customer Service</li> <li>• Education</li> <li>• Bylaw Compliance</li> <li>• Bylaw Exemptions</li> <li>• Data and Continuous Improvement</li> </ul>	\$285,000

## Supporting information

These services are delivered in collaboration between Service Saskatoon, the Sustainability Department and the Water and Waste Operations Department as shown in the diagram below.

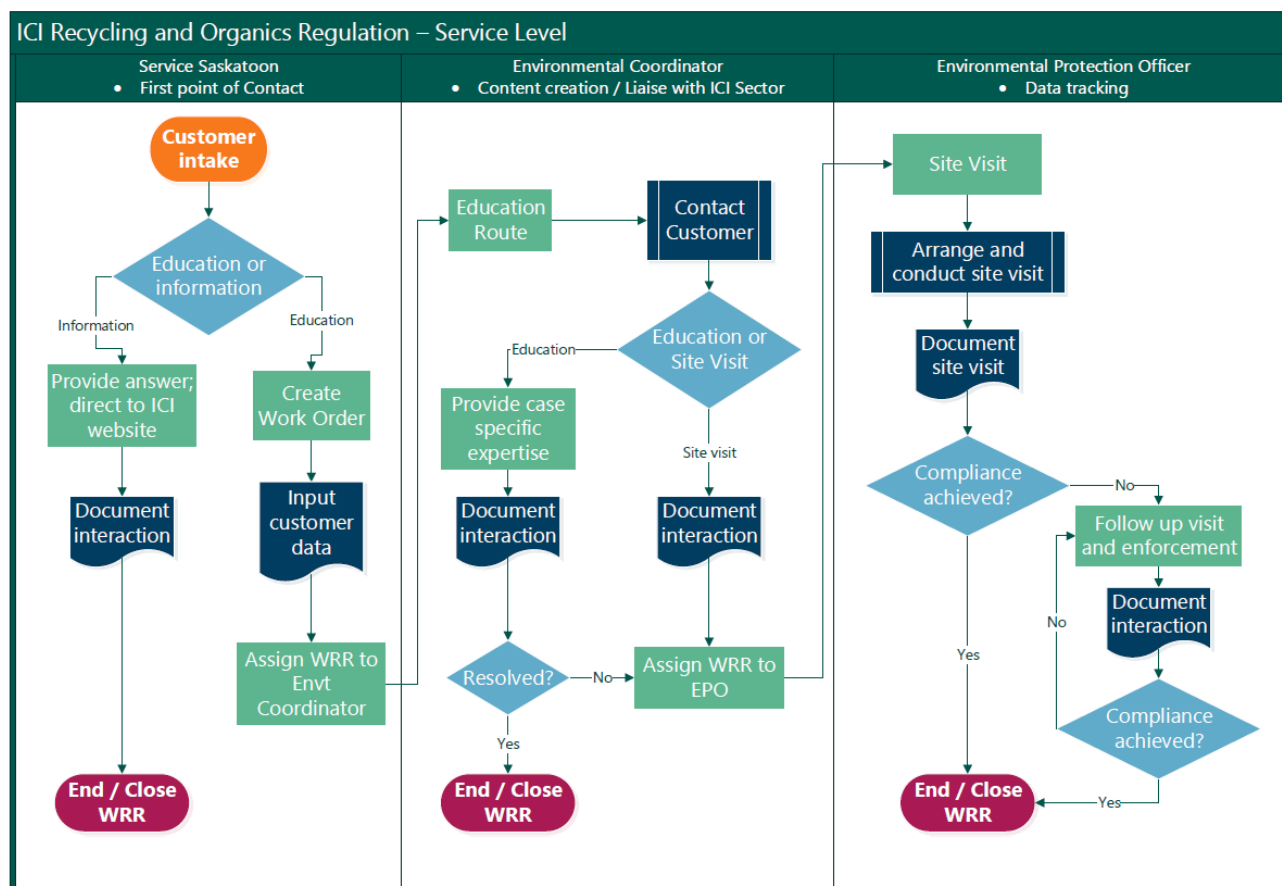
## Constraints

Risk factors and variances that impact the ability to deliver the service include:

- The service line budget estimates are based on research and similar services provided by the City. Adjustments may be required in the future.
- This service level document should be reviewed and updated in 2024 after all the Bylaw requirements have come into force.

## Supporting references

The support program is tailored to the ICI sector requirements as detailed in [Bylaw No. 9775, The Waste Amendment Bylaw, 2021](#)



## ICI Waste Diversion – City of Calgary Program Elements

The City of Calgary has a similar waste management system and operates in a comparable climate and geographic region making them a useful benchmark for Saskatoon. Having implemented an ICI waste diversion regulation in 2016, the City of Calgary has six years of experience and have shared reports and insights throughout the development of Saskatoon's program. Table 1 provides a comparison of the population, businesses licence numbers and waste management services in Calgary and Saskatoon.

*Table 1. Calgary and Saskatoon Population and Business Comparison*

	<b>Calgary</b>	<b>Saskatoon</b>
Population (CMA) 2020	1,543,283	336,614
Business Licences	34,359 <sup>1</sup>	6,677
Waste management system highlights	Residential: <ul style="list-style-type: none"> <li>• Black, blue and green cart service</li> </ul> Multi-unit: <ul style="list-style-type: none"> <li>• Garbage, recycling and organics requirements</li> </ul> ICI: <ul style="list-style-type: none"> <li>• Garbage, recycling and organics requirements</li> </ul> Infrastructure: <ul style="list-style-type: none"> <li>• 3 municipally owned landfills</li> <li>• Recycling depots</li> </ul>	Residential: <ul style="list-style-type: none"> <li>• Black, blue and green cart service</li> </ul> Multi-unit: <ul style="list-style-type: none"> <li>• Garbage and recycling service</li> </ul> ICI: <ul style="list-style-type: none"> <li>• Garbage, recycling and organics (2023) requirements</li> </ul> Infrastructure: <ul style="list-style-type: none"> <li>• 1 municipally owned landfill</li> <li>• Recycling depots</li> </ul>

The City of Calgary and City of Saskatoon ICI Waste Diversion Programs are both based on a bylaw regulating recycling and organic waste diversion. Other program elements are shown in Table 2. Saskatoon's program includes two unique aspects described below and highlighted yellow in the table.

First, Saskatoon offers the opportunity for businesses to apply for a bylaw exemption if they meet certain requirements. Bylaw exemption was identified as a key program element during the public engagement process.

Second, Saskatoon plans to develop a process to collect ICI waste data including the quantities of garbage, recycling and organics generated and collected in the city. This will allow the City so accurately track waste diversion from the ICI sector who's waste

<sup>1</sup> Calgary has approximately 34,000 licenced businesses (<https://data.calgary.ca/Business-and-Economic-Activity/Calgary-Business-Licenses-Data-Lens/6zmq-cx7g>); around 5 times the amount in Saskatoon (6,500).

primarily ends up in private landfills outside of the city. This will require staff time to develop and administer.

*Table 2. Calgary and Saskatoon ICI Program Comparison*

<b>Program Elements</b>	<b>Notes</b>	<b>FTE's</b>	<b>Notes</b>	<b>FTE's</b>
1. <i>Customer Service</i>	311	0.0	Service Saskatoon	0.0
2. <i>Education</i>	Education (1.5) Communications (0.5)	2.0	Environmental Coordinator (0.5) Communications (0.1)	0.6
3. <i>Enforcement</i>	Enforcement staff have increased from 1 to 3 FTE's over time	1.5	Environmental Protection Officer (0.5)	0.5
4. <i>Bylaw Exemption</i>	Not included in Calgary program	0.0	Environmental Protection Officer (0.5)	0.5
5. <i>Data and Continuous Improvement</i>	Program management and strategy	0.75	ICI data management (0.25) Program management and strategy (0.25)	0.5
<b>Total</b>		<b>4.25</b>		<b>2.1</b>

### **City of Calgary – Progression Over Time**

#### *Staff*

Since the inception of the ICI Waste Diversion Regulation in 2016, the City of Calgary has had 4-6 FTE's working on the program (the numbers provided are an estimate as FTE's work in other areas of waste and bylaw compliance as well). The program has shifted from education to enforcement-focused over 6 years as more businesses become compliant with the Waste Bylaw requirements (Table 3).

*Table 3. City of Calgary: Approximate FTE's supporting the ICI Waste Bylaw*

	<b>Approx. FTE's</b>	<b>Education</b>	<b>Compliance</b>	<b>Comms</b>	<b>Program Management</b>	<b>Strategy</b>
<b>2016</b>	4	2	1	0.5	0.5	-
<b>2017</b>	4	2	1	0.5	0.5	-
<b>2018</b>	3.25	1.5	1	0.25	0.5	-
<b>2019</b>	3.25	1.5	1	0.25	0.5	-
<b>2020</b>	4.25	1.5	2	0.25	0.5	-
<b>2021</b>	5.75	1.5	3	0.25	0.5	0.5
<b>2022</b>	4.5	0.25	3	0.25	0.5	0.5

### *Education and compliance*

In 2020, the City of Calgary started proactive inspections for businesses. Prior to this, compliance checks were complaint-based and there was a focus on education. The need to transition from education to enforcement can be seen in the reduction of 311 requests and education presentations over time with the first two years of the ICI Waste Diversion Program requiring the most education (Table 4).

*Table 4. City of Calgary: Education and Compliance for the ICI Waste Bylaw*

	<b>Total 311 Requests</b>	<b>Compliance Check</b>	<b>Education Presentations</b>
<b>2016</b>	379	26	64
<b>2017</b>	354	54	66
<b>2018</b>	168	69	24
<b>2019</b>	134	60	11
<b>2020</b>	73	325	2
<b>2021</b>	42	345	1

Aside from presentations, program staff also do the following and most have continued to do so through the pandemic:

- ICI Working Group
- Community of Practice (COP): Property Managers
- COP: Post-Secondary Institutions
- Green Calgary Hauler Directory (Paid Partnership)
- Green Calgary Workplace (Paid Partnership)
- Rethinking Waste Program: 2018 and 2019 – to gain a better understanding of small businesses (has not continued through pandemic)
- Door Knocking Campaign in BIA (not continued through pandemic)
- Proactive investigations (started in 2020)
- Developed new resources for businesses
- Collaborating with BOMA, Calgary Chamber
- Tradeshows: Gordon Food Service, Small Business Week
- ICI Newsletter

### Assisted Waste Collections Program

#### ISSUE

Relocating curbside solid waste roll-out carts to and from the collection location can be problematic, and in some cases, impossible for residents with physical limitations. The City of Saskatoon (City) currently offers a limited program to residents to assist with rolling out their curbside collections. Saskatoon residents who are not currently part of the program have expressed the need for a similar service to provide equitable service to all residents.

This report provides recommendations for expansion of the *Assisted Waste Collection Program*.

#### RECOMMENDATION

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council that the Assisted Waste Collections Program be expanded as outlined in this report.

#### BACKGROUND

In 2007, the City moved from having 300-gallon communal back lane garbage collection, to each residence having their own individual roll-out cart. Because of this change in service model, there was a one-time-only offer to residents with physical limitations who met a pre-defined acceptance criterion to receive assistance from waste collections staff to roll out their carts for collection. This Special Needs Garbage Collection program was intended to be phased out as existing residents moved from their homes.

In 2018, the City hosted an engagement workshop to obtain feedback for revision of the program. The results of this engagement are attached to this report in Appendix One. The following key values were proposed, for the design and delivery of a potential future program:

- Transparency and openness of program offered;
- Fairness (of eligibility and access);
- Equity (in level of services and cost);
- Affordability (conscious of constrained incomes); and
- Coordination (between service providers).

In February 2020, Administration presented the *Accessibility Considerations for Curbside Solid Waste Collection* decision report to the Standing Policy Committee on Environment, Utilities and Corporate Services. Three options were presented, and the following was resolved:

“That the Administration proceed with Option 3 to initiate a project to identify alternatives to expand the accessible Citywide curbside (single-

family household) solid waste collection service, report back on the feasibility of each, and recommend an alternative for implementation.”

### **CURRENT STATUS**

There are currently 212 single-family households that receive assistance for the collection of their curbside garbage (black) and recycling (blue) carts. Loraas Recycle provides this service for the blue cart collection.

The City provides collections of the black cart with a rear-loader collections truck. Rear-loader collections are not automated and involve two staff, a driver and labourer, who work together to empty waste carts. In addition to the *Assisted Collections Program*, the rear-loader also provides waste collections services in difficult to access locations where conventional side-arm automated waste trucks are unable to collect.

The Waste Stream Management team typically operates two rear-loader trucks daily, Monday to Friday, to meet current service levels.

### **DISCUSSION/ANALYSIS**

Several alternatives were considered to expand the existing accessible collections program, including program features from other municipalities and the use of third-party resources. After consideration of alternative program components, the expansion of the current program was deemed more favorable than creating an entirely new program.

The expanded *Assisted Waste Collections Program* will address the barriers residents currently have regarding relocating their roll-out cart to and from the collection location on collection day. The revised program would include assistance relocating the black (garbage), blue (recycling) and eventually green (organics) carts to the collection location from a predetermined location on the residents’ property. The Administration recommends maintaining the existing arrangements for provision of this service by the same provider as the regular collection service (City of Saskatoon for black and green carts, Loraas for blue carts).

The expanded program will also incorporate feedback for improvement expressed by participants in the engagement workshop in 2018, including ensuring a fair and equal distribution of service to all residents of Saskatoon.

### **New Program Name**

The program was originally referred to as Special Needs Garbage Collection Program. Feedback from the community engagement indicated the need for an updated program name. Administration recommends that the program name be revised to *Assisted Waste Collections*. *Assisted Waste Collections* indicates that the collection services will be assisted by collections staff and more accurately reflects the intent of the program.

### **Process Overview**

The *Assisted Waste Collections Program* will be open to all eligible residents of Saskatoon. New applicants will apply for the program through an updated registration

process that involves completing an application and providing a qualified health care practitioner's assessment of the applicant's condition. Applications will be available online and on paper. Applications will be reviewed by an independent occupational therapist, hired by the City, to confirm eligibility for the program. The specific requirements to be eligible for the program will be determined by the occupational therapist on a case-by-case basis with the primary determination being the inability of all residents of a dwelling to roll out their carts for collection. The application process is visually outlined as an attachment in Appendix 2.

The City's website will be updated with revised information that reflects the changes to the program. The program will be promoted through collaboration with not-for-profit organizations, Access Transit Saskatoon, and other health services, to inform residents who would most benefit from the service. Following review of applications, residents will be notified of their eligibility and those approved for the program will receive communications informing them of the requirement to contact the City should their situation change where they no longer require this service.

Upon enrollment in the program, a representative from Waste Stream Management will meet with the resident to coordinate and document the location of the carts and any other pertinent information. This information will be provided to Loraas Recycle so that the service can be provided consistently for all types of carts. Depending on the circumstance, Loraas Recycle may also need to visit the home prior to providing the service.

The *Assisted Waste Collections Program* will also be provided to qualified residents for their curbside organics (green) cart when that program is implemented in spring of 2023.

The 212 existing users will continue to receive the service and will not be required to submit a new application. The launch of the expanded program is not expected to disrupt or change service levels for existing participants.

To ensure that residents enrolled in this program remain eligible, regular audits will be performed. Collections staff will document any concerns they notice in the field to the program administrator to follow up with the resident. Dwellings enrolled in the program that have changed ownership or changed billing information will be reviewed to confirm eligibility.

The intent for this revised program is to begin accepting applications in the third quarter of 2022 and begin providing service for new locations in early 2023.

At this time, no considerations are proposed for individuals with short term physical limitations that would otherwise make them eligible for the program. The *Assisted Collections Program* is intended to be a long-term solution in providing equitable waste collection to residents who meet the criteria.

### Other Jurisdictions

Many other jurisdictions throughout Canada offer similar programs. Appendix 3 details the results of a benchmarking initiative investigating similar programs in other municipalities. These program features were considered in preparing the expanded program outlined in this report.

### Triple Bottom Line Implications

A Triple Bottom Line (TBL) review was completed to enhance the *Assisted Waste Collections Program* in achieving more Triple Bottom Line outcomes. The revised program offers significant social improvements for residents living with physical limitations for a marginal increased cost to the City and slight increase in GHG emissions. Key benefits and impacts include:

- **Environmental** – The expanded program will be offered to all waste streams (garbage, recycling, organics) to minimize the potential for improper waste disposal and missed collections for households that are unable to move their carts. Expanding the number of households in the program will increase the number of rear loader collection trucks required to operate the service, which may result in a marginal increase in greenhouse gas emissions.
- **Social** – Households who are eligible for the service will receive assistance, the program provides equitable waste collection for all residents and allows those with physical limitations the freedom to continue living independently in their homes. There is no additional financial barrier to accessing the program as regular waste collection fees will cover the cost of this service, quality of life is improved by reducing the risk of potential falls and lifting injuries to those who are susceptible.
- **Financial** – The expanded program could create efficiencies in delivering the service through economies of scale, improving route and program management; and allowing those with physical limitations to use waste services more easily and reliably. Serving more households will increase the operational costs while also providing value to more residents who are eligible at the same cost as other waste collection services.
- **Governance** – Expanding the service abides by the City's value of People Matter; demonstrates continuous improvement in waste collection services; all applicants will be assessed based on the same eligibility criteria for a fair and transparent registration process, which remedies current limitations.

The following are further considerations as the program is developed and implemented, and potential future improvements:

- the program should have clear and concise eligibility criteria with an easy-to-use application process developed with participant needs in mind;
- conducting engagement in the future would help to ensure the service continues to meet participants' needs; and
- future investment in more environmentally efficient collection trucks would reduce fuel consumption and greenhouse gas emissions.

### Privacy

Administration will ensure that appropriate measures are in place to protect the privacy of all applicants who have applied for this service.

### FINANCIAL IMPLICATIONS

The program is anticipated to grow from 212 households to nearly 500 dwellings when the *Assisted Waste Collections Program* is expanded. This estimate is based on the number of Saskatoon residents utilising Access Transit services and the number of calls that the Customer Care Centre receives requesting the service. Most operating costs are related to the expanded operation of collection vehicles. In evaluating other options within the expanded program, there are only marginal cost savings or cost increases, given the relatively low number of expected households utilizing this service.

The following table shows the anticipated costs of the expanded service.

*Table 1: Assisted Collection Annual Funding*

Year	Budget	Purpose
2022	\$50,000.00	Program development and initiation, Occupational Therapist services
2023 +	\$120,000.00	Additional equipment rentals, staffing, program improvements

During the 2022 and 2023 Business Plan and Budget Deliberations, \$50,000 and \$70,000 of capital funding was approved in 2022 and 2023 respectively to implement the program. Ongoing operating funds for this program will be included in the Curbside Organics Utility in 2023, and the Curbside Garbage Utility in 2024.

### OTHER IMPLICATIONS

Other implications of expanding this service are minimal.

### NEXT STEPS

Administration is finalizing an Administrative Procedure outlining how this program will be operated. Stakeholders at the City and its service partners will be informed of the changes in the process. Applications will be available in the third quarter of 2022, and the service will commence in early 2023.

### APPENDICES

1. Accessible Waste Collection Workshop Summary
2. New Participant Registration Flow Chart
3. Benchmarking Results

### Report Approval

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Admin Report - Assisted Waste Collections Program.docx

## Accessible Waste Collection Workshop Summary



# Append 1- Accessible Waste Collection Workshop Summary.docx

*Accessible Waste Collection Workshop Summary - [saskatoon.ca/engage](http://saskatoon.ca/engage)*  
March 2018



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## 1 Background

The Special Needs Garbage Collection Service has been the topic of several City Council reports and motions. In fall 2017, City Council requested that Administration consult with stakeholders to discuss accessibility considerations and the future of the Service as part of the larger Saskatoon Talks Trash: Curbside community engagement activities.

Some Saskatoon residents, including seniors and people with mobility challenges or disabilities, have challenges physically maneuvering waste carts or accessing other waste services.

While a Special Needs Garbage Collection Service exists to provide assistance with collection carts, the program has not accepted new registrations since its inception and was originally intended to be a short-term measure. However, Administration continues to receive requests for new applicants.

Costs to provide this service are estimated at \$490 per household in the program, funded through property taxes. In the interim, the Cart Crusaders campaign was launched as a way of encouraging neighbours to help neighbours in need by rolling out their carts on collection day - similar to the Snow Angels campaign for snow shoveling.

## 2 Engagement Strategy

The “Accessible Waste Collection” workshop was held on March 6<sup>th</sup>, 2018 from 9:30am-11:30am at the Saskatoon Field House.

The workshop was open to stakeholders and organizations that serve or represent older adults and/or other residents who are physically challenged by the task of managing a waste cart. Direct invitations were sent to a list of over 30 organizations, and the workshop was also publicized on the project’s Engagement website.

### 2.1 Engagement Objectives

The goals of this workshop were to:

- Better understand the challenges and opportunities with curbside collection from an accessibility lens;
- Discuss preferred options for design and delivery of a special collections service;
- Assess the three scenarios used in the broader engagement exercise from an accessibility lens; and
- Build relationships with key stakeholders.

### 2.2 Participants

8 participants attended the workshop, representing a variety of organizations:

1. Spinal Cord Injury Saskatchewan
2. Saskatchewan Human Rights Commission

3. Sarcan Recycling
4. Saskatoon Services for Seniors
5. Saskatoon Council on Aging
6. Crocus Cooperative
7. Saskatoon Accessibility Advisory Committee
8. Kenderdine Court Condo Association

## 3 What We Heard

### 3.1 Barriers and Challenges

Participants shared a range of challenges with the current waste collection program, including: the size, height, and weight of bins; difficulty maneuvering in snowy and icy conditions; and difficulty disposing of bulky items and hazardous waste.

They emphasized that difficulties are experienced by both people with physical limitations and people with mental health challenges (for example, with hoarding behaviours). One service provider noted that they have assisted with many yard clean-ups do to the storing or piling of waste as a result of the above difficulties.

Participants were disappointed with the current limitations on Special Needs Garbage Collection, and noted the need for an updated name to reflect current language (not special needs). They emphasized that neighbourliness approaches like the Snow Angels or Cart Crusaders campaigns are insufficient and unreliable solutions for waste management. These approaches were also critiqued from a human rights perspective, as residents are not receiving an equitable level of service from the City.

The participants also shared feedback on the fines from Environmental Protection Officers, stating that the Officers and the tone of the letters have been intimidating or scary to older residents and people with mental health challenges. They urged a more educational tone, greater sensitivity, and friendliness related to fining, and to customer service in general.

### 3.2 Opportunities

We heard that it would be important to take a values-based approach in the design and delivery of a future program. Key values include:

- Transparency and openness – of program offered
- Fairness – of eligibility, access
- Equity – in level of service and cost (comparative to regular household program)
- Affordability – conscious of constrained incomes (old age pensions, disability)
- Coordination – between service providers

The group also identified that a future program should have a threshold for eligibility with clear criteria, and streams for temporary versus permanent physical impairments. There was strong support for inviting community proposals for the delivery of the service, while the City would retain overall strategy, oversight, and communications. One service provider noted that it is much easier for them to collect bags than to move carts. Participants also stressed that residents in the program not be double-charged for the service.

It was noted that having smaller garbage cart options in a waste utility would be helpful for many who struggle with the size and weight of current standard carts.

## 4 Next Steps

January 2020 update:

- The results from this work were intended to inform future decisions on solid waste collection and management in Saskatoon.
- This appendix was first presented to City Council on June 25, 2018, in the Changes to Waste Management in Saskatoon - Engagement Results report. At that time, significant changes to curbside (single-family household) solid waste collection were being explored by the City, including a pay-as-you-throw utility model for garbage and a City-wide organics collection program. Program decisions made in late 2018 resulted in the accessible solid waste collection scope becoming decoupled from the project which is ultimately pursuing a City-wide curbside organics collection program.

### 4.1 Consideration of results

January 2020 update:

- The results of this engagement work will be used to inform any future work related to curbside solid waste collection accessibility.

## Appendix A: Full Results

*Question 1: What are residents and/or clients telling us about the barriers and challenges they encounter with our curbside collection program?*

- Bins are too large and heavy as individual carts, cannot maneuver or struggle to move them
  - Have heard that carts are too high to deposit larger/heavier bags or materials into them
  - Back alley collection seems to be more accessible-friendly due to lack of curb
- Weather challenges; pulling the carts through snow, or snow accumulating on flat tops of carts
  - Getting bins to the streets when snow pile is high
- There is a broad spectrum of need, including:
  - Mental health challenges and waste hoarding leading to residents feeling threatened or worrying about eviction
  - Physical disability or mobility limitations leading to being physically unable to get waste out of the house or to the cart
  - Some have homecare providers or support agencies who do the disposal
  - Some hire service providers, if they have money to afford this
- Dealing with bulky items is an added challenge
- Attitude to City or feeling of civic pride may not be as positive for some of these groups – ex. Seeing messy yards; not everyone is conscientious or concerned about it
  - Crocus Co-op and Saskatoon Services for Seniors both provide yard clean-up services for clients and are often thanked by neighbours for their services
- Symptom of these barriers may lead to waste accumulating outside the door or in yard (because unable to get it to the carts) to the point where it becomes overflowing or too heavy to deal with
  - Providers like Services for Seniors have been stuck with waste they cannot dispose of for their clients, and no solutions offered by City in these cases
- Services in the community exist but are not coordinated and there is a lack of awareness among residents of who to contact for what
- Residents experiencing difficulties do not know who to call and have felt dissatisfied by City response
  - Frustrated that they may have heard of this “magic program” (Special Needs Collection Service) but cannot get into it
- “Neighbourliness” approaches are not reliable
  - We are too large with insufficient community spirit to achieve this; connections between neighbours are not necessarily strong or may not exist

- What happens when people move away or their life circumstances change?
  - Could there be an incentive in exchange for helping a neighbour?
- Some people work together and use each other's bins for excess waste
  - Idea raised of a civic incentive for sharing waste bins (i.e. a 2% reduction on your bill)
- Fine system is a point of concern
  - Notice letters (i.e. educational warnings to move bin back onto property) have been disturbing to some residents, especially if economically challenged and with a disability
  - "military-like" approach of Environmental Protection Officers (EPOs) can provoke emotional responses from residents who need special consideration re: accessibility
    - Police-like uniforms were mentioned as distressing to some
  - Public perception of being policed by EPOs and the cost of EPO staff leads some to wonder about investing more in a more conversational and educational approach using phone calls, mailers, news media, etc.
  - Overloaded carts – people don't know that the lids are not supposed to be open at all; also lack of knowledge of the right of way bylaw, as discussed prior
- Customer Service considerations – increase sensitivity and responsiveness, awareness of differing needs and abilities

*Question 2: What are the advantages and disadvantages of these scenarios from an accessibility lens? Why?*

Scenario 1

- Concern about lifting bags of yard waste – would need smaller bags
- Small food cart might still be large for a senior – may not fill it at all, and just contaminate black cart instead. Scenario 3 could help with that situation.
- Like the small garbage options across all scenarios
- Some people may still need largest size carts AND be unable to move them

Scenario 2

- 1 cart for organics seems easiest, compared to Scenario 1
- Some desire for more frequent collection than every 2 weeks

Scenario 3

- Need a simple solution – green and black bags seem complicated for education and use
- Challenges getting the bags are even more challenging for people with disabilities – would need distribution not just pick-up

- Need clarity around materials going into/out of garbage and organics especially for Opti-Bag
- Could be good for people with limited garbage/organic waste – in one cart vs. hauling out another cart
- Would like smaller blue cart options as well

#### General comments

- Concerns about (organics) compliance in any scenario
- Need variable sizes for ALL carts – makes sense given variability of need, household size and type
- Bagging options can help service providers to the pick-up (can't manage large, full carts at this point)
- 1 size doesn't fit all
  - The word “mandatory” rubs people the wrong way
  - Describe the benefits in terms of costs not just environmental angle, especially when thinking about fixed income and low income residents
  - Note – house design – how to integrate organics collection in kitchen?
  - Perhaps carrying bags out to stationary carts is easier
    - Could consider special program where folks can do this instead of using carts; get special bags for pickup
  - What about residents who generate medical waste – penalizing this by variable rate pricing?

Looking beyond the scenarios, how might we adapt our collection program to be more accessible for more people?

- Recycling – if I don't generate much, why have the largest bin
- Education – take less punitive approach, less judgemental, more informative
- Seniors – reaching folks via 6:00 and 12:00 News is best, not via social radio
- Be clearer in communication not just about what's permitted/not but the next step (ex. If plastic film not allowed, what to do with it?)
- More accessible options for Household Hazardous Waste pick-up
- We need to expect that our demand will increase with an aging population

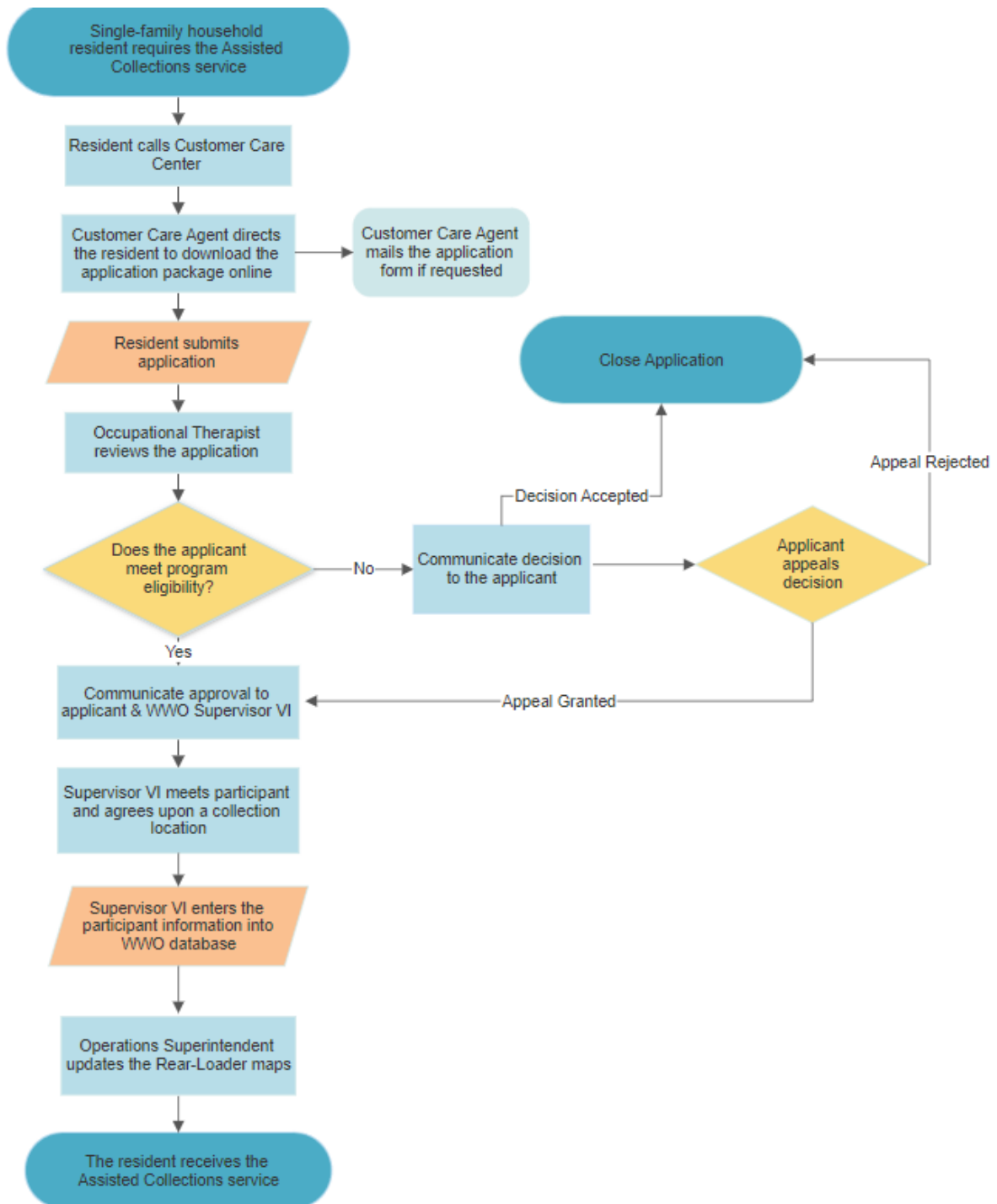
Question 3: Preferred models for special collection – what do you see as the advantages/disadvantages of a City-delivered or 3<sup>rd</sup> party-contracted approach? What are the critical success factors for this kind of service?

- Must be open to the public, with criteria for eligibility
  - Could involve Health Region, Occupational Therapy to do home visit assessment
- Fairness as a key principle
- Would like to see smaller cart options in the general service stream, for those who do have the ability to manage smaller carts

- Find a supplier who can do it
- Don't make people feel bad or like they have to beg to access the service
- Invite community proposals to procure the service – include a clear scope of demand and expectations
  - Might be cheaper than City-run program
    - Affordability is important, especially if on disability pay or low-income
    - Sense of already being financially penalized for a condition that is beyond a person's control
  - May need to have some consideration of different agency constraints and abilities – ex. Crocus Cooperative workers have a limit on their hours per week for disability payments
  - Could be a component of a broader suite of service offerings, like snow removal help
  - Could Cosmo or another group drive around day prior to collection & within 24h after to pull out/in the carts for special service recipients?
- People may want the City to be involved, at the very least in a promotion and advocacy role and to answer questions/deal with concerns from residents – “more likely to call the City than a contractor”
- Suggestion that at the end of the day, City is likely to play a significant role even with 3<sup>rd</sup> party delivery – managing the contracts, providing education, etc.
- One person suggested the option of allowing folks to opt-out of city collection and manage their own special procurement rather than perception of paying twice
- No double-charging or being punished for age or ability
- Equitable service is required; not necessarily the same service
- Must remove barriers and stop limiting the program in current fashion – this is a problem from a Human Rights perspective
- Must have a threshold for accessing the service – consider a one to two page form like other cities
- Aging in place is a priority in our community and that relates to waste collection
- Change language away from “Special Needs” service – outdated and not fully accurate
- Timelines – must move on this sooner than later
  - A Human Rights complaint would become an issue for the City of Saskatoon
- Recommend an incremental change approach, similar to Human Rights Commission's work with transportation
- Human Rights Commission doesn't necessarily care how the service is delivered, but emphasized that neighbour-based program likely would not work

- Need temporary and permanent service options for different types of challenges (ex. Recovery from hip surgery vs. a permanent condition)
- Likely cheaper for a 3<sup>rd</sup> party to deliver the actual service
- Would this be part of a user pay model or reflected in the mill rate – need to prioritize equity
- From rights perspective, any program would have to be the same costs for those on special services and those on regular service (could be a challenge to work into a Waste Utility)
- At the end of the day, collection is a public good
  - This is about being a better, more inclusive community
  - Waste collection is a public good like parks and libraries

## New Participant Registration Flow Chart



## Municipal Benchmarking Results

### Municipal Benchmarking

The City of Saskatoon is a member of the National Solid Waste Benchmarking Initiative (NSWBI). As advertised on their website, “The NSWBI was created as a tool that enables municipalities and regional governments to spot program differences, assess common performance indicators, and to develop language and definitions consistent for all programs.”

The Administration contacted NSWBI members and non-members to solicit feedback on how their municipalities address accessibility challenges with curbside (single-family household) residential solid waste collection. A total of 11 municipalities responded to a series of questions; 8 in Western Canada, 2 in Ontario, and 1 in the Maritimes. As a member of the NSWBI, the City of Saskatoon (City) is bound to a Confidentiality Agreement which requires information destined for the public forum to be scrubbed so that individual communities cannot be identified by name. The following is the compilation of responses received.

1. Does your municipality operate a program to enhance, in any way, curbside (single-family household) solid waste collection accessibility?
  - 8 – Yes
  - 3 – No

The balance of the questions only pertain to those municipalities who offered a related program.

2. What is the name or title of the program?
  - Special collection
  - Assisted waste collection program
  - Backyard collection / Special collection assignment
  - Special needs program
  - Walk-up collection service
  - Set-out service
  - Walk-up program
  - Carry-out program
3. What is the service delivery method?
  - 4 → Roll-out carts for waste containers. Collection truck operators or their passenger (depending on the type of collection truck) exit their vehicle, retrieve the roll-out cart from the property, collect, and return the cart to the property.
  - 1 → Roll-out carts for waste containers. However, either a dedicated service technician in a half ton truck, or the regular collection truck operators exit their vehicle, retrieve the roll-out cart from the property, collect, and return the cart to the property.
  - 2 → Combination of roll-out carts and bagged waste, depending on the waste stream (garbage, recycling, or organics). Collection truck operators or their passenger (depending on the type of collection truck) exit their vehicle, retrieve

- the roll-out cart or bag from the property, collect, and return the cart to the property.
- 1 → Bags. However, they are switching to carts. Waste collection attendant collects from the front door.
  - Note: 6 of the 8 municipalities incorporated these accessible collection services within their regular collection routes.
4. Percentage of program participants compared to the total number of curbside households serviced.
    - Ranged from 0.03-0.85%
    - Mean (Average) of 0.27%
    - Median of 0.20%
    - Note: for reference, the City's current program collects from approximately 0.4% of the total number of curbside households serviced.
  5. What is the application process for the program?
    - In all cases, the application is initiated by the resident.
    - 7 of the 8 municipalities required an application form to be completed by the resident.
    - 6 of the 8 municipalities confirmed that a qualified City representative performs a site visit to the residence as part of the application process. Cart/bag placement confirmation, assessment of any specific needs, and verification of information are examples of the reason for the visit.
    - 3 of 8 municipalities require a medical professional to verify the requirement for service.
  6. What is the frequency of follow-up with each program participant, if any?
    - 3 → Annually.
    - 1 → Every two years.
    - 1 → After 7 years. They found that an annual follow-up was an administrative burden.
    - 3 → None. They expect residents to contact them for any program changes.
  7. Are there any expectations for the residents in the program?
    - Compliance with waste-related bylaws.
    - The waste container must remain in the agreed-upon location on their property.
    - The path must be clear of snow.
    - Ensure that collections staff do not have to interact with dogs.
    - The street address must be clearly visible from the front street or back alley (depending on collection location).
  8. What are the administrative requirements to operate the program?
    - Varied greatly depending on the program design. The specific feedback will be referenced should the City proceed to expand the existing program or develop a new program.

Additional lessons learned and feedback included the following:

- Solid waste collections staff may not have the knowledge or ability to confirm program eligibility. In cases where they are expected to assess a resident's need, they consider factors such as whether they live with another individual who is able to relocate their cart.
- If contracting waste collection services, consider the very detailed instructions and information which are required to successfully deliver this program.
- Consider the cost to the residents if the program requires medical notes or information.

# FCM Funding Decision for Home Energy Loan Program

## ISSUE

The City of Saskatoon (City) launched the Home Energy Loan Program (HELP) on September 1, 2021. Prior to launching the program, the City applied for the Federation of Canadian Municipalities' (FCM) Community Efficiency Financing Program to secure additional capital to enhance the program.

FCM has confirmed their offer to provide loan and grant funding for the expansion of the City's HELP program. City Council approval is required to accept the FCM funding, and a decision is required for rebate package offerings and income cut-off definition.

## BACKGROUND

### History

On February 22, 2021, City Council approved the base program elements and financing for HELP and resolved, in part, that:

"The Administration complete an application for the Federation of Canadian Municipalities' (FCM) Community Efficiency Financing program, which if approved, would be utilized for the Home Energy Loan Program set out in this report, including up to \$10,000,000 of borrowing for loan capital from the Federation of Canadian Municipalities (borrowing will be subject to public notice and an intent to borrow report)."

### Current Status

#### Base Program

HELP was launched on September 1, 2021, with approved capital of \$250,000 to operate the program and \$2,500,000 to loan to program participants. It was initially estimated that this would be sufficient for approximately 100 participants assuming the average loan provided was \$25,000.

Currently, 69 applicants have been approved to participate in the program ("participants"), with an average loan request of \$29,700, 5 applicants have been denied for ineligibility reasons, 5 applicants have dropped out voluntarily, and 256 are on the program waitlist ("waitlisted applicants"). When a participants' project information about construction scope and cost becomes available, and if loans are requested of less than \$40,000 or participants drop out, waitlisted applicants move up to participate in the program. To date, there is one participant in the program targeting a net-zero ready renovation (greater than 50% reduction in energy efficiency).

Of the HELP participants, there are 17 projects under construction for a total value of \$510,389.

A status update for HELP, including a summary of successes and challenges, is available in Appendix 1 – HELP Program Status Update and Lessons Learned.

### FCM Community Efficiency Financing Loan and Grant

Notification of approval from FCM's Community Efficiency Financing Program was received in December 2021. The funding provides an additional \$7,333,200 in a loan for the City to distribute to participants and a grant of \$3,666,600 for non-loan purposes. Further information on the total budget for HELP is provided in the financial implications section.

Assuming an average loan of \$29,700 per participant, the FCM loan capital would provide enough funding for approximately 247 additional participants, allowing HELP to grow to approximately 331 participants when combined with City funding.

With the FCM grant funding, \$1,317,000 is available for rebates to be used within four years. The timeline is flexible and if the funds are fully spent before the end of four years, the rebates can be removed from the program offering. Alternatively, if rebates are under budget in any of the four years, more can be provided in subsequent years to fully utilize the funds available. However, if rebates are underspent after four years, then the grant portion of the funding will be reduced to match expenditures.

The remainder of the FCM grant portion is valued at \$2,349,600 for program enhancements such as:

- A city-wide energy map;
- A renovation concierge software service for residents;
- Communication and education materials for residents both participating in HELP and households that have not applied for the program yet; and
- Administrative costs to run the enhanced program.

The city-wide energy map for residents involves the use of a contracted software platform, which could include archetype analysis and renovation payback calculators. The energy map could allow residents to search for their specific home and receive advice on upgrades based on their housing type as well as payback estimates for potential upgrades, allowing residents to model out different renovation options and see the potential results before undertaking a project. Other program functionality options will also be explored.

Administrative costs for the enhanced program consist of staff salaries, attendance to mandatory peer learning workshops hosted by FCM, a third-party program evaluation and a financial audit of the program in the final year of funding.

### **City of Saskatoon's Current Approach as Applied to FCM Funding**

#### Rebate Options

HELP was initially launched with City funding, with loans averaging \$29,700 to approximately 84 participants. The program has now received over 335 applications and initial planning projected a program duration of approximately two years, not

including the loan pay-back period. No rebates are currently included in the HELP program.

With the FCM funding contributing to an enhanced HELP program, rebate packages can be offered, and the program duration would likely extend up to four years with the additional participation. The base program already has waitlisted applicants, many of whom are still defining their work scope. With the enhanced program there are opportunities to influence the type of retrofits, size of projects, and greenhouse gas reduction scope that participants consider.

As part of the application package for FCM, ICF Consulting prepared a report with options for rebates, insight on reasonable rebates for individual project types and outlined how this offering would interact with the Canada Greener Homes Grant program. The ICF report provides insight, recommendations and funding amounts which have informed the development of the proposed rebate options. The full consultant report is provided in Appendix 2 - ICF Consulting - Saskatoon HELP Rebate Design Report.

### Low-Income Qualification

To assist a broader audience of low to moderate income households, this report recommends increasing the income cut-off amount to 2.5 times Statistics Canada's Low Income Cut-off (LICO) as it applies to application fees and rebate eligibility. In the core program, 1.5 times LICO before tax amount for 2020 has been used to qualify low- to moderate-income households for waived administration fees when participating in HELP. LICO is an income threshold used to determine eligibility for programs and takes the household size and community population into account.

### Approaches in Other Jurisdictions

A jurisdictional scan of rebate offerings has been carried out on a variety of project types across Alberta, Ontario, Nova Scotia, British Columbia, Newfoundland and Labrador as well as the Canada Greener Homes Grant. This data, along with further administrative information, has been used to propose rebates options and amounts for HELP. A summary of the jurisdictional scan and proposed HELP rebates is available in Appendix 2, Exhibit 3.

Other rebates are offered in Saskatchewan include:

- Provincial Home Renovation Tax Credit provides a 10.5% reimbursement for the cost of multiple home upgrades, including window and door replacement and rooftop solar. This program is expected to close at the end of 2022.
- SaskEnergy's Residential Equipment Replacement Rebate Program provides rebates ranging from \$100-\$1,000 for eligible furnaces, boilers, heat recovery ventilators (HRVs), and water heaters.

### **APPROVAL – LOW-INCOME QUALIFICATION**

In the base HELP program, the administration fee of \$500 is waived for income-qualified households, set at 1.5 times Statistics Canada's Low Income Cut-Off (LICO) and 2 of 69 participants (3%) are below this cut-off.

This report recommends increasing the income cut-off amount to 2.5 times LICO to provide greater access to the program for low to moderate income households. The new cut-off could also be used to qualify participants for rebates and base / free items. If the income qualification cut-off is increased to 2.5 times LICO, 20% of the program participants would have access to the waived administrative fee and rebates. Statistics Canada's LICO, the base HELP program 1.5 times LICO, and the proposed HELP income cut off at 2.5 times LICO are illustrated in Table 1 below.

Table 1 - Income qualification LICO, base program, and proposed

Number of people per household	Statistics Canada LICO for 2020 (before tax)	Base program HELP income qualification cut off (1.5xLICO)	New proposed HELP income qualification cut off (2.5xLICO)
1	\$ 22,926	\$ 34,389	\$ 57,315
2	\$ 28,540	\$ 42,810	\$ 71,350
3	\$ 35,087	\$ 52,631	\$ 87,718
4	\$ 42,600	\$ 63,900	\$ 106,500
5	\$ 48,315	\$ 72,473	\$ 120,788
6	\$ 54,493	\$ 81,740	\$ 136,233
7+	\$ 60,670	\$ 91,005	\$ 151,675

The rationale for this approval is that increasing the income-qualification cut-off will reach a broader audience of low to moderate income households that have applied for the program and provide these participants with additional opportunities for upgrades.

## OPTIONS - REBATES

### Rebate Option Summary

Three rebate package options are proposed in alignment with the FCM grant requirements. They are designed to incentivise retrofits that will have the highest GHG reductions, target 20-50% of incremental costs, and are not currently rebated through other offerings such as the Provincial Home Renovation Tax Credit or SaskEnergy's Residential Equipment Replacement Rebate Program. The total rebate budget is assumed to be \$1,317,000 and income-qualified is assumed to be 2.5 times LICO.

The rebate options are summarized in Table 2 and categories and item values are shown in Table 3. The options include:

- Option 1: Income-qualified households eligible for all base / free items, standard rebates, and additional rebates.
- Option 2: Income-qualified households eligible for all base / free items, standard rebates, and additional rebates. Participants with homes built in 1990 or prior eligible for standard rebates.
- Option 3: Income-qualified households eligible for base / free items and standard rebates, all households eligible for standard items.

## FCM Funding Decision for Home Energy Loan Program

Table 2 - Option Summary – Qualifying groups for basic / free, standard, and additional rebate categories

Rebate Category	Option 1			Option 2			Option 3		
	Income Qualified	1990 or older	1991-2021	Income Qualified	1990 or older	1991-2021	Income Qualified	1990 or older	1991-2021
<b>Basic/Free Items<sup>1</sup></b>	△			△			△		
<b>Standard Rebate<sup>2</sup></b>	△			△	△		△	△	△
<b>Additional Rebate<sup>3</sup></b>	△			△					

Table 3 - Rebate categories and values per item

Rebate Category	Rebate Value
<b><sup>1</sup>Basic / Free Items</b>	
<i>Low-cost items that can improve energy performance but not typically included in loans</i>	
Programmable smart thermostat	\$180
Weather stripping	\$200
Air sealing	\$900
A Low flow toilet	\$200
Low flow faucet aerators	\$15
Low flow showerheads	\$25
Rainwater catchment (for outdoor landscaping purposes)	\$100
Window glazing and embedded markers for birds	\$130
<b><sup>2</sup>Standard Rebate</b>	
<i>Highest GHG reduction potential and not rebated through other programs</i>	
Insulation (exterior wall, attic, and basement)	Wall \$1,000; Attic \$900; Basement \$1,000
Air sealing	\$200
Heat Pump	\$4,000
EV charging station	\$600
Solar water heater	\$1,000
A bonus incentive to encourage Net Zero Ready or Net Zero home renovations of up to \$10,000.	\$10,000
<b><sup>3</sup>Additional Rebate</b>	
<i>Either have lower GHG potential or are already rebated through other programs</i>	
Windows (maximum 10 per household)	\$120 per window max. of \$1,200/household
Exterior Doors (maximum 2 per household)	\$100 per door up to max. of \$200/household
HRV	\$400
Drain water heat recovery	\$300
Furnace	\$450
Boiler	\$450
Tankless water heater	\$350
Rooftop solar	\$3,500

### Analysis

The analysis is informed by triple bottom line assessment, financial analysis, and GHG reduction calculation. The results of the options' analysis are summarized in Table 4 highlighting how they differ in terms of eligible participants, total cost, GHG reductions, and equity.

Table 4 - Rebate Options Analysis

Criteria	Option 1	Option 2	Option 3
<b>Program participants that are eligible</b>	20% (income-qualified only)	90% eligible for standard items, 20% eligible for additional items	100%
<b>Estimated Total Cost</b>	\$725,440 (\$591,560 under rebate budget)	\$1,256,382 (\$60,618 under rebate budget)	\$1,239,530 (\$77,470 under rebate budget)
<b>Estimated Lifetime CO<sub>2</sub>e reduction</b>	4,930 Tonnes CO <sub>2</sub> e	9,450 Tonnes CO <sub>2</sub> e	8,055 Tonnes CO <sub>2</sub> e
<b>Equity</b>	Income-qualified households are eligible for the most types and amounts of rebates	Income-qualified households are eligible for the most types and amounts of rebates. Rebates will be available to older homes that may have owners with higher incomes.	Income-qualified households eligible for less types and amounts of rebates (i.e., no "additional rebates") compared to options 1 and 2. Rebates available to all homes regardless of income.

### RECOMMENDATION

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

1. The income-qualification cut-off for the HELP program be calculated at 2.5 times Statistics Canada Low Income Cut-Off;
2. Option 2: Income-qualified households eligible for all base/free items, standard rebates, and additional rebates; and participants with homes built in 1990 or prior eligible for standard rebates; be approved for the HELP program;
3. Table 3: Rebate categories and values per item be approved for application in the HELP program while rebate funding is available; and
4. Capital Project P1956 – Property Assessed Clean Energy Financing Program be increased by \$3,666,600 for the grant portion and \$7,333,200 for the loan portion (subject to an intent to borrow report and public notice) of FCM's Community Efficiency Financing Program Funding.

### OPTIONS RATIONALE

Option 2 is recommended because it maximizes the rebate budget available and greenhouse gas reductions by providing incentives for more participants to make impactful energy upgrades that are not already incentivized through other programming.

## FCM Funding Decision for Home Energy Loan Program

This option still provides a comprehensive package of rebates and free items for income qualified households to reduce their utility bills and increase home health or comfort. This is aligned with the previous program goal to attract more income-qualified households by waiving the administration fee for these participants. Option 2 also targets older homes that may need a deeper retrofit than homes built more recently. Table 5 provides a summary of each option.

Table 5 - Options Summary of Advantages and Disadvantages

Advantages / Disadvantages	Option 1	Option 2	Option 3
Advantages	<ul style="list-style-type: none"> <li>Income-qualified households eligible for the most types and amounts of rebates so may further equity outcomes</li> <li>Rebates on a broad variety of upgrades could result in more innovative projects</li> </ul>	<ul style="list-style-type: none"> <li>Expands the pool of participants that can access Standard Rebates, while still providing Free Items and Additional Rebates to income-qualified households (same rebates for income-qualified as option 1)</li> <li>Targets some rebates at older homes that are most in need of upgrades</li> <li>Uses most of the available budget</li> <li>Has the highest GHG emissions reduction potential</li> <li>Rebates on a broad variety of upgrades could result in more innovative projects</li> </ul>	<ul style="list-style-type: none"> <li>All participants will have access to the same Standard Rebates</li> <li>Income-qualified households still have access to Free Items</li> <li>Uses most of the available budget (but less than Option 2)</li> <li>Has the second highest GHG emissions reduction potential</li> <li>Reduced potential perception of unfairness</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>Only 20% of current participants are eligible for any rebates</li> <li>Will use up the least amount of the available budget</li> <li>Has the lowest GHG reduction potential</li> <li>Public may perceive targeted rebates as unfair</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Public may perceive targeted rebates as unfair</li> </ul>	<ul style="list-style-type: none"> <li>Less items are rebated, which could result in less innovative projects that would be pursued with a rebate</li> <li>Income-qualified households have access to fewer rebates than Options 1 and 2</li> <li>Does not target rebates based on income levels or age of home</li> </ul>

Option 2 is limited to *rebates* as they relate to specific applicant groups and eligible items. Approval of Option 2 does not impact *loan* funding eligibility; criteria for loans remains as approved in the base HELP program.

## FINANCIAL IMPLICATIONS

Table 6 summarizes the HELP Program funding.

Table 6 - Program funding with FCM grant & loan

	Funding for operations & rebates	Loan capital for participants	Total
<b>Original Internal Funding for Base Program</b>	\$250,000	\$2,500,000	<b>\$2,750,000</b>
<b>FCM Community Efficiency Financing - Grant</b>	\$3,666,600		<b>\$3,666,600</b>
<b>FCM Community Efficiency Financing - Loan</b>		\$7,333,200	<b>\$7,333,200</b>
<b>Total Program Funding</b>	<b>\$3,916,600</b>	<b>\$9,833,200</b>	<b>\$13,749,800</b>

The grant portion of \$3,666,600 is proposed to be used for rebates, a city-wide energy map, additional communications materials or programming and administrative costs, with no impact on the City's borrowing limit.

Of this grant portion, the funding allocated specifically to rebates was originally estimated as \$1,317,000. If Option 2 is approved, then an estimated \$1,256,382 is projected to be spent on rebates with \$60,618 remaining. The project team will closely monitor the rebate budget as funds are distributed to ensure this budget is not overspent. If the rebate budget is used up while the program is still ongoing, rebates will no longer be offered. If there is substantial rebate budget remaining after one year, the rebates can be increased to use up the grant funding in the following years. The remainder of the FCM grant portion is \$2,349,600 will fund program enhancements as noted earlier in the report including:

- a city-wide energy map;
- a renovation concierge software service for residents;
- communication and education materials for residents both participating in HELP and households that have not applied for the program yet; and
- Administrative costs to run the enhanced program.

The loan funding of \$7,333,200 will impact the City's overall debt limit. An intent to borrow report detailing the loan implications in detail will be presented at a future public hearing of City Council.

Original estimates for cost of administrative fees for income-qualified households at 1.5 times LICO was \$22,300. It is estimated that increasing the income-qualification to 2.5 times LICO will increase the cost to \$44,600 due to more households eligible for the waived administrative fee. The FCM grant funding can be used towards administrative expenses for the program, meaning the City is less reliant on administration fee revenues to offset additional program costs.

## ADDITIONAL IMPLICATIONS/CONSIDERATIONS

### Triple Bottom Line Implications

A triple bottom line analysis was completed to identify benefits, impacts, and considerations for the HELP rebate enhancements. Some of the key takeaways from the review included:

- Increase the income-qualification threshold to provide a broader group of participants with benefits like a waived administration fee.
- Prioritization should be made for rebates that aid with utility savings, health, and comfort of a home such as HRVs, furnace replacement, insulation and windows and doors.
- Offering free items would reduce barriers for income qualified households to make small changes to their home.
- Encourage renovations in older homes, core neighbourhoods, and increase uptake amount income-qualified households.
- Targeted education and communication options should be utilized including education about overall home maintenance and energy efficient behaviours.
- Providing in person workshops and utilizing community champions could expand future iterations of the program to more demographics.

For the full detailed summary of the triple bottom line analysis, refer to Appendix 3 - HELP Rebate Recommendations - Triple Bottom Line Analysis.

### COMMUNICATION ACTIVITIES

Existing participants of the program will be notified about the new rebate package and any that have completed projects will be eligible for rebates retroactively.

Part of the FCM funding includes additional communication activities to build knowledge and capacity in the community around energy efficiency for different types of homes.

### NEXT STEPS

With City Council approval, changes will be made to the program income-qualification cut-off and to communication materials informing HELP participants of the new rebate package.

Following the approval to borrow, wait-listed applicants will be processed until all the loan capital is fully allocated. Uptake will be monitored, and updates provided to the Standing Policy Committee on Environment, Utilities and Corporate Services in late 2022.

### APPENDICES

1. Appendix 1 – HELP Program Status Update and Lessons Learned
2. Appendix 2 – ICF Consulting - Saskatoon HELP Rebate Design Report
3. Appendix 3 – HELP Rebate Recommendations Triple Bottom Line Analysis

#### Report Approval

Written by: Hilary Carlson, GHG Controls Specialist

Reviewed by: Amber Weckworth, Manager, Climate Strategy and Data  
Jeanna South, Director of Sustainability  
Kari Smith, Director of Finance

Approved by: Angela Gardiner, General Manager, Utilities and Environment

## HELP Program Status Update and Lessons Learned

The Home Energy Loan Program (HELP) was launched on September 1, 2021, with \$2,500,000 of capital funding to loan to program participants. It was initially estimated that this would be sufficient for 100 participants assuming the average loan provided was \$25,000 and that the program duration would be approximately two years for active administration.

Based on program statistics up until January 4, 2021, the program has received over 335 applications with an average loan request of \$29,700 each. Currently, 69 participants have been approved for funding, 5 applicants have been denied for ineligibility reasons, 5 applicants have dropped out of the program voluntarily, and 256 are waitlisted applicants. When a participants' project information about construction scope and cost becomes available, and if loans are requested of less than \$40,000 or participants drop out, waitlisted applicants move up to participate in the program. To date there is one participant in the program targeting a net zero ready renovation (greater than 50% reduction in energy efficiency).

Of the participants approved, 17 have projects under construction at a value of \$510,389.

### Program Successes to date

- Program Interest and Uptake – The program is very popular, even with minimal advertising or a rebate/incentive program. Program interest was much higher than anticipated during program planning due to much lower initial uptake in other jurisdictions. Administration credits the low interest rate, stackable rebates such as Canada Greener Homes and the Provincial tax credit, and the straight-forward and well supported application process for the high uptake.
- Retrofits - 88% of participants with projects under construction are making multiple upgrades to their home, using the program for a bundle of energy renovation projects which is in alignment with HELP's intent.
- Pre-vetted contractor list - The pre-vetted contractor list includes 22 local businesses across a variety of industries including electrical, HVAC, plumbing, heating & cooling, home building, renewable energy installation, building envelope, general contractors and window and door replacement. Program participants with projects under construction are utilizing the pre-vetted contractor list with 10 participants choosing at least one contractor from the list to complete their project.
- Turnover time - Turnover time on the review of deferral agreements is usually within three to five business days before agreements are sent back to participants for signature. If agreements are delayed its because more information is needed from the participant.
- In-house energy modelling - Participants who pursue a retrofit with an energy reduction of 50% or greater are eligible for a maximum loan of \$60,000. All other participants are eligible for a maximum loan of \$40,000. The project team has developed a process using in-house expertise and software to model projects for

participants seeking the \$60,000 maximum and have streamlined modelling turnover time to take one week from the time a participant requests the extra loan balance and provides details about their project.

- Program administration – Collaboration across different departments responsible for the program including Sustainability, Revenue and Finance is excellent, with clear roles and responsibilities for each group. These groups have constant check-ins and proactively problem solve when needed.
- Education - The program coordinator provides education and guidance to each program participant and ensures their projects are eligible for funding prior to drafting a deferral agreement. Since the guidance is unique to each participant, it requires substantial staff time, providing value to participants and reducing barriers throughout the application process since they have an individual to speak to when there are questions or concerns about their application.

#### Program Challenges to date

- EnerGuide audit delays - Like HELP, the Canada Greener Homes Grant requires all participants to get an EnerGuide Home Energy Audit, resulting in high demand for these in Saskatoon, especially since there are only two organizations that complete audits. While, in some ways this benefits the program as the Canada Greener Homes Grant provides partial funding toward the cost of the audit, the high demand has resulted in a bottleneck to the application process. Participants are typically waiting two months to be approved by Canada Greener Homes, then 3-6 weeks to schedule an energy audit appointment, and another 2-3 weeks to receive the audit report for their home.
- Deposits - For some home upgrades such as window and door replacement or solar installations, participants are required to pay a substantial deposit (30%-50%) upfront to secure their pricing with contractors. The HELP bylaw does not allow the City to pay deposits upfront on behalf of participants, so participants are required to use cash out of pocket or source other financing for the deposit. Once the project is completed, the City reimburses participants for deposits, but, in the interim, this may create a barrier for participants wanting to undergo large, long term, or multi-faceted upgrades if they can not cashflow the deposits. The project team may recommend a bylaw amendment to alleviate this barrier in the future; however, is not proposing any changes at this time.
- Income qualification - The income qualification cut-off used for the base program was 1.5 times Statistics Canada's Low-Income Cut-off (LICO) before tax amount for 2020. LICO is an income threshold used to determine eligibility for programs and takes the household size and community population into account. However, based on existing program uptake, and the current income-qualifying cut-off, only 2 of 69 applicants, or 3% are below this cut off. In addition, 2020 and 2021 may be unusually high-income years for participants as Federal programs to supplement household income such as CERB were provided.
- Funding amount – the original funding level of \$2,500,000 was originally assumed to be enough for 100 participants at \$25,000 per loan. The average

loan request has been approximately \$29,700 and only 69 participants<sup>1</sup> have been confirmed for funding with the other 256 applicants on the waitlist.

With FCM funding, most to all of the wait list applicants can receive funding commitments, and the FCM funding is likely to be fully committed relatively quickly. Once this happens, next steps for the program will need to be considered to determine if HELP continues and what potential funding sources for the loans could be.

#### Program design feedback from FCM

FCM uses a peer review group to evaluate program design and provide optional feedback for implementation to improve programs going forward. Feedback from the peer review group was very positive.

The peer reviewers felt that HELP is an excellent program design that has benefited from thorough feasibility analysis, design research, and stakeholder engagement. They took note that the program is currently being delivered by a well-qualified cross-departmental team and the initial number of applications is greater than expected, indicating that the approach to program launch has created significant excitement about participating in the program. The peer reviewers believe the program has a high likelihood of success, which can create a positive example and model for other communities in the province.

Suggestions to improve the program were also provided, and included the following:

*Table 1 - FCM Program design feedback and resolutions*

FCM Suggestion	Administrative Response
<b>Explore partnerships with private financial institutions as a way of potentially ensuring the program can continue and expand after its initial four years of operations.</b>	This will be explored after the funding from internal borrowing and FCM is almost used up.
<b>Organize regular meetings with delivery stakeholder partners (e.g., contractors and utilities) to identify and address any implementation issues.</b>	This has been included in the program's measurement and verification plan, to engage with contractors one year after the program has been in operation.
<b>Consider collaborating with an organization interested in and capable of sharing lessons learned to help facilitate development of similar programs in other Saskatchewan communities.</b>	The project team provides presentations about the program and lessons upon request to other municipalities. To date presentations have been shared at FCM's Sustainable Communities Conference and given to the Canadian Urban Sustainability Practitioner's network.

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<sup>1</sup> To determine the 69 participants for the loan commitments in the base program, a conservative \$40,000 per person or the maximum request is assumed, not the average of \$29,700 based on actuals. Five loans have been reserved for low-income participants. As participants confirm the scope of their loan with executed agreements and if their loans are below \$40,000, the total participant number for the base program could increase. Assuming the average loan of \$29,700 is maintained with actual funding requests from participants, the City's original funding could sustain 84 participants.

	Lessons learned have been shared informally with City of Regina staff, but more local collaboration opportunities will be explored.
<b>Develop metrics and targets for water conservation and EV charging.</b>	A count of the number of water conservation and EV charging installation projects has been incorporated into the measurement and verification plan for the program.
<b>Highlight the linkages of the program to broader economic and social goals and plans and consider enhanced tracking and reporting of non-environmental benefits and outcomes to build support and engagement of social and economic focused organizations groups and stakeholders.</b>	Social and economic metrics such as total income qualified participants, participant satisfaction with the program, increased level of home comfort, and actual utility bill savings have been added in the measurement and verification plan.
<b>Consider augmenting the Project Team with additional marketing staff because of the importance of communications and advertising to success of the program.</b>	Additional communications support will be added to the project team as necessary. Communications about HELP can also occur through the broader Sustainability program.
<b>Consider the possibility of providing open-source data that will be generated from the initiative.</b>	Energy audit data can be shared publicly through the use of a citywide energy map.
<b>Review the budgeted operating costs for possible efficiencies.</b>	Currently the program is operating very lean, with one environmental coordinator on staff. Operating costs will be reviewed regularly to ensure efficiencies are maintained as the program grows.



# → Saskatoon HELP Rebate Design Report

Establishing HELP Rebate Options

June 30, 2021



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## Executive Summary

The City of Saskatoon is seeking to significantly reduce its Greenhouse gas (GHG) emissions through a series of initiatives. One such initiative is the Home Energy Loan Program (HELP) which would provide loans to homeowners for energy efficiency retrofits, and with them, rebates to lower barriers to participation and encourage involvement in the program. The purpose of this report is to provide insight into how to set rebate amounts to maximize retrofits, stay within budget, and not over-incentivize customers. The proposed rebate amounts have been set with an understanding of such rebates in other jurisdictions and complementary programming.

To determine energy savings and GHG emissions reduction for each measure, results from similar jurisdictions with evaluated Technical Reference Manuals with verified prescriptive savings amounts for each measure were used. Annual GHG emissions reduction were determined by multiplying the electricity and gas savings with the respective grid emissions factors for Saskatoon. Lifetime savings were determined by multiplying the annual savings by the expected useful life of the measure.

The emergence of a new national Greener Homes Grant program by NRCan that was not anticipated at the time of HELP design led to a different program design approach than would typically be taken. While the Greener Homes Grant program provided an additional point of evidence to set the rebate pricing, considerations needed to be made for how the overlapping program would impact participation in Saskatoon's program. It also raised concerns about potential "double-dipping" in the absence of the prospect of data-sharing between Saskatoon and NRCan. The NRCan program can impact HELP uptake in both positive and negative ways which were outside of the scope of this project but should be given further consideration. To account for these impacts, the report considers a scenario above the originally expected participation of 420 participants, and also considers scenarios at the 600 participant level to account for the increased rebates, and with it, a higher incentive to participation. Additionally, rebate amounts on the energy efficiency measures that appear in both the Saskatoon and NRCan programs, were reduced in Saskatoon's program to limit the expected combined rebate so as to not exceed 50% of the cost, on average, between the two programs.

All the individual measure rebates, corresponding energy savings, and GHG emissions reduction were then multiplied by expected uptake and the number of participants to capture the relative popularity of different measures. This provided a summary for participation in the program. Ten separate participation scenarios were explored in this manner taking into consideration different participation levels, different measure eligibility, and additional rebates for income qualified participants. The ten scenarios display the expected outcome based on the number of participants in the program. A full breakdown of each measure, including the roll up summary into each scenario is included in Appendix B.

Generally, many of the scenarios fail to achieve the expected impacts due to lower participation. The scenarios that were best suited to the City's goals were scenarios 5 & 6, which achieved the most savings for the expected level of participation while staying within budget and achieving the additional goal of assisting income qualified participants attain additional savings. For this reason, it is recommended that the City of Saskatoon plan for and pursue scenario 5 or 6 depending on how NRCan's Greener Home Grant program impacts the Home Energy Loan Program.

## Background

The City of Saskatoon has set targets to reduce Greenhouse Gas (GHG) emissions by 40% below 2014 levels by 2023, and 80% by 2050, as well as community emissions by 15% below 2014 by 2023 and 80% by 2050. The Low Emissions Community Plan lays out a comprehensive plan to achieve these goals through a set of concrete actions. One of those actions is the establishment of the Home Energy Loan Program (HELP) which will provide loans for Saskatoon homeowners to improve energy efficiency and generate renewable power.

As part of the program, the City is also looking to extend rebates to residents to help encourage participation in HELP by offsetting the cost of programs. The City is requesting funds from the Federation of Canadian Municipalities (FCM) to assist with the cost of the rebates. To complete the application, a full breakdown of measures, rebates, GHG emission reductions, and expected participation levels needs to be provided to FCM. ICF was engaged to develop the information needed for the City's application.

## Approach

To accomplish this objective, three primary tasks were performed. The first was a kick-off meeting. The kick-off meeting provided insight into the City's priorities and the objectives of the program. At this meeting, previous work, such as the initial program design was shared, and the highlights reviewed. This information provided the foundation upon which the rest of the tasks were built.

The next task was the jurisdictional scan which comprises a later section of this report. To accomplish this, jurisdictions across Canada with similar residential rebate programs were reviewed and compared to provide insight into what the expected "market rate" was for certain rebates. The programs that were most closely aligned were Efficiency Manitoba's residential programming, the City of Edmonton's Home Energy Retrofit Accelerator, and Efficiency Nova Scotia's various residential programs. Other jurisdictions were also compared for certain measures that were not part of those three main programs.

Lastly, a full measure build up was performed under ten separate scenarios for the City. The highlights of that task are explored in the Program Design section of this report, and a full breakdown is provided in Appendix A. Of these ten scenarios, four are broken out in this report for a final decision from the City for their submission.

## Greener Homes Grant Program Impact

After this project launched, Natural Resources Canada ("NRCan") initiated a country-wide residential rebate program, the Greener Homes Grant Program, that is expected to overlap with the HELP. As participants can potentially participate in both programs, and there may not be a data sharing agreement between the two programs, this program heavily impacted the results of the rebate design. Rebates for measures that existed in both programs were limited to help ensure that rebates would not exceed 100% of the cost of the measure.

The Greener Homes Grant Program could also impact the City's program in other ways as well. The first is that a separate program may impact the participation levels in the HELP program in one of two ways. The Greener Homes program could cause lower participation as it provides an alternative program to potential participants who may opt to just apply to a single program to avoid the additional administrative burden. Alternatively, having a second program complement the HELP program's rebates may actually drive participation higher than originally expected as there is additional funding for retrofits which lowers the cost barrier to participants.

The second impact is in ownership of the Greenhouse gas (GHG) savings attributed to the retrofits. Typically, in programs such as the HELP program and/or the Greener Homes program, the program administrator "buys" the GHG savings from the participants so that they cannot be double counted. In a situation where applicants can apply for both programs, both program administrators cannot take ownership of the GHG savings unless they work out an agreement, which typically involves data sharing of some sort, which requires the approval of the participant.

The impact of the Greener Homes Program is outside of the scope of this project, and so has not been fully explored in the project. The above commentary may not be the only impacts from the NRCan program, and the City should consider all impacts further. In addition, it is recommended that the City communicate with NRCan to discuss these impacts and potentially others and find ways to mitigate them as early as possible.

## Jurisdictional Scan

On May 27, 2021, ICF met with the City of Saskatoon for the project kick-off. As part of that meeting, relevant jurisdictions across Canada were highlighted to help direct the jurisdictional scan. Jurisdictions discussed during the meeting included City of Edmonton, Manitoba, and Nova Scotia. ICF agreed to research other relevant jurisdictions for similar program offerings to ensure that as many eligible measures as possible were found and compared.

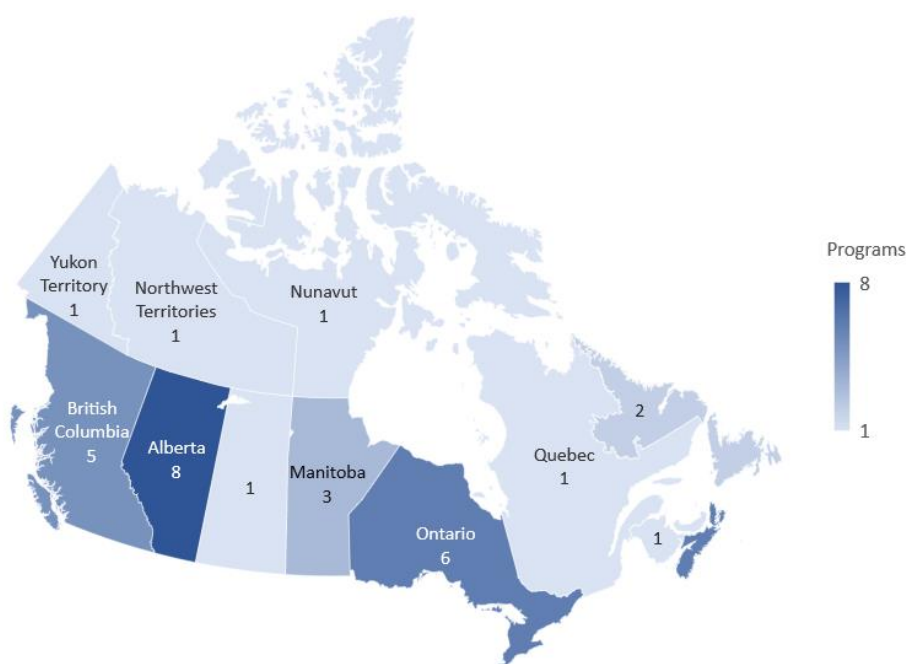
ICF has utilized various sources to perform this jurisdictional scan, including but not limited to, the following:

- Program-specific websites
- PACE Canada
- U.S. Department of Energy website
- Interviews with program managers

The jurisdictions were chosen with the goal of comparing residential programs entailing the energy efficiency, renewable energy, water conservation and other relevant measures the City of Saskatoon is interested in offering through HELP. Whether each program can be stacked with other programs was also reviewed. Rebate-stacking information is only available for some of the programs.

## Regions

The jurisdictional scan of relevant programs is based on the review of program information available online. A total of 25 programs were reviewed from across Canada. This includes programs offered at municipal, provincial and federal level. Since the Canada Greener Homes Grant program is offered across Canada, each province and territory in Exhibit 1 at least has one program offering.

*Exhibit 1: Map of Jurisdictions Reviewed*

The majority of the measures proposed by the City of Saskatoon as part of the rebate package are offered through the programs reviewed with the exception of solar inverters (which are typically included with solar PV systems, not as a separate measure), and bird marker measures. The most common energy efficiency measures included insulation, air sealing, energy efficient furnaces, and smart thermostat. Solar PV systems are the most common renewable energy measure. The most common water conservation measure includes low-flow toilet. Rebates on Level-2 EV chargers and battery storage systems are less common and only offered by two programs each. Exhibit 2 provides an overview of measures offered in different jurisdictions.

An overview of the measures, and the rebate provided in each jurisdiction is provided in Exhibit 2.

A summary table of all of the programs that were explored in each region is provided in Appendix A.

Exhibit 2: Summary of Measures by Jurisdiction

Jurisdiction	Furnaces	Boilers	Central Air Conditioners	Windows	Door	Wall Insulation	Celling/ Attic Insulation	Basement Insulation	Air Sealing	Water Heaters	DWHR Systems	Heat Recovery Systems (HRV)	Smart Thermostats	Air-source Heat Pumps	Geothermal Heat Pumps	Solar Water Heaters	Solar PV Panels	Solar Inverters	Low-flow Toilet Replacement	Low-Flow Fixture & Faucets	Irrigation Control Systems	Rainwater Catchment s	Level-2 EV Chargers	Battery Storage Systems	Window Glazing & Bird Markers
<b>Municipal</b>																									
Edmonton	X			X		X	X	X	X	X	X	X	X	X	X		X						X		
Halifax																X	X								
Toronto	X	X	X	X	X	X	X	X	X	X	X				X	X	X		X				X	X	
Medicine Hat	X		X						X				X				X			X					
Banff	X				X											X	X		X			X			
Guelph																			X						
Halton																			X						
Kelowna																					X				
Comox Valley																					X				
<b>Provincial</b>																									
Nova Scotia						X	X	X	X		X	X	X	X	X	X	X			X					
Manitoba						X	X	X				X	X												
Ontario	X	X		X	X	X	X	X	X	X			X												
B.C.	X	X		X	X	X	X	X		X				X											
N.L.									X											X					
<b>Federal</b>																									
Canada				X	X	X	X	X	X	X			X	X	X		X							X	

Exhibit 3: Overview of rebate offerings in different jurisdictions

Measures	Alberta	Ontario	Nova Scotia	British Columbia	Newfoundland and Labrador	Canada Greener Homes Grant (Canada)	Proposed HELP Rebate
<b>Furnace</b>	\$250-\$500/unit	\$250/unit		\$800-\$1000/unit			\$450/unit
<b>Boiler</b>		\$1,000/unit		\$1,000/unit			\$450/unit
<b>Window</b>	\$50-\$200/unit	\$40/unit	\$30/unit	\$50-\$100/unit (max. \$2,000)		\$125-\$250/unit	\$120/unit
<b>Door</b>	\$100/unit	\$40/unit	\$30/unit	\$50-\$100/unit (max. \$2,000)		\$125/unit	\$100/unit
<b>Wall Insulation</b>	\$1.05/sq.ft.	Up to \$3,000/home	Up to \$1,500/home	Up to \$1,200/home	Up to \$1,000/home	Up to \$5,000/home	\$100/100 sq.ft.
<b>Celling / Attic Insulation</b>	\$0.66/sq.ft.	\$650/home	Up to \$750/home	Up to \$900/home	Up to \$1,000/home	Up to \$600/home	\$125/100 sq.ft.
<b>Basement Insulation</b>	\$1.05/sq.ft.	Up to \$1,250/home	Up to \$600/home	Up to \$1,200/home	Up to \$1,000/home	Up to \$1,500/home	\$125/100 sq.ft.
<b>Air Sealing</b>	Up to \$435/home	Up to \$150/home	\$200/home		\$2-\$3/strip or door kit	Up to \$1,000/home	\$200/home
<b>Tankless Water Heater</b>	\$415/unit	\$400/unit		\$1,000/unit			\$350/unit
<b>Gas Storage Water Heater</b>	\$110/unit	\$400/unit		\$200-\$1,000/unit			\$300/unit
<b>Heat Pump Water Heater</b>	\$460/unit		\$400/ton	\$1,000/unit		\$1,000/unit	\$600/unit
<b>Drain-water Heat</b>	\$300/unit		\$200/unit				\$300/unit

Measures	Alberta	Ontario	Nova Scotia	British Columbia	Newfoundland and Labrador	Canada Greener Homes Grant (Canada)	Proposed HELP Rebate
<b>Recovery System</b>							
<b>Heat Recovery System (HRV)</b>	\$270/home				\$175/unit		\$400/unit
<b>Smart Thermostat</b>	\$85/unit	\$75/unit				\$50/unit	\$80/unit
<b>Air-source Heat Pump</b>	\$800/ton		\$300-\$500/ton	\$1,000-\$3,000/unit		Up to \$5,000/unit	\$600 - \$4700/unit
<b>Geothermal Heat Pump</b>	\$1600/ton		\$600/ton			Up to \$5,000/unit	\$7,500/unit
<b>Solar Water Heater</b>	\$650/unit		\$1000/unit				\$1,000/unit
<b>Solar PV System (incl. panels &amp; inverter)</b>	\$0.40/watt, \$1.00/watt to a max of \$6,000, \$750/kW to a max of 20 kW	\$600/kW <sup>1</sup>				\$1,000/kW	\$500/kW up to a maximum of \$3,500 per household.
<b>Low-flow Toilet</b>	\$100 or 50% of the cost/unit	\$50 - \$75/unit					\$50/unit

<sup>1</sup> Incentive converted from \$0.6/W to \$600/kW to keep the units consistent with other programs.

Measures	Alberta	Ontario	Nova Scotia	British Columbia	Newfoundland and Labrador	Canada Greener Homes Grant (Canada)	Proposed HELP Rebate
<b>Low-Flow Fixture &amp; Faucet</b>	Up to \$200/home				\$10/showerhead, \$1/faucet aerator		\$3/aerator, \$10/showerhead
<b>Irrigation Control System</b>				\$40/unit, \$300/unit (smart controller)			\$40/unit
<b>Rainwater Catchment</b>	\$50/unit						\$50/unit
<b>Level-2 EV Charger</b>	Lower of \$600 or 50% of the installed cost			Up to 50% of costs, to a max of \$350.			\$600/unit
<b>Battery Storage System</b>						\$1,000/home	\$300/kWh of usable capacity installed. Up to a maximum of \$4,000 per household
<b>Window Glazing &amp; Bird Markers</b>							\$7/window

## Interviews

As part of jurisdictional scan, ICF conducted consultations with program managers from specific programs to better understand the barriers to program participation, program implementation challenges and any other useful insights. This section summarizes the results of the consultations.

### City of Toronto: Home Energy Loan Program

Home Energy Loan Program (HELP) provides homeowners a loan of up to \$75,000 to cover the cost of home energy improvements. The amortization term varies from 5 to 20 years depending on the type of upgrade. The program was launched as a pilot in 2014 and has been renewed twice. It was extended for five more years in 2021 and the current term runs till 2025. The program only provides loans, and the participants can apply for rebates through other programs incentivizing the home upgrades. Popular measures applied under the program include heating and cooling equipment and insulation measures. Interest in solar PV systems has increased steadily over past few years. The program is stackable with either NRCan's Greener Home Grants or Enbridge's Home Efficiency Rebate. Participants cannot apply for rebates through both programs. Exhibit 4 shows the program participation and uptake numbers. Outstanding bills (property taxes and utility bills) was one of the major reasons for the applicants becoming ineligible for participating in the programs. The dropout rate due to unpaid bills was 6% in 2019 and increased to 24% in 2020. For 2021, the dropout rate due to unpaid bill is at 10%. For properties subject to a mortgage, lender's consent is required to participate in the program. City of Toronto indicated that the biggest drop-off during the past years has resulted from applicants unable to provide a completed consent form from the mortgage lender. The dropout rate resulting from nonfulfillment of lender consent was 56% in 2019 and 53% in 2020. City has focused on driving the participation through advertising, program related information on property tax bills, webinars, and information session at different events across the City.

*Exhibit 4: Toronto HELP Program Application Summary*

	2021	2020	2019	Jan 2014 – March 2018
<b>Applications Received</b>	70	93	141	677
<b>Eligible Applicants</b>	20	22	34	354
<b>Projects Completed</b>	1	16	42 <sup>2</sup>	160
<b>Program Expenditure</b>	Not Available	Not Available	Not Available	\$2.7 million

The City of Toronto indicated that the program participation has not been restricted by the program budget. The participation barriers noted by the City include:

- Major challenge to participation is lack of consent from mortgage lenders to allow property owners to take out loans for home upgrades.
- Outstanding property taxes and utility bills
- Home insured by Canada Mortgage and Housing Corporation (CMHC) are currently not eligible to participate in the program.
- Lack of knowledge regarding home upgrades.
- Lack of awareness about the program that can be attributed to limited marketing budget.

Some of the challenges encountered during program implementation include:

- Multiple reviewers are involved in the approval process to minimize fraud and risks, but this process makes issuing a loan labor intensive and can result in delays.
- Currently there is no proper CRM for tracking approval process.

<sup>2</sup> Completed projects are more than the eligible applicants in cases where the projects are carried over from previous year.

The City of Saskatoon should take note of the participation barriers as they could heavily impact Saskatoon's HELP program participation.

### City of Edmonton: Home Energy Retrofit Accelerator Program (HERA)

Home Energy Retrofit Accelerator Program (HERA) provides rebate to homeowners for energy efficiency upgrades. Rebates are available to help cover the costs of an EnerGuide label and subsequent upgrades to your home. The program was launched in January 2021 for a term of 3 years (depending on available funds). The program has a budget of \$1.8 million over a period of three years. Program has received 346 applications since the start of the program. Program provides a variety of measures to improve home energy efficiency. Most popular measures include attic insulation, smart thermostats, windows, and furnaces. Applicants are eligible for 20% bonus<sup>3</sup> for implementing at least three measures within a period of 18 months. The program is stackable with the NRCan's Greener Home Grants, but the incentives are capped at 100% of the project cost. It should be noted that a PACE-style program is not currently available as part of the City of Edmonton program, however one is currently in the design phase, and expected to be launched in the next year. The participation barriers noted by the City include:

- Lack of information regarding energy efficiency and its value.
- Inexpensive energy (natural gas and electricity) resulting in low ROI for most of the measures.
- Average homeownership is much shorter than the ROI (resulting in split-benefit between current and future homeowner).
- Lack of confidence in equipment contractor and lack of info regarding the choice of a suitable contractor.
- Pre- and post-project EnerGuide evaluations can be a barrier as applicants see it as an additional step.
- Project financing.

Some of the challenges encountered during program implementation include:

- Delays due to COVID-19 resulting in a delayed program launch.
- Delays in EnerGuide evaluations due to COVID-19.
- Limited opportunities to promote the program.
- Limited marketing budget.

### City of Halifax: Solar City Program

Solar City Program is for eligible property owners, which include residential, non-profits, places of worship, co-operatives and charities. The program offers property owners access to solar energy options, which can be financed through the Halifax Regional Municipality. The program was launched as a pilot in 2012. The current version of the program was launched in 2016. The solar energy options include solar electric (PV), passive solar hot air and passive solar hot water. These solar energy measures are eligible for incentives offered through Efficiency Nova Scotia programs such as SolarHomes Program and Green Heat Program. For measures where rebates are available through Efficiency Nova Scotia programs and NRCan's Greener Home Grants, participants can apply for rebates through only one program. Solar PV systems are the most common measure applied for under the program as about 95% of the applications are for solar PV system. Exhibit 5 shows the program participation since the program launch. City of Halifax indicated that about 10% of the applicants that register for Solar City Program go through with the project implementation. The City also indicated that the program is adequately funded and there are no budgetary constraints to program participation.

<sup>3</sup> 20% of rebate amount for applied measures

*Exhibit 5: City of Halifax Solar City Participation*

Year	Executed Participant Agreements
<b>2016 - 2017</b>	65
<b>2018</b>	161
<b>2019</b>	217
<b>2020</b>	109
<b>2021</b>	42

The participation barriers noted by the City include:

- System cost.
- Long payback period.
- Lack of information regarding technology and choice of appropriate contractor.
- Loan payback term (10 years currently).

Some of the challenges encountered during program development and implementation include:

- Setting up a competitive interest rate.
- Shortage of capacity to process applications.

## Program Design

To complete the program design component, ICF's used our program modelling tool that displays information about the measure and measure costs, demonstrates expected baseline of uptake and market standards based on evaluated programs in other jurisdictions, and calculates the expected rebate, energy savings (gas and electric), GHG savings, and expected bill savings on a measure-by-measure basis. This breakdown is then rolled up into the expected program level savings under ten separate scenarios.

The tool uses evaluated savings and costs from proxy jurisdictions. When determining which dataset to use, the following considerations are made:

- Available data source, that's been reviewed by a third-party evaluator;
- similar climate;
- similar target audience; and
- similar program / measure type.

Included in the document are the individual calculations performed for each measure to provide full transparency on the calculations, with any assumptions documented and sourced. Additionally, the calculations take into consideration actual grid emission factors for Saskatchewan's electricity generation and natural gas usage to provide an accurate representation of the GHG savings for each measure.

The complete measure breakdown is provided in Appendix B.

## Scenarios

The following scenarios were considered as part of the rebate design:

- Scenario 1: Low uptake (minimum expected) from the initial HELP Program Design
- Scenario 2: Medium uptake from the initial HELP Program Design
- Scenario 3: High uptake (maximum expected) from the initial HELP Program Design

- Scenario 4: Very-high uptake (above maximum) from the initial HELP Program. This was in consideration of the additional program from NRCan which may provide incentive for more homeowners to participate in the HELP Program.
- Scenario 5: High uptake, Other Assumptions: (1) 40% of total participants are low-income, (2) All participants are eligible for rebates regardless of income levels, and (3) Low-income participant will get 8 selected measures for free.
- Scenario 6: Very-high uptake. Other Assumptions: (1) 40% of total participant are low-income, (2) All participants are eligible for rebates regardless of income levels, and (3) Low-income participant will get 8 selected measures for free.
- Scenario 7: High uptake. Other Assumptions: (1) 40% of total participant are low-income, (2) Only low-income participants are eligible for rebates, and (3) Low-income participant will get 8 measures listed below for free.
- Scenario 8: Very-high uptake. Other Assumptions: (1) 40% of total participant are low-income, (2) Only low-income participants are eligible for rebates, and (3) Low-income participant will get 8 measures listed below for free.
- Scenario 9: High uptake. Other Assumptions: (1) 40% of total participant are low-income, (2) Only low-income participants are eligible for furnace, boiler, air conditioning, and water heater rebates, and other participants will be eligible for rebates for all other products (i.e., excluding furnace, boiler, air conditioning, and water heater), and (3) Low-income participant will get 8 measures listed below for free.
- Scenario 10: Very-high uptake. Other Assumptions: (1) 40% of total participant are low-income, (2) Only low-income participants are eligible for furnace, boiler, air conditioning, and water heater rebates, and other participants will be eligible for rebates for all other products (i.e., excluding furnace, boiler, air conditioning, and water heater), and (3) Low-income participant will get 8 measures listed below for free.

These scenarios were requested by the City of Saskatoon during the review meetings. In addition to these scenarios, the cost of waiving the planned administrative fee for all participants was also included. See Exhibit 6 for a summary of the scenarios.

*Exhibit 6: Summary of Different Scenarios*

Scenario	Estimated Participation (# of Homes) during Program Period (4 Years)	Total Electricity Savings (kWh)	Total Fossil Fuel Savings (GJ)	Net Energy Savings (GJ)	Lifetime GHG Reduction (tCO <sub>2e</sub> )	Total Rebate (\$)	Waiver of Admin Fee (@\$500)	Rebate + Admin Fee
Scenario 1	120	243,842	9,215	10,092	6,947	893,633	60,000	\$953,633
Scenario 2	295	604,144	22,568	24,743	17,054	2,180,757	147,500	\$2,328,257
Scenario 3	420	862,569	32,160	35,265	24,315	3,098,426	210,000	\$3,308,426
Scenario 4	600	1,226,084	45,918	50,331	34,694	4,421,086	300,000	\$4,721,086
Scenario 5	420	872,074	32,531	35,671	24,509	3,238,974	210,000	\$3,448,974
Scenario 6	600	1,239,677	46,449	50,911	34,971	4,622,792	300,000	\$4,922,792
Scenario 7	420	363,329	13,169	14,477	9,905	1,369,716	210,000	\$1,579,716
Scenario 8	600	507,400	18,873	20,699	14,142	1,963,246	300,000	\$2,263,246

<b>Scenario 9</b>	420	870,006	28,929	32,061	22,288	3,087,724	210,000	\$3,297,724
<b>Scenario 10</b>	600	1,236,789	41,323	45,776	31,815	4,406,942	300,000	\$4,706,942

As can be seen in Exhibit 6 above, the City of Saskatoon has a variety of scenarios to choose from to meet their program objectives. Of the scenarios that fall within the original program design expectations (1-3, 5, 7 and 9), Scenario 5 provides the greatest opportunity for savings.

## Rebates

ICF worked with the City to identify appropriate rebate amounts for each measure. Some factors that went into the determination of rebates for each measure include:

- Targeting 20-50% rebate of incremental cost of measure;
- within range of existing programs (where applicable); and,
- the HELP rebate combined with the NRCAN Greener Home rebate does not exceed 100% of the measure cost - because the data sharing agreement between the City and NRCAN is unknown at this time, it was determined that the best way to safeguard the program from over payment (people receiving rebates for more than they paid for the measure) was to ensure that the rebate amount together with NRCAN's rebate averaged less than 100% when combined.

The table of rebates for each measure, including the NRCAN rebate and the combined total can be found in Exhibit 7.

*Exhibit 7: Summary of Measure Rebates*

Measure Code	Base case	NRCAN Green Homes Grant (\$)	NRCAN Green Homes Grant (Rebate Unit)	Proposed HELP Rebate per Home	HELP Rebate Unit	HELP Rebate as % of Incremental Cost	HELP Rebate + NRCAN Grant as % of Incremental Measure Cost
SHELP01011	ENERGY STAR High-efficiency Furnace	N/A		\$450.00	per home	53%	53%
SHELP01021	ENERGY STAR High-efficiency Boiler	N/A		\$450.00	per home	48%	48%
SHELP01041	ENERGY STAR Window	\$125.00	per unit	\$120.00	per Unit	32%	65%
SHELP01042	ENERGY STAR Exterior Door	\$125.00	per unit	\$100.00	per Unit	33%	75%
SHELP01051	Exterior Wall Insulation (+R 20)	\$3,800.00	per home (+R-20)	\$888.00	per home	16%	85%
SHELP01052	Celling/ Attic Insulation (+R 38)	\$1,800.00	per home (R-50)	\$1,495.47	per home	16%	36%
SHELP01053	Basement Insulation (+R 20)	\$1,500.00	per home (R-22)	\$1,027.82	per home	22%	54%
SHELP01054	Weather Stripping	N/A		\$100.00	per home	44%	44%
SHELP01055	Air Sealing	\$550.00	Per home (Meet the target in RUR)	\$200.00	per home	21%	80%
SHELP01061	ENERGY STAR High-efficiency Gas Storage Water Heater	N/A		\$300.00	per home	55%	55%
SHELP01062	ENERGY STAR High-efficiency Gas Tank-less Water Heater	N/A		\$350.00	per home	46%	46%
SHELP01063	ENERGY STAR Electric Heat Pump Storage Water Heater	\$1,000.00	per home	\$600.00	per home	34%	92%
SHELP01071	Drain-water Heat Recovery System	N/A		\$300.00	per home	32%	32%

Measure Code	Base case	NRCan Green Homes Grant (\$)	NRCan Green Homes Grant (Rebate Unit)	Proposed HELP Rebate per Home	HELP Rebate Unit	HELP Rebate as % of Incremental Cost	HELP Rebate + NRCan Grant as % of Incremental Measure Cost
SHELP01081	Heat Recovery Ventilation System (HRV)	N/A		\$400.00	per home	32%	32%
SHELP01091	Smart Thermostats	\$50.00	per home	\$80.00	per home	40%	65%
SHELP02011	Ductless Mini-Split Heat Pump (DMSHP)_Electric resistance	N/A	The grant is for units having HSPF >10 (mainly cold climate), where as ENERGY STAR requirement is 8.5	\$600.00	per home	27%	27%
SHELP02012	Ductless Mini-Split Heat Pump (DMSHP)_Heating Oil	N/A		\$600.00	per home	27%	27%
SHELP02013	Ductless Mini-Split Heat Pump (DMSHP)_Natural Gas	N/A		\$600.00	per home	27%	27%
SHELP02021	Cold Climate DMSHP Electric resistance	\$5,000.00	per home (max.)	\$3,750.00	per home	18%	43%
SHELP02022	Cold Climate DMSHP Heating Oil	\$5,000.00	per home (max.)	\$3,750.00	per home	19%	45%
SHELP02023	Cold Climate DMSHP Natural Gas	\$5,000.00	per home (max.)	\$3,750.00	per home	19%	45%
SHELP02031	Centrally Ducted Heat Pump (CDHP)_Electric Furnace	N/A	The grant is for units having HSPF >10 (mainly cold climate), where as ENERGY STAR requirement is 8.5	\$2,800.00	per home	48%	48%
SHELP02032	Centrally Ducted Heat Pump (CDHP)_Heating Oil	N/A		\$2,800.00	per home	48%	48%
SHELP02033	Centrally Ducted Heat Pump (CDHP)_Natural Gas	N/A		\$2,800.00	per home	48%	48%
SHELP02041	Cold Climate CDHP Electric Furnace	\$5,000.00	per home (max.)	\$4,700.00	per home	26%	55%
SHELP02042	Cold Climate CDHP Heating Oil	\$5,000.00	per home (max.)	\$4,700.00	per home	26%	55%
SHELP02043	Cold Climate CDHP Natural Gas	\$5,000.00	per home (max.)	\$4,700.00	per home	26%	55%
SHELP02051	Geothermal/Ground Source Heat Pump (GSHP)_Electric Furnace/Boiler	\$5,000.00	per home (capacity of the units in QPL are much larger than 6.25 Tons of heating)	\$7,500.00	per home	25%	42%
SHELP02052	Geothermal/Ground Source Heat Pump (GSHP)_Heating Oil	\$5,000.00		\$7,500.00	per home	25%	42%
SHELP02053	Geothermal/Ground Source Heat Pump (GSHP)_Natural Gas	\$5,000.00		\$7,500.00	per home	25%	42%
SHELP02061	Solar Water Heater with Electric Backup	N/A		\$1,000.00	per home	20%	20%
SHELP02062	Solar Water Heater with Gas Backup	N/A		\$1,000.00	per home	20%	20%
SHELP02071	Solar PV Panels and Inverter	\$1,000.00/up to \$5,000 per home	kW	\$2,500.00	per home	20%	61%
SHELP03011	Low-flow Toilet	N/A		\$100.00	per home	49%	49%
SHELP03021	Low-flow Faucet aerators	N/A		\$9.00	per home	36%	36%
SHELP03022	Low-flow Showerheads	N/A		\$15.00	per home	40%	40%
SHELP03031	Irrigation Control Systems	N/A		\$40.00	per home	50%	50%
SHELP03041	Rainwater Catchment	N/A		\$50.00	per home	50%	50%
SHELP04011	Level 2 EV Charging Station System	N/A		\$600.00	per home	75%	75%
SHELP04021	Battery Storage System	\$1,000.00	per home	\$7,500.00	per home	34%	39%

Measure Code	Base case	NRCan Green Homes Grant (\$)	NRCan Green Homes Grant (Rebate Unit)	Proposed HELP Rebate per Home	HELP Rebate Unit	HELP Rebate as % of Incremental Cost	HELP Rebate + NRCan Grant as % of Incremental Measure Cost
SHELP04031	Window Glazing and Embedded Markers for Birds	N/A		\$77.00	per home	31%	31%
SHELP05011	Renovating to Net Zero Bonus	N/A	N/A	\$10,000	per home	N/A	N/A

In addition to the rebates listed above, some scenarios (specifically 5-10) included the following measures be provided to income qualified households at no cost:

- Programmable thermostat;
- Weather stripping;
- Air sealing;
- Low flow toilet;
- Low flow faucet aerators;
- Low flow showerheads;
- Rainwater catchment; and,
- Window glazing and embedded markers for birds.

## Bonus Rebates

In addition to the standard rebates provided by the program, the City requested that bonus rebates be provided in certain circumstances to promote additional energy savings. Homes that undergo enough renovations to receive the Net-zero Renovations Label<sup>4</sup> will be eligible for an additional \$10,000 rebate. This is based on the cost of the certification expected to be about \$5,000, as well as to off-set the cost of applying, and the additional renovations that need to occur to make a house net-zero, or net-zero ready. Net zero certification is not expected to exceed 20 participants over the life of the program. It should be noted, the Canadian Home Builders Association Net Zero Renovations Label may not be publicly available at time of program launch, and that requirement should only be added to the program when it is available and there are certifiers available in Saskatoon.

Other discussed bonus rebates revolved around the idea of bonuses for applicants with different measure categories (i.e., energy efficiency and renewable energy on the same application). However, without knowing which scenario the City plans on selecting, multi-category rebates could not be set as it was unclear how much budget was remaining. Additionally, with rebates set at a level that would help them not exceed 100% when combined with NRCan, providing multi-category bonuses increase the risk that the program, in concert with NRCan, may provide more than 100% of the cost of the measure.

## Administrative Fees

In all of the scenarios, the City should be able to waive the administrative fees for participating in the program. Covering of the administrative fees leads to an additional \$60,000 to \$300,000 in additional budget spend depending on the scenario, however in all cases this fit under the program budget cap. Further, by removing the administrative costs to participating, the City lowers the barriers to participating in the program, particularly for smaller projects and income qualified participants. This action is expected to increase the number of participants in the program.

<sup>4</sup> Canadian Home Builder Association, 2021, [https://www.chba.ca/CHBA/HousingCanada/Net\\_Zero\\_Energy\\_Program/NEW\\_Net\\_Zero\\_Renos/CHBA/Housing\\_in\\_Canada/Net\\_Zero\\_Energy\\_Program/Net\\_Zero\\_Renovations.aspx?hkey=b852ae22-f006-4b50-9ed6-7754cfbc6652](https://www.chba.ca/CHBA/HousingCanada/Net_Zero_Energy_Program/NEW_Net_Zero_Renos/CHBA/Housing_in_Canada/Net_Zero_Energy_Program/Net_Zero_Renovations.aspx?hkey=b852ae22-f006-4b50-9ed6-7754cfbc6652)

## Energy and GHG Savings

The following table demonstrates the expected energy savings and corresponding GHG savings expected for each measure. This is determined by understanding what the expected standard baseline equipment and comparing the difference in energy use for the energy efficient model. The savings are calculated on both an annual basis as well as a lifetime basis determined by the expected measure life for each measure (as seen in other jurisdictions).

Once savings are calculated, the GHG emissions associated with natural gas and the electrical grid in Saskatchewan are factored in to gather the annual and lifetime savings.

Measure Code	Measure Name	Electricity Savings (kWh)	Gas Savings (GJ)	Water Savings (Gallons)	1st Year (2022) GHG Reduction (tCO <sub>2</sub> e)	Lifetime GHG Reduction (tCO <sub>2</sub> e)
SHELP01011	ENERGY STAR High-efficiency Furnace	0.00	12.29	0.00	0.63	7.96
SHELP01021	ENERGY STAR High-efficiency Boiler	0.00	9.85	0.00	0.51	7.23
SHELP01041	ENERGY STAR Window	57.63	2.83	0.00	0.17	2.35
SHELP01042	ENERGY STAR Exterior Door	13.36	0.81	0.00	0.05	0.66
SHELP01051	Exterior Wall Insulation (+R 20)	18.00	0.93	0.00	0.06	0.68
SHELP01052	Celling/ Attic Insulation (+R 38)	15.51	1.09	0.00	0.06	0.78
SHELP01053	Basement Insulation (+R 20)	36.60	2.60	0.00	0.15	1.85
SHELP01054	Weather Stripping	9.18	0.05	0.00	0.01	0.07
SHELP01055	Air Sealing	59.50	0.08	0.00	0.03	0.31
SHELP01061	ENERGY STAR High-efficiency Gas Storage Water Heater	0.00	4.99	0.00	0.26	2.43
SHELP01062	ENERGY STAR High-efficiency Gas Tank-less Water Heater	0.00	1.73	0.00	0.09	0.84
SHELP01063	ENERGY STAR Electric Heat Pump Storage Water Heater	-1419.04	17.33	0.00	0.19	3.85
SHELP01071	Drain-water Heat Recovery System	-0.82	4.66	0.00	0.24	3.01
SHELP01081	Heat Recovery Ventilation System (HRV)	0.00	4.62	0.00	0.24	2.49
SHELP01091	Smart Thermostats	106.10	5.59	0.00	0.34	2.76
SHELP02011	Ductless Mini-Split Heat Pump (DMSHP)_Electric resistance	941.46	0.00	0.00	0.46	3.64
SHELP02012	Ductless Mini-Split Heat Pump (DMSHP)_Heating Oil	-1459.35	9.80	0.00	0.02	2.04
SHELP02013	Ductless Mini-Split Heat Pump (DMSHP)_Natural Gas	-1454.65	9.50	0.00	-0.23	-0.51
SHELP02021	Cold Climate DMSHP Electric resistance	1995.76	15.64	0.00	1.79	16.15
SHELP02022	Cold Climate DMSHP Heating Oil	-1804.96	15.64	0.00	0.28	5.28
SHELP02023	Cold Climate DMSHP Natural Gas	-1800.80	15.08	0.00	-0.11	1.16
SHELP02031	Centrally Ducted Heat Pump (CDHP)_Electric Furnace	945.14	0.00	0.00	0.47	3.66
SHELP02032	Centrally Ducted Heat Pump (CDHP)_Heating Oil	-1450.96	9.86	0.00	0.03	2.12
SHELP02033	Centrally Ducted Heat Pump (CDHP)_Natural Gas	-1450.96	9.50	0.00	-0.22	-0.49
SHELP02041	Cold Climate CDHP Electric Furnace	2000.93	0.00	0.00	0.99	7.74
SHELP02042	Cold Climate CDHP Heating Oil	-1799.79	15.64	0.00	0.29	5.30
SHELP02043	Cold Climate CDHP Natural Gas	-1799.79	15.08	0.00	-0.11	1.16
SHELP02051	Geothermal/Ground Source Heat Pump (GSHP)_Electric Furnace/Boiler	2904.41	0.00	0.00	1.43	14.09
SHELP02052	Geothermal/Ground Source Heat Pump (GSHP)_Heating Oil	-1226.81	17.00	0.00	0.67	12.21

Measure Code	Measure Name	Electricity Savings (kWh)	Gas Savings (GJ)	Water Savings (Gallons)	1st Year (2022) GHG Reduction (tCO <sub>2</sub> e)	Lifetime GHG Reduction (tCO <sub>2</sub> e)
SHELP02053	Geothermal/Ground Source Heat Pump (GSHP)_Natural Gas	-1226.81	16.39	0.00	0.24	6.07
SHELP02061	Solar Water Heater with Electric Backup	2386.01	0.00	0.00	1.17	9.23
SHELP02062	Solar Water Heater with Gas Backup	0.00	13.97	0.00	0.72	7.53
SHELP02071	Solar PV Panels and Inverter	1110.83	0.00	0.00	0.55	5.39
SHELP03011	Low-flow Toilet	5.36	0.00	983.16	0.00	0.03
SHELP03021	Low-flow Faucet Aerators	5.37	0.31	424.37	0.02	0.14
SHELP03022	Low-flow Showerheads	24.63	1.56	1728.22	0.09	0.70
SHELP03031	Irrigation Control Systems	0.00	0.00	3318.18	0.00	0.00
SHELP03041	Rainwater Catchment	0.00	0.00	1487.42	0.00	0.00
SHELP04011	Level 2 EV Charging Station System	0.00	0.00	0.00	0.00	0.00
SHELP04021	Battery Storage System	1.28	0.00	0.00	0.00	0.00
SHELP04031	Window Glazing and Embedded Markers for Birds	0.00	0.00	0.00	0.00	0.00
SHELP05011	Renovating to Net Zero Bonus	0.00	0.00	0.00	0.00	0.00

## Recommended Action

As noted, it is difficult to know the impact of the federal Greener Homes program, and for that reason the decision has been made to abide by the original program design estimates. For the purposes of this report, the expectation is that the participation level will hit the original program design limit for participants but not exceed it (Scenarios 3,5,7 and 9). The analysis (Scenarios 4,6,8 and 10) shows that even if participation exceeds expectations there should be room for it within the allotted program budget for the additional participants.

To determine whether the City should select Scenario 3,5,7 or 9 is a program design philosophy decision that can only be made by the City. Should the City decide to focus on treating all participants the same, Scenario 3 should be used for planning purposes. It is worth noting that it is unclear if there is coordination FCM and NRCAN, and whether FCM will be willing to fund a program similar to the one instituted by NRCAN. Scenario 3 is the scenario most similar to the NRCAN program, and if such considerations are being weighed by FCM, there is a possibility the program is at risk of not being funded.

If the City decides to make special considerations for income qualified participants, one of Scenario 5, 7, or 9 should be selected. Further to the point above, the NRCAN does not make special considerations for income qualified participants, and as such an application to FCM that provides special provisions for this group may be evaluated more favourably. It is important to note that only Scenario 5, which provides rebates for all participants but also provides free equipment for low-income participants, is expected to utilize an amount close to the original stated program budget of \$6 million.

Scenarios 7 and 9 which provide rebates only for income qualified participants fail to utilize the full desired budget. If these scenarios are selected, considerations should be made for the lower expected budget use or adjustments would need to be made to the rebate levels to maximize budget, although there may be risk in doing so. Raising rebate levels beyond a certain level risks overpaying participants to install energy efficient measures in their home, and in doing so can mean the budget has not been optimized to achieve its maximum potential. In some instances, raising rebates could create scenarios where participants are receiving more than 100% of the retrofit cost when paired with the NRCAN rebate. If changes to the proposed rebate levels need to occur, they should be done with caution.

Using Scenarios 7 or 9 without further adjustment to the expected participation levels or rebate amounts, for the purposes of the City's application to the FCM may result in receiving reduced funding from the FCM.

Given all of these considerations, Scenario 5 appears to be the best suited to achieve the City's goals with the HELP program within the original program design, in that it is a mass-market program with special considerations for income qualified participants and is the closest to the \$6 million of desired budget. Should the City expect that the addition of the Greener Homes Grant Program by NRCan will bolster participation in the program, then Scenario 6 which accounts for increased participation is best suited for the City's goals.

## Appendix A: Jurisdictional Review Program Details

Program	Location	Target Sector	Energy Efficiency (EE) / Renewable Energy (RE) / Water Conservation (WC) / Other	Stackable Rebate with Other Programs?	Rebate Cap
<b>Municipal Programs</b>					
<b>Home Energy Retrofit Accelerator</b>	Edmonton, Alberta	Residential	EE	Yes	Up to 40% of eligible costs (incl. equipment, installation & professional services)
<b>Change Homes for Climate Solar Program</b>	Edmonton, Alberta	Residential	RE	N/A	Up to 40% of the total eligible expenses or \$4,000 per Dwelling
<b>Electric Vehicle Charger and E-Bike Rebate Program</b>	Edmonton, Alberta	Residential, Commercial	Other	N/A	Residential EV Charger: 50% of cost (equipment & installation) up to a max. of \$600. Commercial EV Charger: 50% of cost (equipment & installation) up to a max. of \$2,000.
<b>Clean Energy Improvement Program</b>	Multiple Municipalities, Alberta	Residential, Commercial	EE, RE	Yes	Up to 100% of project cost
<b>Clean Energy Financing Program</b>	Multiple Municipalities, Nova Scotia	Residential	EE, RE	Yes	Bridgewater: \$15,000 - \$20,000 (depends on property value)

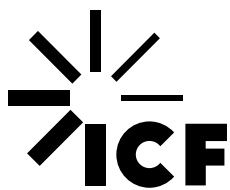
Program	Location	Target Sector	Energy Efficiency (EE) / Renewable Energy (RE) / Water Conservation (WC) / Other	Stackable Rebate with Other Programs?	Rebate Cap
					Lunenburg: \$10,000 Digby: \$15,000 Barrington: \$10,000 Yarmouth: \$15,000 Amherst: \$15,000 - \$25,000 (depends on property value) Cumberland: \$15,000 - \$25,000 (depends on property value)
<b>Solar City Program</b>	Halifax, Nova Scotia	Residential, Non-Profits	RE	Yes	Up to maximum of 105% of quoted cost (equipment, installation, labour, warranty or maintenance plan, any other associated cost)
<b>Home Energy Loan Program</b>	Toronto, Ontario	Residential	RE, EE, Other	Yes	Up to \$75,000
<b>HAT Smart</b>	Medicine Hat, Alberta	Residential	EE, RE, WC	N/A	Solar PV: Up to a max. of \$6,000 Scratch & Win: Up to a max. of \$200
<b>Residential Environmental Rebates</b>	Banff, Alberta	Residential	EE, RE, WC	N/A	Toilet: Lesser of \$100/toilet or 50% of cost

Program	Location	Target Sector	Energy Efficiency (EE) / Renewable Energy (RE) / Water Conservation (WC) / Other	Stackable Rebate with Other Programs?	Rebate Cap
<b>Solar PV Rebates</b>	Banff, Alberta	Residential, Commercial	RE	N/A	\$750/kW of solar capacity installed, to a maximum of 20 kW
<b>Royal Flush Toilet Rebate</b>	Guelph, Ontario	Residential	WC	N/A	Up to two toilets
<b>Water-Efficient Toilet Rebate Program</b>	Halton, Ontario	Residential	WC	N/A	1 toilet
<b>Irrigation Controller Rebate</b>	Kelowna, British Columbia	Residential, Commercial	WC	N/A	1 controller/home
<b>Smart Control Irrigation Rebate</b>	Comox Valley Regional District, British Columbia	Residential	WC	N/A	Up to a \$300
<b>Provincial Programs</b>					
<b>Home Energy Assessment</b>	Nova Scotia	Residential	EE, RE	N/A	Up to \$5,000
<b>Solar Homes Program</b>	Nova Scotia	Residential	RE	N/A	Max. rebate \$6,000, up to 25% of eligible pre-tax system costs
<b>Free Energy Efficient Products and Installation</b>	Nova Scotia	Residential	EE, WC	N/A	Not available
<b>Home Insulation Rebate</b>	Manitoba	Residential	EE	N/A	Up to 100% of insulation material cost
<b>Home Energy Upgrades</b>	Manitoba	Residential	EE	N/A	Home appliances & smart thermostat: Up to \$325

Program	Location	Target Sector	Energy Efficiency (EE) / Renewable Energy (RE) / Water Conservation (WC) / Other	Stackable Rebate with Other Programs?	Rebate Cap
<b>Home Efficiency Rebate Program</b>	Ontario	Residential	EE	N/A	Up to \$5,000
<b>Smart Thermostat Program</b>	Ontario	Residential	EE	N/A	\$75
<b>CleanBC Better Homes and Home Renovation Rebate Program</b>	British Columbia	Residential	EE	Yes	Up to 100% of cost of upgrade
<b>Take Charge (Instant Rebate)</b>	Newfoundland and Labrador	Residential	EE, WC	N/A	Not available
<b>EV Charger Rebate Program</b>	British Columbia	Residential	Other	Yes	Up to 50% of costs, to a maximum of \$350.
<b>Federal Programs</b>					
<b>Canada Greener Homes Grant</b>	Canada	Residential	EE, RE, Other	Yes	<ul style="list-style-type: none"> <li>- Up to \$600 for the cost of pre- and post-retrofit EnerGuide evaluations</li> <li>- Up to \$5,000 total for the implementation of eligible retrofits</li> </ul>

## **Appendix B: Program Design**

See attached spreadsheet labelled Appendix B.



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## HELP Rebate Recommendations - Triple Bottom Line Analysis

### Process and Methodology

The Administration used the City of Saskatoon's Triple Bottom Line (TBL) Decision Making Tool to comply with *Council Policy C08-001 - Triple Bottom Line*.

In conducting the review, the Administration relied on the expertise of the Project Team and Subject Matter Experts from the Sustainability and the Recreation and Community Development departments, as well as conducted research on industry's best practices.

This review is meant to be a high-level way to identify the initiative's environmental, social, economic, and governance outcomes, as well as to identify opportunities to achieve even greater sustainability benefits. The results are meant to support ongoing decision making, rather than be relied upon as a fixed sustainability evaluation.

### Caveats and Limitations:

- Some TBL areas were considered out of scope, including items that were not contingent on and/or influenced by the initiative.
- The narrow scope of the project has impacted the initiative's ability to achieve higher TBL outcomes in certain areas as they were largely unrelated: Environmental Health and Integrity Indicators related to sustainable food systems, and Economic Prosperity and Fiscal Responsibility related to labour rights and employment.

It is assumed that uptake for different rebates will vary. Uptake assumptions were provided from ICF based on their knowledge of rebate programming and in all the options are as follows:

- Insulation (exterior wall, attic, and basement) – 50% uptake
- Air sealing – 10% uptake
- Windows (maximum 10 per household) – 60% uptake
- Exterior Doors (maximum 2 per household) – 60% uptake
- HRVs – 25% uptake
- Drain water heat recovery systems – 25% uptake
- Furnaces – 80% uptake
- Boilers – 50% uptake
- Tankless Water Heaters – 65% uptake
- Heat pumps – 10% uptake
- Rooftop solar – 25% uptake
- Solar water heater – 1% uptake
- EV charging station – 25% uptake
- Net Zero Bonus – 4% uptake

### Results & Findings

Overall, the results of the Administration's TBL review indicate that the HELP rebate recommendations achieve multiple TBL benefits. A summary of results for each TBL principle and indicator are included in the subsequent sections of this document.

## **Principle: Environmental Health and Integrity**

<b>Indicator</b>	<b>TBL Outcomes</b>
Renewable Energy	<ul style="list-style-type: none"> <li>• Rebates for renewable energy items could increase adoption</li> </ul>
Conservation of Resources	<ul style="list-style-type: none"> <li>• Rebates for energy and water conservation projects will encourage conservation of resources.</li> </ul>
Climate Change Mitigation and Adaptation	<ul style="list-style-type: none"> <li>• Free items like smart thermostats and water fixtures along with instructions on how to use or program them can reduce emissions.</li> <li>• Free rainwater catchment items or smart irrigation systems can encourage adaptation action such as water use in drought seasons.</li> </ul>
Green Buildings and Sustainable Land Use	<ul style="list-style-type: none"> <li>• Renovating existing housing stock is more sustainable from a land perspective than greenfield development.</li> <li>• Adding help upgrades to buildings and encouraging net zero renovations through incentives can increase the knowledge and demand for green buildings.</li> <li>• Rebates for HRVs will improve indoor air quality.</li> </ul>
Sustainable Transportation	<ul style="list-style-type: none"> <li>• Rebate for EV charging stations may encourage more EV adoption but only marginally for those that can afford to make the switch to an EV.</li> </ul>
Healthy Ecosystems	<ul style="list-style-type: none"> <li>• Rebates for insulation and thicker high-quality windows and doors can reduce noise nuisances indoors, high efficiency mechanical equipment in addition to air sealing homes may run less often, resulting in less noise or vibration in a home.</li> <li>• Currently the program does not encompass trees, naturalized landscaping or green roofs.</li> </ul>
Clean Air, Water, and Land	<ul style="list-style-type: none"> <li>• Renewable energy - solar/geothermal would reduce air pollution, mechanical equipment that is more efficient will release less GHG's.</li> <li>• Rebates for water fixtures/toilets would reduce wastewater, drain water heat recovery.</li> </ul>
Waste Reduction and Diversion	<ul style="list-style-type: none"> <li>• Program could be creating more construction and demolition waste that's if it did not exist.</li> </ul>
Storm Water Management	<ul style="list-style-type: none"> <li>• Minimal flood mitigation upgrades included in the program, currently just outdoor rainwater catchment and smart irrigation could assist with storm water management.</li> </ul>
Sustainable Food System	<ul style="list-style-type: none"> <li>• Not applicable.</li> </ul>

### **For Further / Future Consideration**

- HELP program could be expanded to include more natural infrastructure upgrades, however the payback and measurement of impact on these items would be difficult to track.
- Mandates for the handling of construction and demolition waste could be considered in a future iteration of the program.

## **Principle: Social Equity and Cultural Wellbeing**

<b>Indicator</b>	<b>Outcomes</b>
Equity and Opportunity	<ul style="list-style-type: none"> <li>• Rebates and program enhancements targeting income-qualified households would improve equity</li> <li>• Targeted programming and communication with diverse communities could be explored further to encourage more income-qualified uptake</li> </ul>

Diversity and Inclusion	<ul style="list-style-type: none"> <li>• HELP and rebates encourage people to stay in their home longer, can add comfort and affordability long term.</li> <li>• Review demographic info across the city and target diverse community groups with communication.</li> </ul>
Heritage, Arts, and Culture	<ul style="list-style-type: none"> <li>• Rebates could help restore/preserve character homes.</li> </ul>
Self Sufficiency and Living with Dignity	<ul style="list-style-type: none"> <li>• Education about home maintenance, offering ongoing workshops on home ownership or maintaining equipment when participants make certain upgrades could equip people with the information, they need to keep their homes comfortable and liveable for the long term.</li> </ul>
Health and Wellbeing	<ul style="list-style-type: none"> <li>• Improving home comfort increases quality of life.</li> <li>• Renovating home can increase affordability long term.</li> <li>• Rebates focused on healthy home upgrades (HRVs, air conditioning, furnace, insulation).</li> </ul>
Safety and Resiliency	<ul style="list-style-type: none"> <li>• Upgrades to heating and cooling equipment and insulation keep people safe from extreme weather events.</li> <li>• Thicker windows and doors could increase safety for homeowners, intersection with crime, disabilities easier to open and close windows, comfort of home.</li> <li>• Rebates for insulation can help households manage power outages more easily, solar panels assist with more locally generated power to the grid.</li> </ul>
Civic Participation	<ul style="list-style-type: none"> <li>• People who renovate their homes take pride in their maintenance and engage with the city heavily throughout the application process.</li> </ul>
Recreation	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

### For Further / Future Consideration

- City could track program equity and upgrades that income-qualified groups are pursuing to understand if there are barriers to different types of upgrades and develop strategies to address these barriers.
- Could target programming or communications by neighbourhood, age of housing stock or location.

### Principle: Economic Benefits

Indicator	TBL Outcomes
Innovation	<ul style="list-style-type: none"> <li>• Program is first of its kind in Saskatchewan</li> <li>• Rebates for more innovative retrofits could increase use of newer technologies that are not yet widely adopted in our region such as heat pumps, EV chargers, geothermal heating and cooling, and battery storage technologies.</li> <li>• Knowledge and capacity for green building renovations and energy audits will grow with the program and could attract new businesses or expertise to the city.</li> </ul>
Sustainable Procurement	<ul style="list-style-type: none"> <li>• Program enhancements for contracts can include sustainable procurement and TBL criteria.</li> </ul>
Financial Planning and Resourcing	<ul style="list-style-type: none"> <li>• FCM funding extends the length of the program and the number of applicants that can complete projects.</li> <li>• Increasing LICO baseline would allow for more individuals to access free items/targeted rebates.</li> <li>• Renovations increase investment in housing stock.</li> </ul>

	<ul style="list-style-type: none"> <li>• Rebates for the items with the biggest payback potential can save homeowners money.</li> <li>• Maximizing the available FCM budget will help ensure more households receive rebates.</li> <li>• FCM funding is partially debt. This will impact City's borrowing limits; grant portion of funding has no impact on debt limits.</li> </ul>
Affordability for Users	<ul style="list-style-type: none"> <li>• Rebates will make upgrades more affordable for citizens.</li> <li>• Some home upgrades will reduce utility bills such as solar Photovoltaics, low flow fixtures, added insulation, more efficient mechanical equipment.</li> <li>• Offering free items would be of value to income-qualified households to make small low hanging fruit upgrades.</li> </ul>
Support the Local Economy	<ul style="list-style-type: none"> <li>• Program provides work for local contractors, builders, energy auditors and skilled tradespeople.</li> <li>• Spreading knowledge about energy efficiency and renewable energy in the residential sector.</li> <li>• Increasing demand for specific products from local suppliers.</li> </ul>
Asset Management	<ul style="list-style-type: none"> <li>• Renovating homes can increase their useful life and reduce degradation of resident owned assets in older areas.</li> </ul>
Skills and Training	<ul style="list-style-type: none"> <li>• The project increases the demand for skills in the green building renovations, energy auditing and renewable energy industries.</li> <li>• Could use program as opportunity to engage with homeowners on home maintenance which would increase knowledge and skills among homeowners.</li> </ul>
Labour Rights and Employment	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

### Other Notes

- A detailed budget / financial analysis is included in the body of the report.
- Targeted communications and programming to core areas for home renovations could improve access to other services like transit.
- Future program offerings focused on multi-unit building stock in core areas would increase asset management and the local economy further.
- Further engagement and focus could be placed on training and building capacity for EnerGuide assessments and green building products.

### Principle: Good Governance

Indicator	TBL Outcomes
Ethical and Democratic Governance	<ul style="list-style-type: none"> <li>• This project aligns with the City's strategic plan and follows City policies.</li> <li>• The program and future enhancements are an action from the City's Low Emissions Community Plan.</li> <li>• Decisions are been made among stakeholders across departments and top management with the final approval from City Council.</li> </ul>
Effective Service Delivery	<ul style="list-style-type: none"> <li>• Rebates are resident-centric, improve equity where possible and communications about the program can be enhanced/expanded with FCM funding.</li> </ul>
Education, Communication, Engagement, Capacity Building	<ul style="list-style-type: none"> <li>• Program enhancements will be shared with Service Saskatoon and community consultants.</li> <li>• Can use FCM funding to educate residents on home maintenance, efficiency, renewable energy, advantages of home upgrades and where to start with renovating their homes.</li> </ul>

	<ul style="list-style-type: none"> <li>Feedback will be collected from participants through the use a survey after their project is complete so future enhancements or changes can be made to improve the program going forward.</li> </ul>
Monitoring, Reporting and Compliance	<ul style="list-style-type: none"> <li>Project team is tracking a variety of metrics including project types, average loan amounts, contractors used, income-qualified applicants, energy and emissions reduced for each retrofit.</li> <li>Additional tracking and reporting are required through the FCM agreement to receive disbursement of funds.</li> <li>Program uses best practices, local experience and subject matter expertise to make program improvements or develop rebate packages.</li> </ul>
Agility and Adaptiveness	<ul style="list-style-type: none"> <li>Continuously improving the program and day to day operations to make the application process smooth and transparent for applicants.</li> <li>Bylaw amendments may be required for major changes to the program in the long term.</li> <li>Remaining flexible within the constraints of the program bylaw.</li> </ul>
Roles, Responsibilities and Rewards	<ul style="list-style-type: none"> <li>Rebates are rewarding residents for sustainable improvements and are stackable with other existing incentive programming.</li> </ul>