

# AGENDA MATERIAL

### **COMMITTEE OF THE WHOLE**

MEETING DATE: MONDAY, JUNE 6, 2022

LOCATION:

**S. H. BLAKE MEMORIAL AUDITORIUM** (Council Chambers)

TIME:

6:30 P.M.



### **MEETING:** Committee of the Whole

**DATE:** Monday, June 6, 2022

Reference No. COW - 27/53

### CLOSED SESSION in the McNaughton Room at 4:30 p.m.

Committee of the Whole - Closed Session Chair: Councillor Andrew Foulds

Closed Session Agenda will be distributed separately to Members of Council and EMT only.

### OPEN SESSION in S.H. Blake Memorial Auditorium at 6:30 p.m.

Committee of the Whole - Operations Session Chair: Councillor Brian McKinnon

### **DISCLOSURES OF INTEREST**

### **CONFIRMATION OF AGENDA**

### **CONFIRMATION OF AGENDA**

### Confirmation of Agenda - June 6, 2022 - Committee of the Whole (Page 9)

WITH RESPECT to the June 6, 2022 Committee of the Whole meeting, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

### PRESENTATIONS

### **Remedial Action Plan Implementation Committee**

Memorandum from Chief Chemist - Environment Division Ian Morgan dated May 24, 2022 requesting an opportunity to provide a presentation relative to the above noted. (Pages 10 - 11)

### **DEPUTATIONS**

### ITEMS ARISING FROM CLOSED SESSION

### **REPORTS OF COMMITTEES, BOARDS AND OUTSIDE AGENCIES**

### EarthCare Advisory Committee Minutes

Minutes of Meeting 04-2022 of the EarthCare Advisory Committee held on April 5, 2022, for information. (Pages 12 - 17)

### Clean, Green & Beautiful Committee Minutes

Minutes of Meeting 03-2022 of the Clean, Green & Beautiful Committee held on April, 20 2022, for information. (Pages 18 - 23)

### **REPORTS OF MUNICIPAL OFFICERS**

### Net-Zero Strategy Update - 2021/2022

Report R 91/2022 (Infrastructure & Operations) providing information regarding the progress achieved since the approval of Climate-Forward City: Thunder Bay Net-Zero Strategy in June 2021, for information. (Pages 24 - 37)

Memorandum from Sustainability Coordinator Summer Stevenson dated May 17, 2022 requesting an opportunity to provide a presentation relative to the above noted.

### Contract 2, 2022 - Sidewalk & Pedestrian Crossover

At the May 16, 2022 Committee of the Whole meeting the City Clerk advised that this item has been withdrawn from the agenda and will be re-presented at a later date.

Report R 65/2022 (Infrastructure & Operations - Engineering & Operations) containing a recommendation relative to the above noted, re-presented. (Pages 38 - 42)

Pending the passage of the resolution at the Committee of the Whole meeting, the resolution will be presented for ratification at the City Council meeting to be held later in the evening and will require a two-thirds vote.

WITH RESPECT to Report R 65/2022 (Infrastructure & Operations - Engineering & Operations), we recommend that Contract 2, 2022 – Sidewalk and Pedestrian Crossover Construction be awarded to Bay City Contractors who submitted the lowest compliant tender in the amount of \$1,230,010.65 [inclusive of HST]; it being noted that the amount shown is based on estimated quantities; final payment for this contract will be based on measured quantities for the completed work;

AND THAT the General Manager of Infrastructure and Operations report any circumstances to City Council should significant variation in the contract quantities occur;

AND THAT the Mayor and City Clerk be authorized to sign all documentation related to these matters;

AND THAT any necessary bylaws be presented to City Council for ratification.

### Contract 4, 2022 - Sewer & Watermain II

At the May 16, 2022 Committee of the Whole meeting the City Clerk advised that this item has been withdrawn from the agenda and will be re-presented at a later date.

Report R 56/2022 (Infrastructure & Operations - Engineering & Operations) containing a recommendation relative to the above noted, re-presented. (Pages 43 - 47)

Pending the passage of the resolution at the Committee of the Whole meeting, the resolution will be presented for ratification at the City Council meeting to be held later in the evening and will require a two-thirds vote.

WITH RESPECT to Report R 56/2022 (Infrastructure & Operations – Engineering & Operations), we recommend that Contract 4, 2022 Sewer and Watermain II be awarded to Nadin Contracting Ltd, which submitted the lowest tender in the amount of \$2,982,581.89 (inclusive of HST); it being noted that the amount shown is based on estimated quantities; final payment for this Contract will be based on measured quantities for the complete work;

AND THAT the General Manager of Infrastructure and Operations report significant variations in the Contract quantities to City Council;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to this matter;

AND THAT any necessary by-laws be presented to City Council for ratification.

### School Crossing Location Deletion

Report R 97/2022 (Infrastructure & Operation - Central Support) providing a recommendation for Council's consideration relative to the above noted. (Pages 48 - 49)

WITH RESPECT to Report R 97/2022 (Infrastructure & Operations – Central Support), we recommend that a school crossing guard location at Shuniah Street and Huron Avenue be removed;

AND THAT any necessary By-laws be presented to City Council for ratification.

### **School Crossing Location Addition**

Report R 98/2022 (Infrastructure & Operations - Central Support) recommending that a school crossing guard location be implemented at Leslie Avenue at Talbot Street for the start of the 2022/2023 school year. (Pages 50 - 51)

WITH RESPECT to Report R 98/2022 (Infrastructure & Operations - Central Support), we recommend that a school crossing guard location be implemented at Leslie Avenue at Talbot Street for the start of the 2022/2023 school year;

AND THAT any necessary By-laws be presented to City Council for ratification.

### Fit Together: Recreation & Facilities Master Plan Update

Report R 63/2022 (Community Services - Recreation & Culture) providing an update on the progress of the Fit Together: Recreation and Facilities Master Plan (the Plan), approved by City Council in January 2017 (R 152/2016), for information. (Pages 52 - 64)

### **Tbaytel Debenture Financing**

Report R 89/2022 (Corporate Services & Long-Term Care - Financial Services) recommending that City Council approve the request from Tbaytel to borrow \$25 million for capital infrastructure upgrades in 2022 through 2024. (Pages 65 - 66)

WITH RESPECT to Report R 89/2022 (Corporate Services and Long-Term Care – Financial Services), we recommend that the request from Tbaytel to borrow \$25 million for capital infrastructure upgrades in 2022 through 2024 in accordance with the 3-year Tbaytel Capital Plan outlined in the report be approved;

AND THAT the City Treasurer be authorized to proceed with debenture financing as outlined in the Report;

AND THAT the necessary By-laws be presented to Council for ratification.

### Non-Consolidated Financial Statements, Reserve Fund and Investment of Municipal Funds Update

Report R 81/2022 (Corporate Services & Long Term Care - Financial Services), recommending that the Non-Consolidated Financial Statements, Reserve Fund, and Investment of Municipal Funds Update for The Corporation of the City of Thunder Bay be received by City Council. (Pages 67 - 96)

WITH RESPECT to Report R 81/2022 (Corporate Services & Long Term Care - Financial Services), we recommend that the Non-Consolidated Financial Statements for the Corporation of the City of Thunder Bay, as appended as Attachment A to this report, be received for information purposes;

AND THAT the 2021 tax-supported surplus of \$10.9 million be transferred to reserve funds as follows:

- 1. \$6.0 million to the General Capital Reserve Fund;
- 2. \$1.9 million to the Winter Roads Reserve Fund;
- 3. \$0.7 million to the Legal Fees Reserve Fund;

- 4. \$0.1 million to the Event Hosting Reserve Fund; and
- 5. \$2.2 million to the Stabilization Reserve Fund;

AND THAT the 2021 update on the Reserve Funds and Investment of Municipal Funds be received for information purposes;

AND THAT Appropriation No. 16, appended as Attachment B, and No. 17, appended as Attachment C, be approved;

AND THAT By-law 123-1992 be repealed upon the closure of the Sandy Beach Reserve Fund;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to these matters;

AND THAT any necessary by-laws be presented to City Council for ratification.

### **Property Tax Assessment Appeals**

Report R 92/2022 (Corporate Services & Long-Term Care - Revenue) providing information on the outstanding number of assessment appeals, current and historical impact of assessment appeals on annual tax write-offs, and the status of the assessment appeal reserve fund, for information. (Pages 97 - 102)

### **Election Sign By-law**

Report R 88/2022 (City Manager's Office - Office of the City Clerk) recommending that the draft Election Sign By-law, as outlined in this report and appended as Attachment A, be approved. (Pages 103 - 114)

WITH RESPECT to Report R 88/2022 (City Manager's Office – Office of the City Clerk), we recommend that the draft Election Sign By-law, as outlined in this report and appended as Attachment A, be approved;

AND THAT the Election Sign By-law, BL 56/2022, be presented to City Council on June 13, 2022.

### FIRST REPORTS

### Food and Organic Waste Diversion Program – Implementation Plan

Report R 24/2022 (Infrastructure & Operations - Environment) recommending the development and implementation of a food and organic waste diversion (Green Bin) program to achieve and maintain compliance with the requirements of the Provincial Policy Statement, and for the optimization of the City's collection services with the use of new technology and policies to minimize the cost of implementing the new program and achieve effective participation. (Pages 115 - 181)

This report is being introduced as a 'first report' to allow Committee of the Whole and the general public time to consider the implications of the report before the following recommendations are considered by Committee of the Whole on June 27, 2022.

Memorandum from Manager - Solid Waste and Recycling Services Jason Sherband date May 24,

2022 requesting an opportunity to provide a presentation relative to the above noted.

### Receive Report R 24/2022 (Infrastructure & Operations - Environment) as a First Report

Recommendation to receive Report R 24/2022 (Infrastructure & Operations - Environment) as a First Report: (Pages 182)

WITH RESPECT to Report R 24/2022 (Infrastructure & Operations - Environment) we recommend that the Report be received;

AND THAT Report R 24/2022 (Infrastructure & Operations - Environment) be presented at the June 27, 2022 Committee of the Whole meeting for consideration.

### **PETITIONS AND COMMUNICATIONS**

### EarthCare Sustainability Plan

Memorandum from Sustainability Coordinator Summer Stevenson dated May 16, 2022 providing an update on the renewal of the EarthCare Sustainability Plan, for information. (Pages 183 - 185)

### **Tree Production - Feasibility Assessment**

At the January 10, 2022 City Council meeting, a resolution was passed directing Administration to complete an Expression of Interest related to growing and provision of trees to inform the original report R 168/2021 (Engineering & Operations) submitted at the December 6, 2022 COW meeting, and to report back by June 2022. (Pages 186 - 188)

Memorandum from Manager - Parks & Open Spaces Cory Halvorsen dated May 16, 2022 containing information and a recommendation for Council's consideration, relative to the above noted.

WITH RESPECT to the Memorandum from Cory Halvorsen, Manager – Parks & Open Spaces dated May 14 2022, we recommend that consideration of Report R 168/2021 (Engineering & Operations) Tree Production – Feasibility Assessment be deferred to September, 2023.

### Summer Services Update

Memorandum from Director - Recreation & Culture Leah Prentice dated May 19, 2022 relative to the above noted, for information. (Pages 189 - 192)

### Tennis Court Resurfacing - Capital Appropriation

Memorandum from Director, Recreation & Culture Leah Prentice dated May 19, 2022, providing a recommendation relative to the above noted. (Pages 193 - 196)

WITH RESPECT to the Memorandum from Director – Recreation & Culture Leah Prentice dated May 19, 2022, we recommend that Appropriation 19 be approved;

AND THAT any necessary by-laws be presented to City Council for ratification.

### Licensed Private Home Child Care

Memorandum from General Manager, Community Services Kelly Robertson dated May 24, 2022 providing an update and recommendation relative to the above noted. (Pages 197 - 199)

WITH RESPECT to the Memorandum from General Manager – Community Services Kelly Robertson dated May 24, 2022, we approve the deferral of the termination of the City's administration and delivery of the Licensed Private Home Child Care Program from July 1, 2022 to September 1, 2022;

AND THAT Administration inform the Thunder Bay District Social Services Administration Board of the change in date for contract termination;

AND THAT Administration re-purpose the current staffing complement and remaining 2022 budget for the Licensed Private Home Worker position towards the creation of an Early Childhood Educator I position effective September 2022;

AND THAT any necessary by-laws be presented to City Council for ratification.

### Clean, Green & Beautiful Terms of Reference and Policy Review

In June 2018, Council approved a recommendation from Administration and the Clean, Green and Beautiful Committee to review Corporate Policy 02-05-01. The Committee has formed a subcommittee to review the Policy and complete the annual review of the Terms of Reference, required under Council's Procedural By-law. (Pages 200 - 201)

Memorandum from Councillor Rebecca Johnson, Chair – Clean, Green & Beautiful Committee dated May 24, 2022 containing a recommendation relative to the above noted.

WITH RESPECT to the Memorandum from Councillor Rebecca Johnson dated May 24, 2022 we recommend that the report back date relating to Outstanding List Item 2018-009-ADM Clean, Green & Beautiful Policy review be changed from June 27, 2022, to July 25, 2022;

AND THAT any necessary by-laws be presented to Council for ratification.

### **Outstanding Item - Automated Speed Enforcement**

Memorandum from Director - Engineering & Operations Kayla Dixon dated May 27, 2022 providing a recommendation relative to Automated Speed Enforcement - Outstanding Item 2020-048-INO. (Pages 202 - 203)

WITH RESPECT to the Memorandum from Kayla Dixon, Director, Engineering & Operations dated May 27, 2022, we recommend that the report back date relating to Outstanding Item No. 2020-048-INO (Automated Speed Enforcement) be changed from June 6, 2022 to December 12, 2022.

### **OUTSTANDING ITEMS**

### Outstanding List for Operations as of May 24, 2022

Memorandum from City Clerk K. Power, dated May 24, 2022 providing the Operations Outstanding Items List, for information. (Pages 204 - 206)

**NEW BUSINESS** 

**ADJOURNMENT** 



### *MEETING DATE* 06/06/2022 (mm/dd/yyyy)

### SUBJECT Confirmation of Agenda - June 6, 2022 - Committee of the Whole

### **SUMMARY**

Confirmation of Agenda - June 6, 2022 - Committee of the Whole

### **RECOMMENDATION**

WITH RESPECT to the June 6, 2022 Committee of the Whole meeting, we recommend that the agenda as printed, including any additional information and new business, be confirmed.



### *MEETING DATE* 06/06/2022 (mm/dd/yyyy)

### SUBJECT Remedial Action Plan Implementation Committee

### **SUMMARY**

Memorandum from Chief Chemist - Environment Division Ian Morgan dated May 24, 2022 requesting an opportunity to provide a presentation relative to the above noted.

### **ATTACHMENTS**

1. Memorandum - I. Morgan - May 24, 2022



**Environment Division** 

*Tel:* (807) 625-2471 *Fax:* (807) 625-3588

### MEMORANDUM

TO:	Krista Power, City Clerk
FROM:	Ian Morgan, Chief Chemist – Environment Division
DATE:	May 24, 2022
RE:	Remedial Action Plan Implementation Committee – Request to Present Information – June 6, 2022

We respectfully request an opportunity for the Remedial Action Plan Implementation Committee (RAPIC) to provide a presentation to the Committee of the Whole at the meeting on Monday, June 6, 2022. A RAPIC representative, Gurpreet Mangat from Environment and Climate Change Canada will provide a PowerPoint presentation regarding an update on the Beneficial Use Impairments (BUI) of local Thunder Bay beaches which were listed as Areas of Concern.

If you have any questions regarding this request please contact me at 625-3537.

Sincerely,

Ian Morgan, Ph.D., P. Chem., C. Chem. Chief Chemist – Environment Division

cc: K. Marshall, General Manager – I&O M. Warywoda, Director – Environment Krista Power, City Clerk



### *MEETING DATE* 06/06/2022 (mm/dd/yyyy)

SUBJECT EarthCare Advisory Committee Minutes

### **SUMMARY**

Minutes of Meeting 04-2022 of the EarthCare Advisory Committee held on April 5, 2022, for information.

### **ATTACHMENTS**

1. EarthCare Advisory Committee Minutes - April 5, 2022

DATE:	April 5 , 2022	MEETING NO.:	04-2022
TIME:	4:03 P.M.		
PLACE:	Microsoft Teams Meeting		

#### **PRESENT:**

Margaret Wanlin Shannon Costigan Jane Todd Courtney Strutt Sandra Stiles

### **OFFICIALS:**

Summer Stevenson, Sustainability Coordinator Jacob Porter – Climate Adaptation Coordinator Michelle Warywoda, Director – Environment Division Lynae Grace – Administrative Assistant - Environment

#### **GUESTS:**

Parminder Sandhu, Enerva Energy Solutions Inc. Amara Kartick, Enerva Energy Solutions Inc. Chenyang Zhang, Enerva Energy Solutions Inc. Wendy O'Connor, We the Nuclear Free North Dodie LeGassick, We the Nuclear Free North

### 1.0 WELCOME AND DISCLOSURES OF INTEREST

The meeting was called to order at 4:03 p.m. There were no disclosures of interest declared at that time. Quorum was established at 4:05 p.m.

### 2.0 <u>APPROVAL OF AGENDA</u>

THAT the revised Agenda for Meeting No. 04-2022 of the EarthCare Advisory Committee, held April 5, 2022, including any additional information and new business, be confirmed.

MOVED BY: Sandra Stiles SECONDED BY: Jane Todd

CARRIED

### 3.0 PRESENTATIONS

3.1 Wendy O'Connor and Dodie LeGassick of We the Nuclear Free North gave a presentation on the movement and storage of Nuclear Waste in Northwestern Ontario, followed by a Q&A session. This item to be included in next month's Agenda for discussion by the Committee.

3.2 Members of Everva Energy Solutions Inc. presented on the Community Efficiency Financing Feasibility Study update. A Q&A session followed.

### 4.0 <u>MINUTES OF PREVIOUS MEETING</u>

THAT the Minutes of Meeting No. 03-2022 of the EarthCare Advisory Committee, held March 1, 2022, to be confirmed.

MOVED BY: Jane Todd SECONDED BY: Sandra Stiles

CARRIED

### 5.0 <u>BUSINESS ARISING FROM PREVIOUS MINUTES</u> – None

6.0 <u>NET ZERO UPDATE</u>

## **1.** LEAD: Provide civic leadership to advance mutual respect, equal opportunity and hope.

- a. Community Efficiency Financing Feasibility Study
  - i. Risk assessment workshop for municipal administration held on March 7.
  - ii. Met with Northern Credit Union to discuss opportunities for collaboration have established an ad-hoc working group with NCU and three other municipalities in Northern Ontario.
  - iii. Provided presentation at AMO Municipal Energy Symposium on March 31.
  - iv. Engagement strategy and communications plan are complete. Tentative public launch date: April 19 (subject to change).
  - v. Draft landscape assessment delivered review and comment underway.
- b. Supported ongoing initiatives
  - i. Canadian Water Network Net-Zero Strategic Sharing Group on March 17.
  - ii. Attended Thunder Bay Urban Aboriginal Strategy Community Forum.
  - iii. Continued scan of corporate reports delivered since approval of Net-Zero Strategy to support NZS reporting. Developing reporting framework.

## 2. SERVE: Advance service excellence through a citizen focus and best use of technology.

- i. April Engagement:
  - Tentative CEF Engagement Window: April 19 May 15

**3.** GROW: Focus on city building and social infrastructure to strengthen our economy, lifestyle and wellbeing & RENEW: Focus on essential infrastructure, revitalize our cores and enhance our Image Routes.

### 7.0 <u>SUSTAINABILITY UPDATE</u>

**1.** LEAD: Provide civic leadership to advance mutual respect, equal opportunity and hope

### 2. SERVE: Advance service excellence through a citizen focus and best use of technology.

- a. Working Groups/Partner projects:
  - i. Submit Garden Signs project to Clean, Green & Beautiful Emerging Project Fund – project will be led by Community Greening WG.
  - ii. Community Greening WG article included in this month's edition of the Walleye.
  - iii. Water WG has indicated interest in hosting an event on Lake Superior Day (third Sunday in July).

# **3.** GROW: Focus on city building and social infrastructure to strengthen our economy, lifestyle and wellbeing & RENEW: Focus on essential infrastructure, revitalize our cores and enhance our Image Routes.

a. Opportunity to partner with United Way (and team) to support "Empower the North" Community Impact/Digital Engagement Platform.

### 8.0 <u>SUSTAINABILITY PLAN UPDATE</u>

## **1. LEAD:** Provide civic leadership to advance mutual respect, equal opportunity and hope.

- a. Review and propose updates to the Sustainability Plan to further the Community's commitments to sustainability and climate adaptation
  - i. SWOT workshops completed: Climate Adaptation, Water, Community Greening, and Walkability Committee
  - ii. SWOT workshops scheduled: Waste (April 12)
  - iii. Follow-up workshop held with Climate Adaptation WG changing their name to Climate Action group moving forward.
  - iv. Climate Action sub-working group have volunteered to conduct research and make suggestions regarding the structure and function of EarthCare. They will be sharing their findings with EAC at the June meeting.

Due to the fact that this is an election year and Council meetings will re-start in the New Year, the Sustainability Plan will not be presented to Council until early 2023.

### 9.0 <u>CLIMATE ADAPTATION UPDATE</u>

- **1.** LEAD: Provide civic leadership to advance mutual respect, equal opportunity and hope.
- 2. SERVE: Advance service excellence through a citizen focus and best use of technology
  - i. Presented to the COVID-19 Vulnerable populations table, recruiting participants in resilience hub engagement

# 3. GROW: Focus on city building and social infrastructure to strengthen our economy, lifestyle and well-being & RENEW: Focus on essential infrastructure, revitalize our cores and enhance our Image Routes

- RPWCO Roadmap for assessing climate vulnerabilities is being piloted on urban flooding risk on a section of intercity, one of the first ones assessed in phase 2 of the intercity flood study, and we are supporting Risk Sciences International with feedback on newly implemented tools. http://www.rpwco.ca/climate-roadmap-webinars
- ii. Second climate-related emergency exercise taking place on April 8, engaging some of the broader emergency partnerships formed in COVID-19 response
- iii. Participating in Advancing adaptation partnership program with ICLEI Canada. Will be investigating topic of resilience hubs. Supporting ICLEI Canada on a related application that could support additional long term implementation.

### 10.0 <u>WORKING GROUP UPDATE FOR LIAISONS</u> – See Sustainability Report

Current working group liaisons are as follows:

- a) Mobility Councillor Andrew Foulds
- b) Air, Energy & Green Building Vacant
- c) Community Greening Margaret Wanlin
- d) Food Jane Todd
- e) Waste Shannon Costigan
- f) Water Sandra Stiles
- g) Climate Adaptation Courtney Strutt

### 11.0 UPCOMING EVENTS

- 11.1 EcoSuperior <u>Bike Mechanic Workshops</u> at Community Spokes
- 11.2 Earth Day April 22<sup>nd</sup>
- 11.3 International Dark Sky Week April 22-30

### 11.0 <u>NEW BUSINESS</u> – None

### 12.0 <u>NEXT MEETING</u>

Committee meetings are held on the first Tuesday of each month, except July and August, at 4:00 p.m. in the McNaughton Room, City Hall, 500 Donald Street E. unless otherwise notified.

The 2022 meeting schedule is as follows:

- May 3, 2022
- June 7, 2022
- September 6, 2022
- October 4, 2022
- November 1, 2022
- December 6, 2022

### 13.0 ADJOURNMENT

The meeting was adjourned at 5:30 p.m.



### *MEETING DATE* 06/06/2022 (mm/dd/yyyy)

SUBJECT Clean, Green & Beautiful Committee Minutes

### **SUMMARY**

Minutes of Meeting 03-2022 of the Clean, Green & Beautiful Committee held on April, 20 2022, for information.

### **ATTACHMENTS**

1. CGB Minutes - Meeting 03-2022 - April 20, 2022

DATE:	APRIL 20, 2022	MEETING: 03-2022
TIME:	10:05 AM	
PLACE:	MICROSOFT TEAMS	
CHAIR:	COUNCILLOR REBEC	CA JOHNSON
MEMBERS:		OFFICIALS:
Councillor Rebea Kerry Berlinquett <i>Representative</i> Jean-Louis Chare	cca Johnson, <i>City Council</i> e, <i>Small Business</i> ette, <i>Ministry of Tourism</i>	Dana Earle, <i>Deputy City Clerk</i> Karen Lewis, <i>General Manager – Development &amp;</i> <i>Emergency Services</i> Louisa Costanzo, <i>Supervisor – Cultural</i>
<i>Culture &amp; Sport</i> Sharon Godwin, Jesse Hamilton,	Thunder Bay Art Gallery EcoSuperior	<i>Development &amp; Events</i> Jillian Fazio, <i>Planner II</i> Lori Wiitala, <i>Council &amp; Committee Clerk</i> –

*Office of the City Clerk* 

#### 1. WELCOME & DISCLOSURES OF INTEREST

Daniel Hansen, Public Art Committee

Jessica Reinhart, Youth Representative

Geoff Ritchie, *Labour Representative* Albertus Viljoen, *Citizen Representative* 

Stephen Margarit, Large Industrial

Andy Puiatti, Architectural

Kyle Jessiman, Medium Business Representative

The Chair called the meeting to order at 10:05 a.m. There were no disclosures of interest declared at this time.

### 2. <u>AGENDA APPROVAL</u>

Representative

It was the consensus of the Committee that the agenda for Meeting 03-2022 of the Clean, Green & Beautiful Committee held on Wednesday, April 20, 2022 be confirmed.

### 3. <u>MINUTES OF PREVIOUS MEETING</u>

It was consensus of the Committee to confirm the Minutes of Meeting 02-2022 held on March 16, 2022.

#### 4. <u>REVIEW OF CLEAN, GREEN AND BEAUTIFUL POLICY UPDATES</u>

The Chair advised that Administration is currently reviewing the Terms of Reference document and will provide further updates at a later time.

### 5. <u>REVIEW OF TERMS OF REFERENCE UPDATES</u>

The Chair advised that Administration is currently reviewing the Terms of Reference document and will provide further updates at a later time.

### 6. EMERGING PROJECTS WORKING GROUP REPORT AND RECOMMENDATIONS

Albertus Viljoen provided the following update relative to the above noted.

The deadline to receive internal Emerging Project Fund Project Applications was April 11, 2022 and the committee received six (6) applications as follows:

- EarthCare
- City of Thunder Bay Human Resources Health & Wellness Division
- Clean, Green & Beautiful Committee
- Northern Nishinawbe Education Council
- St. Ignatius High School
- St. Patrick High School

The deadline for remaining submissions is May 6, 2022.

In discussion with the working group it was decided that the decision to award the request from Northern Nishnawbe Education Council be deferred until the May 6, 2022 deadline. The working group will meet on May 11, 2022 to discuss the remaining applications submitted.

The committee agreed to award the Emerging Projects Fund Project Application to the following Secondary High Schools:

- St. Ignatius High School
- St. Patrick High School

MOVED BY:	Stephen Margarit
SECONDED BY:	Daniel Hansen

CARRIED

### 7. <u>CLEAN, GREEN & BEAUTIFUL AWARD UPDATE</u>

Kyle Jessiman provided the following update relative to the above noted.

The Chamber of Commerce awards event will be held Thursday, May 26, 2022 and eight (8) tickets are available for committee members who would like to attend. It was noted that Lori Wiitala, Council & Committee Clerk would inform the Chamber who has confirmed attendance.

### 8. <u>FUTURE MEETINGS – VIRTUAL, IN PERSON AND HYBRID OPTIONS</u>

A discussion was held relative to the above noted and it was the consensus of the committee that the May 18, 2022 meeting would be held virtually, the June 15, 2022 meeting will be held at the Thunder Bay Art Gallery, a tour of the Emerging Projects would be scheduled for the August meeting and the December 14, 2022 meeting will be held in person.

### 9. <u>SUMMER TOUR DATE</u>

The Chair provided the following update regarding the above noted.

The Chair advised the committee that Werner Schwar, Supervisor – Parks & Open Spaces and Guy Walter, Landscape Architect will be hosting a tour of the Emerging Projects in August 2022. The date is to be determined.

### 10. HERITAGE ADVISORY COMMITTEE UPDATE

The Chair provided the following update regarding the above noted.

The Chair advised that she was speaking with the Heritage Advisory Committee Chair, Andrew Cotter, regarding Diana Pallen's retirement and a new appointment for Clean, Green & Beautiful Committee. Hhe advised that this item has not come to their meeting to date and will advise after their next meeting.

### 11. <u>PUBLIC ART COMMITTEE UPDATE</u>

Daniel Hansen and Louisa Costanzo provided the following updates relative to the above noted.

The next Public Art committee meeting will include an idea generating session and a discussion regarding the recommendations to the Clean, Green & Beautiful committee from the Public Art Sub-Committee.

Louisa Constazo provided an update on the City's summer events series as follows:

- Going back to in person events
- Re-envisioning of Canada Day at the Waterfront to be more thoughtful in regards to reconciliation; will be a scaled back event which will not include fireworks.
- Moving forward with Live on the Waterfront Wednesdays until August 31, 2022.
- Children's concert matinee will take place in lieu of Teddy Bear's Picnic and Kite Festival

### 12. EARTHCARE UPDATE

Kyle Jessiman provided the following update relative to the above noted.

- Earthcare article in the Walleye April edition
- EcoSuperior invasive species article in the Walleye scheduled for June edition
- LRCA Volunteer Days at Mountdale boat launch: parking lot and planting information can be found on Get Involved Thunder Bay
- LRCA Tree seedling program
- Retrofit Financing Program open for public engagement April 20, 2022; program for residential energy upgrades
- Lake Superior Day  $-3^{rd}$  Sunday in July
- Commuter Challenge June 5 11, 2022

Earthcare Advisory Committee will be taking a break starting in July and will re-convene December 2022 due to the Municipal Election.

### 13. DOWNTOWN FORT WILLIAM REVITALIZATION COMMITTEE UPDATE

Stephen Margarit provided the following update relative to the above noted.

No meeting was held in April; May meeting scheduled and committee is looking to host an in person meeting with a neighbourhood walk and strategy session.

Downtown Fort William Revitalization Committee will be taking a break starting in July and will re-convene in December 2022 due to the Municipal Election.

### 14. <u>ROUNDTABLE & ANNOUNCEMENTS</u>

Sharon Godwin and Jesse Hamilton provided the following announcements:

The Thunder Bay Art Gallery has exhibits from the following:

- The World We Know New Acquisitions to the Permanent Collection including Benjamin Chee Chee, Norval Morriseau, Jean Marshall among others
- Katie Lemieux, ceramic artist Ending Up April 8 June 19
- Wrap & Culture collaborative project with Australian and Indigenous artists: Buffalo Skin Robe and Possum Robe
- Out There Banner Project displays works of art from regional artists on the exterior of the building and will change every couple of months

Eco Superior partnering with Shelter House Thunder Bay will be hosting the 26<sup>th</sup> annual Spring Up to Clean Up project starting May 3<sup>rd</sup> for the duration of the month of May.

### 15. <u>NEXT MEETING</u>

- Wednesday, May 18, 2022
- Wednesday, June 15, 2022 (tentative lunch meeting at Art Gallery)
- August Project Tour Date to be determined
- Wednesday, December 14, 2022

### 16. ADJOURNMENT

The meeting adjourned at 11:00 a.m.



### **Corporate Report**

DEPARTMENT/ DIVISION	Infrastructure & Operations	REPORT NO.	R 91/2022
DATE PREPARED	05/09/2022	FILE NO.	
MEETING DATE	06/06/2022 (mm/dd/yyyy)		
SUBJECT	Net-Zero Strategy Update - 2021/20	22	

### RECOMMENDATION

For information.

### LINK TO STRATEGIC PLAN

This report directly supports the fifth goal under the Lead pillar of the City of Thunder Bay's Corporate 2019-2022 Strategic Plan to "Further [previous] commitments to sustainability and climate adaptation."

### EXECUTIVE SUMMARY

This report provides an update on the first year of implementation of Climate-Forward City: Thunder Bay Net-Zero Strategy. A memorandum outlining the progress made on the renewal of the EarthCare Sustainability Plan distributed separately.

Overall, 66% of actions included in the Net-Zero Strategy's five-year implementation plan are in progress or complete after just one year. Highlights include the approval of the new Zoning Bylaw, continued progress on the creation of a residential organic waste collection program, initiating the Home Energy Improvement Loan Study, and the upcoming Municipal Transit Electrification Strategy. Four actions are on hold due to human resource capacity constraints. Due to the lag in data availability, greenhouse gas emissions inventories measuring the impact of net-zero actions will begin in 2023.

Priority actions for 2022-2023 include the Home Energy Improvement Loan Study, Climate Lens tool for Corporate reporting, community greenhouse gas emissions reporting, and continued implementation of supporting City plans and strategies.

### DISCUSSION

The Net-Zero Strategy (2021) responds to the climate emergency by providing a pathway to reduce energy use and greenhouse gas emissions across the community. This report outlines the progress made during the eleven months following Council approval in June 2021.

### Quantifying Greenhouse Gas Emissions

Energy use across several categories will be used to measure community-wide greenhouse gas emissions to assist with quantifying the impact of net-zero actions (see table 1). A streamlined approach to estimating emissions was selected based on access to data and budget constraints. Data collection takes place annually in the spring. Due to the lag in data availability, inventories measuring the impact of net-zero actions will begin in 2023.

Input	Units	Data Quality	Data Source				
Stationary Energy	Stationary Energy						
Electricity	Kilowatt hours (kWh)	High	Synergy North				
Natural Gas	Cubic metres (m <sup>3</sup> )	High	Enbridge Gas				
<b>Other Fuels</b>							
Gasoline	Litres (L)	Medium	Kalibrate Technologies Ltd;				
			City of Thunder Bay				
Diesel	Litres (L)	Medium	Kalibrate Technologies Ltd;				
			City of Thunder Bay				
Propane	Litres (L)	Low	Statistics Canada				
Fuel Oil	Litres (L)	Low	Statistics Canada				
Waste & Wastewater							
Solid Waste	Tonnes (t)	High	City of Thunder Bay				
Compost	Tonnes (t)	High	City of Thunder Bay				

Table 1. Streamlined community GHG inventory inputs.

### Status of Action Implementation

The Net-Zero Strategy includes a series of near-term (2021-2025) implementation action tables for the Corporation of the City of Thunder Bay (Appendix D, NZS). Attachment A outlines the status of each action included in Appendix D, presented by time-horizon. A summary table is included below (table 2).

Table 2. Status summary of near-term actions for the Corporation of the City of Thunder Bay.

Timo Horizon	Action Status					
	Complete	In Progress	Not Initiated	Total		
Immediate (2021-2022)	2	4	3	9		
Short-term (2022-2023)	2	7	3	12		
Medium-term	0	2	6	8		

Time Horizon	Action Status				
	Complete	In Progress	n Progress Not Initiated		
(2023-2025)					
Ongoing	N/A	8*	1	9	
Total	4	21	13	38	

\* Actions identified as "ongoing" in Attachment A are included as "in progress" for simplicity.

Overall, 66% of actions are complete or in progress. Many of the actions that have not yet been initiated are scheduled to start between 2023-2025. As indicated in Attachment A, three immediate actions and one short-term action are on hold due to human resource capacity constraints.

Highlights from the first year of implementation include:

- 1. **Approval of the 2022 Zoning By-law.** The Land Use and Natural Areas Objective in the Net-Zero Strategy encourages neighbourhoods that are complete, compact, and walkable. Land-use policies are a powerful tool for reducing GHG emissions, as they lock in reductions over the long term. The new Zoning By-law supports the intensification of the urban area and promotes walkable and transit oriented neighbourhoods.
- 2. **Source Separated Organics Studies.** Several studies were completed to develop a preferred option for the anticipated Organic Waste Collection Program, per the Provincial Food and Organic Waste Policy Statement. The feasibility of rerouting organics to an anaerobic digester was assessed, along with other available technologies and processing options. Climate change considerations were integrated from the outset and included in the decision making process. Diverting organic waste from the landfill is expected to reduce over 5,000 tonnes of CO2e per year.
- 3. **Home Energy Improvement Loan Study.** In August 2021, the City of Thunder Bay was awarded \$116,800 from the Federation of Canadian Municipalities' Green Municipal Fund (Community Efficiency Financing Stream) to complete a Community Efficiency Financing Feasibility Study to assess the feasibility of establishing a municipally run or supported home energy retrofit financing program. The study is underway and is expected to be complete July 2022.
- 4. **Municipal Transit Electrification Strategy.** The City of Thunder Bay, along with twelve other municipalities in Ontario, is participating in a municipal transit electrification study. In addition to transit electrification, this study will include a review of the corporate fleet and assess the impact on the local electricity grid.

### Net-Zero Priorities for 2022-2023

In addition to leading the renewal of the EarthCare Sustainability Plan and coordinating the EarthCare programme, the Sustainability Coordinator will continue to steward the

Committee of the Whole - Monday, June 6, 2022

implementation of several net-zero actions until additional staff resources are assigned. The Sustainability Coordinator's net-zero priorities for 2022-2023 are as follows:

- 1. Complete Home Energy Improvement Loan Study and pursue funding to advance to the Program Design stage if directed. Anticipated completion: July 2022.
- 2. Initiate and coordinate the development of a Climate Lens. This action will require significant staff time and will continue into 2023.
- 3. Continue providing internal support on projects and initiatives related to sustainability and climate action.
- 4. Complete and report on the annual community-wide greenhouse gas emissions inventories to satisfy the City's commitments to the Global Covenant of Mayors, CDP, and Cities Race to Zero initiatives.

In addition to the priorities listed above, there are ongoing and upcoming initiatives throughout the Corporation that directly or indirectly support the Net-Zero Strategy, including:

- 1. Implementing the new Zoning By-law
- 2. Source Separated Organics
- 3. Municipal Fleet Electrification Strategy
- 4. Municipal Asset Management Program
- 5. Continue implementing existing Plans and Strategies
  - Active Transportation Plan
  - Transportation Master Plan
  - Corporate Energy Management Plan
  - Solid Waste Management Strategy

### **Financial Implications to Date**

Following the approval of the Net-Zero Strategy, Council requested that the financial impacts of climate action be quantified moving forward. Research investigating methods for tracking and reporting on the financial impacts of climate mitigation initiatives is ongoing.

A scan of other municipalities with emissions reduction strategies is underway to determine best practices for calculating financial implications and incentives. Several municipalities in Ontario have begun incorporating financial considerations into their climate lens processes. This pathway will be assessed during the development of Thunder Bay's climate lens framework in 2022/2023. In addition, municipalities have begun exploring a carbon budget process for maximum clarity and transparency; however, this would require funding for consulting services due to staff workloads and the complexity of developing a carbon budget and supporting framework.

A carbon budget is a tool that establishes a direct link between climate science and municipal policies and expenditure patterns, providing a long-term planning perspective as well as an accountability framework. A municipal carbon budget breaks down a city's total carbon budget into annual caps. Capital and operating expenditures are then aligned with the annual carbon cap

[Planning Services] [Solid Waste & Recycling] [Facilities, Fleet & Energy Mgmt] [Infrastructure & Operations] [Multiple] during each budget cycle. In Canada, the City of Edmonton is leading the way and pioneering this approach.

### LINK TO EARTHCARE SUSTAINABILITY PLAN

The Net-Zero Strategy fulfills the following objective outlined in the EarthCare Sustainability Plan (2014-2020): Develop a long-range energy plan for the community (Energy: A.a; p. 12). In addition, the Net-Zero Strategy incorporates and strengthens many of the objectives included in the Energy, Green Building, Land Use Planning, Mobility, Waste, Air Quality, and Community Greening sections of the EarthCare Sustainability Plan.

### FINANCIAL IMPLICATION

There are no financial implications associated with this report.

### **CONCLUSION**

It is concluded that the City of Thunder Bay is making progress on the implementation of the Net-Zero Strategy and will continue implementing the near-term actions identified in the Strategy.

### BACKGROUND

City Council originally approved Environmental Policy No. 04-02-02 after reviewing R 290/2005 (Environment) on December 5, 2005. Two annual reports, R27/2007 (Environment) and R 24/2008 (Environment), were presented to City Council in keeping with the Policy requirements. R24/2008 recommended that pending adoption of the CEAP by City Council, the reporting of the City's Corporate environmental progress become part of the CEAP reporting process.

The Community Environmental Action Plan (CEAP) was adopted by City Council in 2008, R 128/2008 (Environment). The CEAP was updated with the latest iteration – the EarthCare Sustainability Plan, R 55/2014 – and is part of the City's commitment to reducing greenhouse gas emissions, and functioned as the community's integrated community sustainability plan. The first Annual Report was presented in 2010, R 2/2010 (Environment).

In 2019, the City of Thunder Bay received funding from the Federation of Canadian Municipalities – Municipalities for Climate Innovation Program (\$125,000) and the Ontario Ministry of Energy, Northern Development and Mines – Municipal Energy Plan Program (\$89,500) for the creation of a community energy plan. With respect to Report No. R 88/2019 (Infrastructure and Operations), City Council approved the receipt and expenditure of funding to carry out the Net-Zero Strategy (formerly the Community Energy and Emissions Plan).

On January 13, 2020, Thunder Bay City Council declared a climate emergency emphasizing the urgency of addressing climate change. The climate emergency reinforced the need for a plan to provide the community with the information and tools to make decisions that contribute to the decarbonisation of Thunder Bay.

Climate-Forward City: Thunder Bay Net-Zero Strategy was approved by City Council on June 7, 2021 (R 69/2021) and a community-wide target of net-zero greenhouse gas emissions by 2050 was established.

### REFERENCE MATERIAL ATTACHED:

### ATTACHMENT A. IMPLEMENTATION ACTION TABLES (DETAILED)

### **PREPARED BY:** SUMMER STEVENSON, SUSTAINABILITY COORDINATOR

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	May 25, 2022



Infrastructure and Operations Victoriaville Civic Centre 111 S. Syndicate Ave P.O. Box 800 Thunder Bay, ON P7C 5K4

*Tel:* (807) 625-2471 *Fax:* (807) 625-3588

### **MEMORANDUM**

TO:	Dana Earle, Deputy City Clerk
FROM:	Summer Stevenson, Sustainability Coordinator
DATE:	May 17, 2022
RE:	Net-Zero Strategy Update – 2021/2022 – R 91/2022 Request to Present Information – June 6, 2022, COW Meeting

I respectfully request an opportunity to provide a presentation relative to Corporate Report 91/2022, Net-Zero Strategy Update – 2021/2022, at the Committee of the Whole meeting on Monday, June 6, 2022. Summer Stevenson, Sustainability Coordinator, will present a PowerPoint presentation highlighting progress relative to the Net-Zero Strategy.

Sincerely,

Summer Stevenson Sustainability Coordinator EarthCare Thunder Bay

cc: K. Marshall - General Manager - Infrastructure & Operations

### Attachment A. Status of Action Implementation

Tables 3-6 provide an update on the actions included in the Net-Zero Strategy, Appendix D. Near-term (2021-2025) Implementation Action Tables for the Corporation of the City of Thunder Bay.

Focus Area	Priority Actions	Milestones	Division	Status
Integration	Assign full time resources at the City of facilitate the implementation of the Strategy.	Resource assigned (1.0 FTE)	InOps	Not yet initiated. Temporary resource assigned – capacity constraints noted.
Integration	Establish a streamlined community GHG inventory and reporting process.	Reporting system in place	InOps	Complete.
Integration	Develop KPIs for monitoring and evaluation.	KPIs developed	InOps	In progress. GHG KPIs established; to be updated following climate lens process (short-term).
Integration	Engage community stakeholders to help develop implementation strategies for the community and prioritize future work.	EarthCare Energy Working Group re- activated	InOps	In progress. Anticipated completion date: winter 2023.
Land Use	Explore how the Zoning By-law can be used to support NZS implementation.	Zoning By-law updated	DES	Complete. New Zoning By-law supports intensification of urban area and promotes walkable and transit oriented neighbourhoods.
Buildings	Assess policies and strategies that address embodied carbon.	Policy rec.	Multi.	Not yet initiated. Human resource capacity constraints.
Buildings	Conduct a feasibility study for establishing a	Feasibility study	Multi.	In progress.

Table 3. Status of immediate actions (2021-2022).

Focus Area	Priority Actions	Milestones	Division	Status
	Local Improvement Charge or alternative financing mechanism to support building retrofits.			Anticipated completion date of the Home Energy Improvement Loan Study: July 2022.
Industry	Support the establishment of an ICI Energy Efficiency and Decarbonisation Working Group	Working group created	Multi.	Not yet initiated. Human resource capacity constraints.
Waste	Integrate NZS principles into solid waste management operations.	Policy or policy recs developed	InOps	In progress. Climate change considerations integrated into current waste projects, including source separated organics project.

**Table 4.** Status of short-term actions (2022-2023).

Focus Area	Priority Actions	Milestones	Division	Status
Integration	Develop a 'climate	Creation of a	InOps,	In progress.
	lens' policy for	Climate Lens	Multi.	
	municipal decision	Policy		Initiated research phase.
	making.			Anticipated introduction: summer 2023.
Integration	Update Environment /	Update, or	InOps,	Not yet initiated.
	Community	integration, of	Multi.	
	Sustainability policy	Environment		To follow climate lens
	(04-02-02) in line with	Policy		process.
	above.			
Integration	Assess finance	Finance	InOps,	Not yet initiated.
	mechanisms available	mechanisms	Finance	
	to support Strategy	identified.		Human resource capacity
	implementation.			constraints.
Land Use	Assess policies that	Policy rec.	DES	Complete.
	promote compact,			
	mixed-use			New Zoning By-law
	development to			introduces new tools
	increase density,			(policies) to encourage

Focus Area	Priority Actions	Milestones	Division	Status
	reduce sprawl, and reduce transportation GHGs.			densification.
Natural Areas	Identify mechanisms that provide incentives for the preservation, establishment, and maintenance of green infrastructure.	Policy / program rec.	Multi.	In progress. Yard Maintenance By- law currently under review.
Natural Areas	Integrate NZS principles into Urban Forestry Management Plan and operations.	Updated Urban Forestry Management Plan	InOps	In progress. Investigating options to grow trees locally, reducing emissions from transportation.
Buildings	Update Facility Design Standards policy (09- 05-01) to reflect net- zero principles.	Policy update	CS	In progress. Investigation underway.
Buildings	Integrate NZS principles into existing energy audit process to determine net-zero readiness and align with Asset Management Program.	Priority retrofit list	CS	In progress. Investigating net-zero opportunities for municipal facilities as a component of energy audits and facility assessments. Process to align with the development of the new Asset Management Program.
Transport	Review Corporate fleet policies, plans, and procedures. Update to include zero-emission vehicle targets.	Net-zero emissions vehicle target established	CS	In progress. Municipal transit electrification strategy in development. Anticipated completion: spring 2023.
Transport	Identify priority locations for installation of EV charging infrastructure for Corporate fleet,	Expansion of EV charging network	Multi.	In progress.

Focus Area	Priority Actions	Milestones	Division	Status
	Transit, employees,			
	and the public.			
Transport	Establish a bike share	Bike share	InOps	Not yet initiated.
	program (or support	program		
	the launch of a private			
	program).			
Waste	Assess feasibility of	Feasibility Study	InOps	Complete.
	rerouting organics to			
	an anaerobic digester.			

Table 5. Status of medium-term actions (2023-2025).

Focus Area	Priority Actions	Milestones	Division	Status
Buildings	Develop green building standards to enable net-zero ready construction.	Green Building Standards adopted	Multi.	Not yet initiated.
Buildings	Integrate NZS principles into next iteration of the Corporate Energy Management Plan.	Updated Conservation and Demand Management Plan (O. Reg. 507/18)	CS	Not yet initiated. Current CEMP in place until 2024.
Buildings	Identify municipal buildings that can support solar panel installations and create a priority list.	Update priority solar PV list	CS	Not yet initiated. Current study completed in partnership with Synergy North prior to implementing 6 existing solar sites. List may require an update as technology has improved and solar PV costs have reduced, potentially altering the business case.
Energy	Identify mechanisms available to the Corporation to support local renewable energy generation.	Policy / program rec	Multi.	Not yet initiated.

Focus Area	Priority Actions	Milestones	Division	Status
Energy	Assess opportunities for municipal owned renewable energy projects and partnerships.	Projects identified	Multi.	In progress. Feasibility study exploring biomass district energy system in downtown North Core completed (commissioned by CRIBE).
Transport	Establish an Active Transportation Zone, and supporting policy, that prioritizes non- emitting travel.	Active Transportation Zone	Multi.	Not yet initiated.
Waste	Establish residential organics collection program (Provincial regulation).	Organics program established	InOps	In progress.
Waste	Assess opportunity for partnerships with regional municipalities / communities to establish an organic waste hub.	Partnership commitment	InOps	Not yet initiated.

Table 6. Sta	tus of ong	oing actions.
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Focus Area	Priority Actions	Milestones	Division	Status
Integration	Develop annual Action Plan outlining initiatives and priorities for uncoming	Annual Action Plan included in report to Council	Multi.	Ongoing. 2022-2023 priorities included in this report
	year.			included in this report.
Integration	Promote energy and climate literacy in the Corporation and community.	Corporate Energy Workshop Update	Multi.	In progress. Community engagement ongoing.
		Community Engagement Strategy		Anticipated to align Corporate engagement with climate lens
Focus Area	Priority Actions	Milestones	Division	Status
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Buildings	Continue implementing the Corporate Energy Management Plan to achieve 5% reduction in energy consumption per year.	Annual energy consumption and GHG report (O. Reg. 507/18)	CS	process. Ongoing. 2021 data not yet available.
Energy	Advocate for changes to the energy system that support local renewable energy generation and non- wires solutions.	Communication with Province and Canada	IGAC	Not yet initiated.
Transport	Continue implementing the Transportation Master Plan.	Increased sustainable modeshare.	Multi.	Ongoing.
Transport	Continue implementing the Active Transportation Plan Priority Route Networks.	Increased active modeshare, expansion of AT network	InOps	Ongoing. As of 2021, the City of Thunder Bay Active Transportation network has grown to include approximately 80km of multi-use and bicycle infrastructure and 511km of sidewalk.
Transport	Assess alternative fare structures to increase ridership.	Increased ridership	Multi.	In progress. Transit fare freeze & pilot program for children under 12. Impact data not yet available. Ridership continues to be impacted by COVID.
Waste	Increase existing landfill gas capture rate.	Technical Analysis & Monitoring	InOps	Ongoing. Topic included in source separated organics project.
Water	Identify opportunities	Technical	InOps	Ongoing.

Focus Area	Priority Actions	Milestones	Division	Status
	to reduce energy use in water and wastewater pumping process.	Analysis		



# MEETING DATE06/06/2022 (mm/dd/yyyy)SUBJECTReport R 65/2022 (Infrastructure & Operations - Engineering &<br/>Operations) Contract 2, 2022 - Sidewalk & Pedestrian Crossover

#### **SUMMARY**

At the May 16, 2022 Committee of the Whole meeting the City Clerk advised that this item has been withdrawn from the agenda and will be re-presented at a later date.

Report R 65/2022 (Infrastructure & Operations - Engineering & Operations) containing a recommedation relative to the above noted, re-presented.

Pending the passage of the resolution at the Committee of the Whole meeting, the resolution will be presented for ratification at the City Council meeting to be held later in the evening and will require a two-thirds vote.

#### RECOMMENDATION

WITH RESPECT to Report R 65/2022 (Infrastructure & Operations - Engineering & Operations), we recommend that Contract 2, 2022 – Sidewalk and Pedestrian Crossover Construction be awarded to Bay City Contractors who submitted the lowest compliant tender in the amount of \$1,230,010.65 [inclusive of HST]; it being noted that the amount shown is based on estimated quantities; final payment for this contract will be based on measured quantities for the completed work;

AND THAT the General Manager of Infrastructure and Operations report any circumstances to City Council should significant variation in the contract quantities occur;

AND THAT the Mayor and City Clerk be authorized to sign all documentation related to these matters;

AND THAT any necessary bylaws be presented to City Council for ratification.

#### **ATTACHMENTS**

1. Report R 65/2022 (Infrastructure & Operations - Engineering & Operations)



DEPARTMENT/	Infrastructure & Operations -	REPORT	R 65/2022
DIVISION	Engineering & Operations		
DATE PREPARED	3/31/2022	FILE	
<b>MEETING DATE</b>	5/16/2022 (mm/dd/yyyy)		
SUBJECT	Contract 2, 2022 - Sidewalk & Pede	strian Crossover C	onstruction

#### **RECOMMENDATION**

WITH RESPECT to Report R 65/2022 (Infrastructure & Operations - Engineering & Operations), we recommend that Contract 2, 2022 – Sidewalk and Pedestrian Crossover Construction be awarded to Bay City Contactors who submitted the lowest compliant tender in the amount of \$1,230,010.65 [inclusive of HST]; it being noted that the amount shown is based on estimated quantities; final payment for this contract will be based on measured quantities for the completed work;

AND THAT the General Manager of Infrastructure and Operations report any circumstances to City Council should significant variation in the contract quantities occur;

AND THAT the Mayor and City Clerk be authorized to sign all documentation related to these matters;

AND THAT any necessary bylaws be presented to City Council for ratification.

#### LINK TO STRATEGIC PLAN

This report directly supports the 'Renew' strategy of the 2019-2022 Corporate Strategic Plan: focus on essential infrastructure, revitalize our cores and enhance our Image Routes.

#### **EXECUTIVE SUMMARY**

The 2022 capital budget includes funds for new sidewalk, sidewalk replacement, and three additional pedestrian crossover installations at various locations in the City. There were two (2) compliant tenders received for the work, with the lowest being from Bay City Contractors. They have completed previous sidewalk and municipal work for the City on past contracts. Administration recommends them as capable of doing the work. The project as tendered is over the available budget allocation and Administration is recommending the deletion in scope of one of the sidewalk replacement locations in order for the remainder of the contract to proceed.

#### DISCUSSION

As a result of the call for tenders, two (2) compliant responses as listed below were received for the construction of sidewalks and pedestrian crossover installations.

The tender costs include the applicable HST. An irregularity on bid form submission has resulted in another bidder response being deemed non-compliant by Supply Management and is not shown.

Contractor	Tender Opening Bid
Bay City Contracting	\$1,294,878.38
P.N.I. Contracting Ltd	\$1,445,594.88

The pre-tender estimate for the work on this contract was \$1,031,000.00.

The contract includes sidewalk replacement on sections of the following streets: John Street Road, Red River Road, Brescia Court, Centre Street, Yonge Street, and Hyde Park Avenue.

The Hyde Park Avenue location also includes replacement of street lighting and wiring as well as removal of a one block deteriorated section of non-continuous sidewalk on the east side.

Condition surveys of all City sidewalks provides Administration with information to prioritize sidewalk replacements in the capital program including hollow sidewalk replacement.

The contract also includes a number of segments of new sidewalk links that have been identified in the City's Active Transportation Plan and include improved connections to public transit. This includes new sidewalk segments on sections of John Street, Inchiquin Street and Frederica Street. The work on John Street and Frederica Street is part of a staged program to complete sidewalks on both sides of a transit route street. These new sidewalk links improve access to Transit stops and are eligible for funding under the Investing in Canada Infrastructure Program – Public Transit stream.

Also included in this contract is the necessary underground civil work, concrete sidewalk/trail connections, pavement markings, poles, signage and equipment to install new pedestrian crossover (PXO) signals at three (3) locations.

Locations of crossings are East Avenue at Market Street, William Street at Ford Street and Madeline Street at McVicars Creek. These intersection locations have been reviewed in accordance with the traffic and pedestrian crossover matrix in accordance with the Ontario Traffic Manual. All crossings will also remain consistent with the Level 2 Type B PXO construction standard that the City has adopted for these installations. These pedestrian crossovers are eligible for funding under the Investing in Canada Infrastructure Program – Public Transit stream.

Two of the above crossings involve safety crossing enhancements at locations of active transportation multi-use trails. The William Street crossing includes a realignment of the trail on Confederation College and the College is supportive of this improvement.

The low tenderer on this contract is Bay City Contractors. They completed similar work previously for the City in past years. Administration is recommending this company as the low compliant tenderer and capable of carrying out the work on this contract. Some reduction in original scope is being recommended to align with the available budget.

#### LINK TO EARTHCARE SUSTAINABILITY PLAN

The work approved under this report supports the Mobility goal of the Earthcare Sustainability Plan. New and rehabilitated sidewalks and new pedestrian crossovers encourage residents to use active transportation especially for short duration trips, improving health of residents and reducing GHG emissions.

#### FINANCIAL IMPLICATION

The 2022 capital budget includes funds for this work. A number of the new sidewalk projects and pedestrian crossovers are eligible for the Investing in Canada Infrastructure Program (ICIP) Public Transit stream financing that has expanded the extent of work under this year's sidewalk contract.

The work in this contract falls beyond the available budget allocation. Administration is recommending that one of the sidewalk replacement projects on Yonge Street should be removed from the contract to bring it within available budget and all other work proceed. The contractor involved is agreeable to this. Yonge Street sidewalk replacement will be re-budgeted in the Capital Budget submission next year.

Original Contract Tendered Price	\$1,294,878.30
Less Yonge Street scope of work	(\$64,867.65)
Revised Contract Tender price	\$1,230,010.65
HST Rebate	(\$122,347.96)
Subtotal	\$1,107,662.69
Engineering	\$154,000.00
Other City labour & material	\$61,000.00
TOTAL	\$1,322,662.69

Based on the recommendation, the breakdown of pricing is as follows:

This contract includes a contingency allowance for work that is unforeseen and can only be expended with the approval of the General Manager of Infrastructure and Operations.

#### CONCLUSION

It is concluded that City Council should award Contract 2, 2022 for Sidewalk and Pedestrian Crossover Construction to Bay City Contractors as the lowest compliant tender. It is recommended that sidewalk replacement work on Yonge Street should be deleted in order to allow for sufficient budget availability to complete the remainder of the contract.

#### BACKGROUND

A condition survey of all City sidewalks provides Administration with information to prioritize sidewalk replacements in the capital program including hollow sidewalk replacement

A number of new sidewalk connections or linkages have been included within the 2022 Capital program as these locations were identified in the City's Active Transportation Plan (ATP) as missing gaps. The majority of these projects are financially supported through the City's participation in the Investing in Canada Program (ICIP) as they improve access to Transit.

Report 59/2016 and Report 110/2016 provide background on the legislation and implementation of Pedestrian Crossovers in the Province and in the City. New locations for pedestrian crossovers (PXO) are reviewed annually by City Administration in accordance with guidelines established by the Ontario Traffic Manual involving criteria for road type, traffic volumes and pedestrian counts. Locations on Pedestrian Priority corridors identified in the ATP are prioritized. Three (3) new locations are included this year as part of this contract and with financial support from the ICIP Federal funding program as they link to improved accessibility for Transit.

#### **REFERENCE MATERIAL ATTACHED:** None

#### PREPARED BY: Rick Harms, P. Eng., Project Engineer

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	May 11, 2022
Kerri Marshall, General Manager – Infrastructure & Operations	May 11, 2022



# MEETING DATE06/06/2022 (mm/dd/yyyy)SUBJECTReport R 56/2022 (Infrastructure & Operations - Engineering &<br/>Operations) Contract 4, 2022 - Sewer & Watermain II

#### **SUMMARY**

At the May 16, 2022 Committee of the Whole meeting the City Clerk advised that this item has been withdrawn from the agenda and will be re-presented at a later date.

Report R 56/2022 (Infrastructure & Operations - Engineering & Operations) containing a recommendation relative to the above noted, re-presented.

Pending the passage of the resolution at the Committee of the Whole meeting, the resolution will be presented for ratification at the City Council meeting to be held later in the evening and will require a two-thirds vote.

#### RECOMMENDATION

WITH RESPECT to Report R 56/2022 (Infrastructure & Operations – Engineering & Operations), we recommend that Contract 4, 2022 Sewer and Watermain II be awarded to Nadin Contracting Ltd, which submitted the lowest tender in the amount of \$2,982,581.89 (inclusive of HST); it being noted that the amount shown is based on estimated quantities; final payment for this Contract will be based on measured quantities for the complete work;

AND THAT the General Manager of Infrastructure and Operations report significant variations in the Contract quantities to City Council;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to this matter;

AND THAT any necessary by-laws be presented to City Council for ratification.

#### **ATTACHMENTS**

1. Report R 56/2022 (Infrastructure & Operations – Engineering & Operations)



DEPARTMENT/	Infrastructure & Operations -	REPORT	R 56/2022
DIVISION	Engineering & Operations		
DATE PREPARED	3/22/2022	FILE	
<b>MEETING DATE</b>	5/16/2022 (mm/dd/yyyy)		
SUBJECT	Contract 4, 2022 - Sewer & Waterm	ain II	

#### RECOMMENDATION

WITH RESPECT to Report No. R 56/2022 (Infrastructure & Operations – Engineering & Operations), we recommend that Contract 4, 2022 Sewer and Watermain II be awarded to Nadin Contracting Ltd, which submitted the lowest tender in the amount of \$2,982,581.89 (inclusive of HST); it being noted that the amount shown is based on estimated quantities; final payment for this Contract will be based on measured quantities for the complete work;

AND THAT the General Manager of Infrastructure and Operations report significant variations in the Contract quantities to City Council;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to this matter;

AND THAT any necessary by-laws be presented to City Council for ratification.

#### LINK TO STRATEGIC PLAN

This report directly supports 'Our Priorities' of the 2019-2022 Corporate Strategic Plan, through renewal of City infrastructure. This project includes the replacement of sewer and water infrastructure based on Engineering Division's asset management plan.

#### **EXECUTIVE SUMMARY**

The 2022 Capital Budget provides funds for rehabilitation of roads, watermains, sanitary sewers, new sidewalks and a pedestrian crossover on High Street, Crown Street and Lillian Street. There were four (4) tenders received for this work. The low tender for this Contract is Nadin Contracting Ltd. Administration is recommending award of this Contract to this company.

#### DISCUSSION

As a result of a call for Tender, four (4) responses as listed below were received for Contract 4, 2022 – Sewer and Water.

CONTRACTOR	TENDERED COSTS	CORRECTED BID
Nadin Contracting Ltd	\$2,982,581.89	
Makkinga Contractors	\$3,294,719.25	
Bay City Contractors	\$3,567,586.28	
PNI Contracting	\$3,804,650.39	

The tendered costs include the applicable HST. Bids have been checked for mathematical errors and the corrections noted.

The pre-tender estimate for the work in this Contract was \$2,861,051 (inclusive of HST).

This Contract includes road and watermain replacement on High Street between Lisgar Street and Oliver Road. It also includes sewer and watermain replacement, new sidewalk, curb and gutter and road resurfacing on Crown Street between Bay Street and Cornwall Street. The last part of the contract is a new watermain along the Lillian Street right of way that will provide a loop in the distribution system to address flow and water quality issues.

The 2022 Capital Budget includes funds to replace the existing aged infrastructure on High Street between Lisgar Street and Oliver Road. The work includes replacing the watermain and all its associated service connections and resurfacing of the road. Curb and gutter will be added as well as replacement sidewalks for most of the limits and new sidewalks between Lisgar Street and Hester Street on the east side. A new pedestrian crossover will be added at Inchiquin St. Some new sidewalk will be added on Inchiquin Street running westerly to better service the Canada Games Complex area.

There has been a focus on infrastructure replacement in the area around Bay/Algoma district over the last 10 years. Most of the projects have been completed, Crown Street is one that remains and is proposed to be completed over the next two years. This year all of the underground sanitary sewer and watermains will be replaced between Bay Street and Cornwall Street. Curb/gutter and sidewalks will be replaced and the road will be resurfaced. The remaining block to the South will be included in the 2023 capital budget for consideration.

The last part of this contract is a new watermain loop on Lillian Street between Grenville Avenue and the existing trunk watermain along the Dewe Street corridor. This loop will significantly help water quality and flow in the area.

The lowest tender received for this Contract was from Nadin Contracting Ltd. They have completed numerous sewer, water and road projects for the City. Administration is recommending this company as being capable of carrying out all the work within this Contract. The work is expected to start in June and continue until scheduled completion at the end of October 2022.

#### FINANCIAL IMPLICATION

Sidewalk and pedestrian crossover construction included in this project is partially funded by the Provincial and Federal ICIP Transit Stream and will improve access to transit stops. There are sufficient funds within the 2022 Capital Budget along with carry forward accounts for the rehabilitation of streets listed in this contract. As per the memorandum from K. Dixon, Changes to the 2022 Capital Program, dated April 21, 2022, the original scope of the Crown Street project has been reduced to fund the project within the existing capital budget envelopes. It is recommended that all work included in the contract proceed.

The following table breaks down the project costs:

Contract Amount		\$2,982,581.89
HST Rebate		(\$296,674.52)
	Sub-Total	\$2,685,907.37
Engineering		\$200,000.00
	TOTAL	<u>\$2,885,907.37</u>

This Contract includes a contingency allowance for work that is unforeseen and can only be expended with the approval of the General Manager of Infrastructure and Operations.

#### CONCLUSION

It is concluded that Contract 4, 2022 – Sewer and Watermain II be awarded to the low tender Nadin Contracting Ltd. and that all work should proceed.

#### BACKGROUND

Report No.1/2022, (Corporate Services and Long Term Care – Financial Services) proposed 2022 Operations and Capital Budget includes funding to carry out road, storm, sanitary sewer and watermain reconstruction projects.

The 2022 Capital Budget includes rate based funding to carry out watermain and sanitary sewer reconstruction for aging infrastructure within the City of Thunder Bay. It also contains tax supported funding for resurfacing and storm sewer works. The replacement work within this Contract is the result of old age, material type failures and fire protection requirements and improvements.

#### **REFERENCE MATERIAL ATTACHED:** None

### PREPARED BY: Brian Newman, P.Eng., Project Engineer

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	May 10, 2022



DEPARTMENT/ DIVISION	Infrastructure & Operations - Central Support	REPORT NO.	R 97/2022
DATE PREPARED	5/18/2022	FILE NO.	
MEETING DATE	6/6/2022 (mm/dd/yyyy)		
SUBJECT	School Crossing Location Deletion		

#### RECOMMENDATION

WITH RESPECT to Report R 97/2022 (Infrastructure & Operations – Central Support), we recommend that a school crossing guard location at Shuniah Street and Huron Avenue be removed;

AND THAT any necessary By-laws be presented to City Council for ratification.

#### EXECUTIVE SUMMARY

Administration recommends that the school crossing guard location at Shuniah Street and Huron Avenue be removed as a result of the reduction in usage of the school crossing location by students and not meeting the warrant criteria for the student and conflicting vehicular movements during the studied time periods.

#### DISCUSSION

The Field Supervisor of Crossing Guards recognized a low number of children and cars at the Shuniah Street and Huron Avenue School Crossing over a number of visits over the past three years.

As a result, an investigation was carried out at the location on April 12, April 27, and May 5, 2022. The results of the studies found that there were no student and conflicting vehicular movements during the studied time periods. On average, there is one (1) child crossing on Huron Avenue on a daily basis. The City's School Zone Safety Policy (Policy No. 11-03-06) states that a crossing guard will be established when warranted; where data meets the Exposure Index Method of conflicting vehicular volume multiplied by student pedestrians; where there are students crossing often; where there is poor driver behaviour, not yielding the right to way to pedestrians. In this case the data of student and conflicting vehicular movements during the studied time periods does not meets the 85<sup>th</sup> percentile criteria in the Exposure Index Graph for Stop Sign Intersections. Drivers stopped at the stop sign and gave pedestrians crossing the right of way. A Pedestrian Crossover is available to use at this intersection to cross Shuniah Street.

There is also another crossing guard located in front of Vance Chapman School where children can cross Huron Avenue with assistance.

At 50 km/hour, a child's visibility distance is charted at 150 meters. In this case, there is a stop sign on Huron Avenue at Shuniah Street with a distance of approximately 400 meters to the east, sight lines are sufficient.

The Principal of Vance Chapman School has been advised of the City's intention to remove this crossing guard location and has no objection to this proposal.

The Thunder Bay Police Traffic Unit has been advised of the recommendation of the removal of the school crosswalk and crossing guard at this location and supports the recommendation.

#### FINANCIAL IMPLICATION

The savings resulting from the deletion of this crossing guard would be approximately \$7,000 in salary and benefits of the school crossing guard.

#### **CONCLUSION**

It is concluded that the crossing guard is no longer required at Shuniah Street and Huron Avenue and that City Council should approve the deletion of this school crossing location, based on City Policy No. 11-03-06.

#### BACKGROUND

It is the policy of the City of Thunder Bay (Policy No. 1-03-06) to provide for pedestrian safety in school zones through the use of school signs, regulatory and warning signs, Community Safety Zones, sidewalks, road markings, crossing guards, and reduced speed limits (40 km/hr) where appropriate.

### **REFERENCE MATERIAL ATTACHED:**

None

#### **PREPARED BY:** MICHELLE REIMER – FIELD SUPERVISOR – CROSSING GUARDS

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	May 25, 2022



DEPARTMENT/	Infrastructure & Operations -	REPORT NO.	R 98/2022
DIVISION	Central Support		
DATE PREPARED	5/18/2022	FILE NO.	
<b>MEETING DATE</b>	6/6/2022 (mm/dd/yyyy)		
SUBJECT	School Crossing Location Addition		

#### RECOMMENDATION

WITH RESPECT to Report R 98/2022 (Infrastructure & Operations - Central Support), we recommend that a school crossing guard location be implemented at Leslie Avenue at Talbot Street for the start of the 2022/2023 school year;

AND THAT any necessary By-laws be presented to City Council for ratification.

#### EXECUTIVE SUMMARY

Administration recommends that the school crossing guard location be implemented at Leslie Avenue at Talbot Street as a result of the increase in usage of the location by students and meeting the warrant criteria for insufficient safe gap times in traffic during the studied time periods.

#### DISCUSSION

A traffic study was carried out at Leslie Avenue and Talbot Street on request of the Administration at Claude E. Garton School.

An investigation was carried out at the location on November 5, 9, and 18, 2021. The results of the study found that there were some student and conflicting vehicular movements during the studied time periods. On average, there are 28 children crossing Leslie Avenue on a daily basis. The City's School Zone Safety Policy (Policy No. 11-03-06) states that a crossing guard will be established when warranted; where data meets the Exposure Index Method of conflicting vehicular volume multiplied by student pedestrians; where there are students crossing offen; where there is poor driver behaviour, not yielding the right to way to pedestrians. In this case, the data of student and conflicting vehicular movements during the studied time periods meets criteria in the Safe Gap Time Method for Unsignalized Intersections.

At 50 km/hour, a child's visibility distance is charted at 150 meters. Leslie Avenue at Talbot Street has a sight distance for children to see oncoming traffic of 500 metres to the North and 600 metres to the South.

The Vice Principal of Claude E. Garton School has been advised of the City's intention of an addition of a crossing guard location and encourages the addition of a school crosswalk.

The Thunder Bay Police Traffic Unit has been advised of the recommendation of a school crosswalk and crossing guard at this location and supports the recommendation.

#### FINANCIAL IMPLICATION

The implementation of this school crosswalk and crossing guard would be approximately \$7,000 in salary and benefits of the school crossing guard yearly.

There is also a one-time cost to erect school crossing signs and to create an accessible ramp connection to the existing sidewalk of approximately \$1,100. Funds are available within existing 2022 capital budget.

#### CONCLUSION

It is concluded that the school crosswalk and crossing guard is required at Leslie Avenue at Talbot Street and that City Council should approve the addition of this school crossing location for the start of the 2022/2023 school year, based on City Policy No. 11-03-06.

#### BACKGROUND

It is the policy of the City of Thunder Bay (Policy No. 1-03-06) to provide for pedestrian safety in school zones through the use of school signs, regulatory and warning signs, Community Safety Zones, sidewalks, road markings, crossing guards, and reduced speed limits (40 km/hr) where appropriate.

#### **REFERENCE MATERIAL ATTACHED:** None

#### **PREPARED BY:** MICHELLE RIEMER – FIELD SUPERVISOR – CROSSING GUARDS

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager - Infrastructure & Operations	May 27, 2022



<i>DEPARTMENT/ DIVISION</i>	Community Services - Recreation & Culture	REPORT NO.	R 63/2022
DATE PREPARED	03/29/2022	FILE NO.	
MEETING DATE	06/06/2022 (mm/dd/yyyy)		

**SUBJECT** Fit Together: Recreation & Facilities Master Plan Update

#### RECOMMENDATION

This report is for the purpose of information only.

#### LINK TO STRATEGIC PLAN

The 2019-2022 Corporate Strategic Plan outline includes priorities around growth and prosperity, community safety and well-being, cost-effective and quality services to citizens, financial sustainability and environmental stewardship. All of these priorities are reflected in the Recreation and Facilities Master Plan.

Recreation facility investments recommended in the Recreation and Facilities Master Plan align specifically with the "Grow" strategy of the Corporate Strategic Plan, with a focus on city building and social infrastructure to strengthen our economy, lifestyle and well being.

#### EXECUTIVE SUMMARY

This Report provides an update on the progress of the Fit Together: Recreation and Facilities Master Plan (the Plan), approved by City Council in January 2017 (R 152/2016).

The Plan was developed through extensive consultation with nearly 2,000 residents, user groups, stakeholders, City Staff and City Council. The Plan included an in-depth review of current and target standards for facility provision, including comparisons with other similar municipalities, while considering a range of other factors that impact recreation planning such as anticipated demographic changes, community demand and utilization trends.

The Plan is a municipal guide that outlines a series of short, medium and long term priorities for investment in facilities, services and programs owned and/or delivered/operated by the City of Thunder Bay. The Plan's 81 recommendations were developed to guide future strategies and actions to invest in new and revitalized recreational facilities and affordable, accessible programs that meet the needs of people of all ages in their neighbourhoods.

This report highlights key updates since the previous annual report for the Plan (R 5/2021), and provides information on areas impacted due to the COVID-19 Pandemic.

#### DISCUSSION

The Recreation and Facilities Master Plan is a Council-approved document intended to guide and focus internal activity within the:

- Community Services Department Recreation and Culture, Central Support and Facilities, Fleet & Energy Management Divisions
- Infrastructure and Operations Department Engineering and Operations Division, Parks & Open Spaces Section
- City Manager's Office Indigenous Relations, Municipal Accessibility, Community Safety & Wellbeing
- Community Economic Development Corporation Tourism.

The Plan was developed in close consultation with community stakeholders to ensure the vision, goals and recommendations reflect the needs and priorities of the community.

Performance is monitored on an ongoing basis and tracked by the Recreation and Culture Division. This monitoring allows for evaluation of direction based on shifting municipal and community priorities and needs.

The Plan recognizes a number of significant changes in the population and social context of Thunder Bay – all of which have economic and service implications. The value proposition for investment in recreation lies in the creative ability of the sector to foster civic participation as well as resident health and well-being through the delivery of programs and investment in facilities. Linked to this are opportunities to sustain community pride, stem population decline, and revitalize communities and neighbourhoods through new investment. Enhancing quality of life in the city through investment in recreation contributes to resident retention and positioning the City as a place to live, work, and invest.

#### **Impacts of COVID-19**

The benefits of recreation, and impacts of cancelling or modifying recreational opportunities, have been highlighted during the past 2+ years of the ongoing COVID-19 Pandemic. Cancellations and modifications to the typical delivery of recreational programs and services showed that recreation is an important outlet for residents to mitigate mental, physical and social health impacts of the pandemic. The importance of access to outdoor public spaces such as parks, multi-use pathways, and trails for exercise, active transportation, and distanced gathering was also highlighted. While closures were a necessary measure to prevent the spread of COVID-19 early in the pandemic, the potential long-term impacts of the reduction in recreation and cultural activities is yet to be fully understood.

Implementation of Master Plan actions starting or ongoing throughout 2021 and early 2022 was impacted by the pandemic. Facilities were temporarily closed to the public on multiple occasions, and many programs were cancelled, postponed, or shifted to virtual platforms. Some planned construction projects and facility upgrades were delayed due to shutdowns and supply chain issues. However, the extended closure of some recreational facilities provided an opportunity to complete upgrades that are often more challenging when facilities are in use at full capacity.

In 2021, programs continued on virtual platforms due to ongoing pandemic restrictions, including summer events and youth programming. In many cases, this led to an increase in participation. This was particularly noticeable in youth programming, which introduced new participants to both virtual and in-person programming once facilities began to reopen. The virtual Live on the Waterfront series increased its reach geographically, with local to international audiences tuning in weekly.

#### **Staffing Shortages**

While the majority of recreational facilities reopened at various points in 2021, and again in 2022, some facility openings were delayed or required limited schedules due to staffing shortages. Over the past number of months, the Division has been operating with approximately half the front-line staff complement required to deliver typical programs and services. Back-up or on-call staff pools have also been heavily impacted, which can leave operations without a solution when a staff member is unavailable, i.e. due to illness.

Increasing recruitment challenges had been noted in a number of front-line positions prior to the pandemic and the impact of pandemic closures, changes in work availability, and the general staffing shortages being seen nation-wide have taken a significant toll on both recruitment and retention for the Division.

Staffing shortages require modifications to operating hours and/or programs and services offered, and can result in unplanned cancellations of programs or facility access. They also have a significant impact on full-time and supervisory staff who are in a constant and time-consuming cycle of recruitment and training as well as taking on additional responsibilities in the absence of front-line staff.

These challenges are not unique to Thunder Bay. Colleagues across the Province report similar struggles. The Division continues to work with Human Resources on solutions and strategies to improve recruitment and retention success.

#### Pillars of the Plan

The Plan's recommendations are based on 8 key pillars:

- 1. City serving and neighbourhood focus
- 2. An inclusive city

- 3. Age-friendly and accessible recreation
- 4. Positive places and animated spaces
- 5. Core and evolving partnerships
- 6. Services for the evolving needs of the 21<sup>st</sup> century
- 7. A measurable plan
- 8. An affordable plan.

#### **Plan Goals**

Five key goals prioritized in the Plan:

- 1. Invest in infrastructure including capital planning for renewal, recreation zones and active transportation.
- 2. Promote health, wellness, and physical activity through programming, volunteerism, inclusivity, and accessibility.
- 3. Optimize the City's role in program and service delivery by adopting a social development approach, ensuring efficient resource allocation, including all populations.
- 4. Create and maintain positive partnerships and alliances internally and externally.
- 5. Strengthen the City's tourism mandate to attract users from surrounding areas and maximize tournament and event hosting opportunities.

#### **Priority Actions**

This report highlights progress made in the following priority action areas, which correspond to existing initiatives and available resources within the Corporation:

- Facility Investment & Accessibility Upgrades
- Investing in Turf & Field Improvements
- Increasing Opportunities for Youth and related Inquest Recommendations
- Park & Neighbourhood Programming
- Indoor Court Facility Tennis Centre
- Recreation and Culture Division User Fees & Affordable Access to Recreation
- Evaluating the Community, Youth & Cultural Funding Program
- Support for Sport and Event Tourism and Supporting Community Events

- Active Transportation and Access to Recreation
- Culture Plan Implementation
- Online Booking System
- Ice Allocation Policy
- Volunteer Appreciation & Training
- Monitoring Performance

Attachment A provides details on progress of recommendations related to priority areas since the last update to Council.

#### FINANCIAL IMPLICATION

There are no immediate financial implications associated with the information included in this report.

Future financial implications are forecast through the administrative budget review process, and brought forward to City Council for consideration and approval through Committee of the Whole as required.

#### **CONCLUSION**

It is concluded that this report summarizes the status of work completed, or in progress, in 2021 to implement the recommendations of the Recreation & Facility Master Plan. Therefore, it is recommended that this update be received for information at this time.

#### BACKGROUND

The Fit Together: Recreation & Facilities Master Plan was approved by City Council on January 2017 (R 152/2016). Administration was tasked with providing updates on the progress of the Plan's implementation.

In 2008, a Recreation & Parks Master Plan was developed; however, it was not approved by City Council at that time. With the direction in the 2011-2014 Strategic Plan and continued commitment in the 2015-2018 Strategic Plan, the City of Thunder Bay began the planning process in 2015 for the new Fit Together: Recreation & Facilities Master Plan. The process was initiated through an RFP with Sierra Planning & Management selected as the successful consulting firm to guide the plan's development.

Link to the full Recreation and Facilities Master Plan:

#### https://www.thunderbay.ca/en/city-hall/resources/Documents/Recreation-and-Facilities-Master-Plan.pdf

#### **REFERENCE MATERIAL ATTACHED:**

#### ATTACHMENT A: PRIORITY ACTION HIGHLIGHTS

#### **PREPARED BY:** LISA GALON, COORDINATOR – PLANNING, PROJECTS AND DEVELOPMENT LEAH PRENTICE, DIRECTOR – RECREATION & CULTURE DIVISION

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kelly Robertson, General Manager, Community Services	May 27, 2022

## Attachment A: Priority Action Highlights

The following table outlines key priorities listed in the Recreation & Facilities Master Plan with updates on progress since the last annual report in June 2021.

Facility Investment and Maintenance, Accessibility Upgrades		
Related	Recommendations 3, 6, 8, 9, 12, 17, 19, 20, 29, 32, and 42 acknowledge the	
Recommendations	need for long-term capital planning and on-going operational maintenance for infrastructure sustainability.	
Progress	Approval of an additional \$400K capital budget dedicated to the renewal of recreation facilities in 2022.	
	<ul> <li>Aquatics &amp; Wellness Facilities</li> <li>Churchill Pool - Pool deck renewal (included replacement of all pool piping, skimmers, jets, drains &amp; pool deck tiles). Two new Family Change rooms and improvements to both the locker rooms and washrooms.</li> <li>Canada Games Complex - new starting blocks in partnership with Thunderbolts.</li> <li>Northwood Splash Pad completed.</li> </ul>	
	Fort William Gardens	
	<ul> <li>Approved renewal strategy for the Fort William Gardens</li> <li>Exterior haunch repairs, painting, cladding, structural repairs</li> <li>Scoreboard replacement &amp; rigging</li> <li>Marquee replacement (currently underway)</li> <li>Ice plant compressor &amp; piping upgrades (in construction, delayed into 2022).</li> </ul>	
	Satellite Arenas	
	<ul> <li>Completion of a replacement strategy for satellite arenas</li> <li>Current River Arena – fire alarm upgrade</li> <li>Delaney Arena – new fire alarm         <ul> <li>new electrical service</li> <li>new roof top condensing unit</li> </ul> </li> <li>Port Arthur Arena – kitchen flooring, cabinets</li> <li>Refrigeration plant upgrades including compressor rebuilds, ammonia piping replacement, and new compressor motors.</li> </ul>	
	Stadia	
	• Funding applications submitted for renewal of FW Stadium track and turf to proceed in 2022-2023.	

Facility Investment and Maintenance, Accessibility Upgrades		
	Thunder Bay 55 Plus Centre & West Arthur (WACC)	
	munder bay 55 Plus centre & WestArthur (WACC)	
	<ul> <li>Floor replacement in two multi-purpose rooms</li> <li>Floor replacement in two foyers</li> </ul>	
	• Floor replacement in men's and women's shower areas	
	WACC - Floor replacement in main auditorium.	
	Community Centres	
	<ul> <li>New ventilation and air handling units (Phase1) at West Thunder Community Centre.</li> </ul>	
	<ul> <li>New washrooms in the lower level of the Oliver Road Community Centre.</li> </ul>	
	Thunder Bay Community Tennis Centre	
	• Quotes received for court resurfacing and lighting replacement projects to proceed in 2022.	
	Facility Accessibility Upgrades	
	• Hand rails installed in arena facilities in aisle stairways.	

Investing in Turf and Field Improvements		
Related	Recommendations 21, 22, 23, 24, 28 prioritize the need for investment in an	
Recommendations	indoor turf facility and to upgrade/maintain outdoor turf based on usage.	
Progress	<ul> <li>Multi-use indoor sports facility on hold pending determination of funding application submitted July 6/21 to Infrastructure Canada's Green and Inclusive Community Building Program.</li> <li>Funding application included request for up to \$22.4M for a Net-Zero building program estimated to cost \$43.8M (2022 dollars).</li> <li>Eight proposals received and evaluated in response to Expression of Interest issued July 2021 to seek interest from the private sector and other interested organizations for a multi-use indoor sports facility for the short and long terms at the preferred Chapples Park location or alternative locations.</li> </ul>	

Increasing Opportu	nities for Youth and related Inquest Recommendations
Related Recommendations	Recommendations 18, 48, 49, 50, 51, 52, 55 offer strategies for youth inclusion and orientation to Thunder Bay, support for navigating City programs and services, better ways to address the recreational needs of the Indigenous community and to develop a mentorship program that pairs Indigenous students with resident youth.
Progress	<ul> <li>Youth Inclusion Program (YIP) <ul> <li>Neighbourhood sites and programs provided in Windsor-Picton-Blucher, Vale-Limbrick and Simpson-Ogden neighbourhoods.</li> <li>Continue to work closely with local Indigenous high schools and provide free community based programs to youth throughout the City.</li> <li>Additional Youth Navigator hired; Navigators continue to provide one-to-one support to primary participants.</li> </ul> </li> <li>Youth Move/Kinsmen Youth Centre <ul> <li>In person programs returned in fall with participation numbers steadily climbing.</li> <li>Canada Games Complex, Widnall Pool and Kinsmen Centre sites have been running successful in person and virtual programs.</li> <li>Successful annual Youth Week activities hosted.</li> </ul> </li> </ul>
	<ul> <li>PRO Kids</li> <li>Introductory information provided to Nishnawbe Aski Nation through their Education Partnership Program Officer.</li> <li>Information included in student orientation information booklets that were distributed to all students who came to Thunder Bay for secondary education.</li> </ul>

Park & Neighbourhood Programming		
Related Recommendations	Recommendations 10 and 11 acknowledge the importance of animating the Widnall and Heath Pool locations, while repurposing the former Dease Pool site. Recommendations 16 and 55 speak to investing in, and programming, key community zones and parks.	
Progress	<ul> <li>Widnall Pool-Minnesota Park</li> <li>Renovated and opened youth space in the Widnall Pool Building.</li> <li>Since October 2021, Youth Inclusion and Youth Move operating year round, twice per week programs. Space also utilized by community partners.</li> <li>Healthy Kids HOME project, a partnership between the TBDHU, Our Kids Count and the Recreation &amp; Culture Division began in September 2021</li> <li>Healthy Kids provides neighbourhood programming in 3 priority neighbourhoods, including Dease-McKellar-Ogden-Simpson neighbourhood.</li> <li>2 Neighbourhood Leads hired to facilitate programming in physical activity, nutrition, mental health and tobacco cessation.</li> <li>Offering Meal Kit pick up, Art Drop-In, Walking Group and Pre-school</li> </ul>	

Park & Neighbourhood Programming		
	Playgroup. Afterschool program to be offered at McKellar Park School in	
	2022.	
	Dease Park & former pool site	
	Public engagement completed.	
	<ul> <li>Concept plan for redevelopment of Dease Park approved.</li> </ul>	
	• Detailed design and site commemoration plans to proceed in 2022, with	
	detailed design of former Dease Pool site anticipated to be presented by	
	Q4, 2022	

Indoor Court Facilit	У
Related Recommendations	Recommendations 30 & 31 identified the need for the City to work with the Thunder Bay Community Tennis Centre to identify a future solution for indoor tennis
Progress	<ul> <li>Oriented new Thunder Bay Community Tennis Centre (TBCTC) and Lakehead Pickleball Club Executive members to City's due diligence requirements in respect of accessing up to \$1.5M financial contribution from the City to advance indoor racquet sport facility at Chapples Park.</li> <li>Responded to TBCTC request to access additional City lands at Chapples Park to accommodate a new six court indoor facility.</li> <li>Explored feasibility and high level capital estimates to accommodate six court, indoor facility at Canada Games Complex.</li> <li>TBCTC request to access lands at Chapples Park approved in May, 2022</li> </ul>

Recreation & Culture Division User Fees & Affordable Access to Recreation		
Related Recommendations	Recommendations 66 and 67 outline the need to complete a detailed assessment of the full cost of service (direct and indirect costs) for the delivery of programs and assess whether current levels of cost recovery across various categories of programs are acceptable or require change.	
Progress	<ul> <li>User Fee Model approved for implementation in 2023.</li> <li>Work underway towards opportunities for increasing revenue generation through a new Digital Advertising Strategy. RFP to be released by Q3, 2022.</li> <li>Preliminary work towards development of a Sponsorship &amp; Naming Rights Policy.</li> <li>Work underway towards Affordable Access to Recreation and Transit pilot project. Recommendations to be presented to Council in Q3, 2022 for anticipated launch in 2023.</li> </ul>	

Evaluating the Community, Youth & Cultural Funding Program						
Related	Recommendation 69 outlines the need to evaluate the performance of the grant					
Recommendations	program.					
Progress	<ul> <li>Project grants - annual intake continues twice per year, spring and fall; expanded eligibility continued for community sport organizations as well as Anti-Racism &amp; Reconciliation projects.</li> <li>Community Safety and Well-Being plan priorities incorporated into the Community stream of the Program for 2021 fall project grants and 2022 Operating and Sustaining Grants.</li> <li>Twenty one (21) applications requesting a total of \$3,129,475 were received in 2021 for 2022 Community, Youth &amp; Cultural Funding Program Operating and Sustaining Grants.</li> <li>The COVID-19 Pandemic had an impact on the number of project applications. Some projects were postponed or cancelled in 2021 due to gathering limits. A total of twelve (12) project applications were received in 2021.</li> </ul>					

Support for Sport a	Support for Sport and Event Tourism, Supporting Community Events					
Related	Recommendations 70, 73, 74, and 75 speak to the importance of events to					
Recommendations	increase sport and event tourism, expand or enhance existing events that celebrate the City's Indigenous community and heritage, and to support major					
	events beyond the first year of hosting so as to facilitate the sustainability of					
	major events.					
Progress	<ul> <li>Bid submitted for hosting the 2024 Ontario Winter Games with a</li> </ul>					
	successful outcome in 2022.					
	<ul> <li>Supported hosting of Scotties Tournament of Hearts.</li> </ul>					
<ul> <li>Orange Shirt Day/National Day for Truth and Reconciliation</li> </ul>						
	hosted, including opening ceremony and film screening at Marina Park					
	and Youth events led by an Elder at multiple community locations.					

Active Transportation	on Infrastructure and Access to Recreation					
Related	Recommendations 35, 36, 37, 38, 39, 40, 41, 61 and 62 prioritize the need to					
Recommendations	invest in active transportation infrastructure, wayfinding and digital access to					
	link residents to recreation facilities and programming.					
Progress	<ul> <li>Active Transportation Network continues to grow throughout the City of Thunder Bay as per the Transportation Master Plan and the accompanying Active Transportation Plan (2019).</li> <li>Improvements made in crossings through the installation of pedestrian crossovers and accessible pedestrian signals that improve the safety of pedestrians.</li> <li>Wayfinding begun for the North and South Cores, and the Ford and Neebing River Trails.</li> </ul>					

Culture Plan Implementation					
Related	Recommendations 57 – Continue to implement recommendations of the Inspire				
Recommendations	Thunder Bay Culture Plan				
Progress	<ul> <li>The Culture Plan, adopted in 2011, has reached the end of its planned 10 year life-cycle.</li> <li>Capital budget approved for renewal of the Culture Plan to commence in 2022.</li> </ul>				

Online Booking Syst	tem				
Related	Recommendations 59 – invest and implement an online booking system that				
Recommendations	allows residents to self book/request spaces/facilities and register for programs online via the City's website				
Progress	<ul> <li>Online registration system, Perfect Mind (recently rebranded Xplor Recreation) launched in Summer of 2021.</li> <li>Online booking now possible for a number of programs and services.</li> </ul>				

Ice Allocation Policy				
Related	Recommendations 78 – regularly review the City's ice allocation policy and			
Recommendations	evaluate the effectiveness of its implementation			
Progress	Review completed in consultation with users.			
	• Recommendations to be presented to Council in Q3 2022			

Volunteer Apprecia	tion & Training				
Related	Recommendation 63, 64, 65 prioritize the need for volunteers in our community				
Recommendations	and to continue to recognize volunteers with appreciation and awards and				
	maintain training programs				
Progress	Over 100 volunteers gave over 2,670 hrs of their time in 2021. Volunteer opportunities were limited due to the pandemic. Recognition - Volunteer Recognition Week celebrated - Thank You ads in Chronicle Journal and social media. - Holiday greeting cards mailed to volunteers.				
	<ul> <li>Teens n' Training</li> <li>Offered virtually</li> <li>29 teens between the ages of 13-16 participated.</li> </ul>				
	Recruitment-Preliminary meetings with Lakehead University International and Indigenous student offices to explore working together to promote				
	<ul> <li>opportunities and get more students involved.</li> <li>Simplified onboarding training.</li> <li>Created a new volunteer position to assist arenas with staff shortages (19 volunteers assisted with arena screening)</li> </ul>				

<b>Monitoring Perform</b>	nance				
Related	The Plan suggests creation and implementation of Key Performance Indicators				
Recommendations	(KPIs) as part of the monitoring process.				
Progress	• Lakehead University business student project underway on performance based indicators (KPIs) for Recreation & Culture.				



<i>DEPARTMENT/ DIVISION</i>	Corporate Services & Long Term Care - Financial Services	REPORT NO.	R 89/2022
DATE PREPARED	04/05/2022	FILE NO.	
MEETING DATE	06/06/2022 (mm/dd/yyyy)		
SUBJECT	Tbaytel Debenture Financing		

#### RECOMMENDATION

WITH RESPECT to Report R 89/2022 (Corporate Services and Long-Term Care – Financial Services), we recommend that the request from Tbaytel to borrow \$25 million for capital infrastructure upgrades in 2022 through 2024 in accordance with the 3-year Tbaytel Capital Plan outlined in the report be approved;

AND THAT the City Treasurer be authorized to proceed with debenture financing as outlined in the Report;

AND THAT the necessary By-laws be presented to Council for ratification.

#### EXECUTIVE SUMMARY

By-law 257-2004 established Tbaytel as a Municipal Service Board. Section 3.05 of this by-law requires all debt financing to be approved by City Council and includes a clause which caps the debt limit for Tbaytel at 1.3 times the Earnings before Interest, Taxes and Depreciation/Amortization (henceforth EBITDA) for the immediately preceding year.

Tbaytel is requesting that \$25 million be financed through external debentures with \$12.5 million drawn in both 2022 and 2023. It should be noted that timing of the draws are estimates only, but will not extend beyond 2024.

#### DISCUSSION

Tbaytel has traditionally financed the vast majority of its capital requirements internally through operations. In 2006 Tbaytel required \$25 million in external debenture financing through the City to fund the purchase of Superior Wireless. This debenture was paid in full by Tbaytel in 2016. In 2014 they required an additional \$8 million which will be paid in full in 2024. From 2017 to 2019, an additional \$49 million was borrowed for planned expansion into the region.

Tbaytel is requesting 25 million in external debenture borrowing for 2022 - 2024 with planned draws of 12.5 million in both 2022 and 2023.

By law 257-2004 which governs Tbaytel's ability to procure debt, dictates that any new debt must be approved by the City of Thunder Bay City Council. Further Tbaytel's Corporate Procedure PF 11-009 limits debt to a 1.3/1 Ratio of Debt/EBITDA.

#### FINANCIAL IMPLICATIONS

Tbaytel is requesting approval of City Council to borrow \$25 million for capital infrastructure in 2022 - 2024. The borrowing is estimated to be \$12.5 million in 2022 and \$12.5 million in 2023 and overall will not exceed \$25 million. There will be no impact on the City's budget or the ability for Tbaytel to continue with the annual dividend payout. The debt servicing costs for this debenture will be paid by Tbaytel and will be included in the consolidated annual financial statements.

The overall debt service ratio projections continue to remain below the 10% maximum per Corporate Report 2014.019 Debt Management Strategy (Finance & Corporate Services Accounting & Budgets) peaking at 6.6% in 2023, declining each year thereafter.

#### **CONCLUSION**

It is concluded that City Council should approve Tbaytel's request to borrow \$25 million towards its capital infrastructure in 2022 through 2024.

#### REFERENCE MATERIAL ATTACHED:

None.

#### **PREPARED BY: EMMA WESTOVER, DIRECTOR – FINANCIAL SERVICES**

THIS REPORT SIGNED AND VERIFIED BY:	DATE:
Linda Evans, GM Corporate Services & Long Term Care, City Treasurer	May 17, 2022



DEPARTMENT/ DIVISION	Corporate Services & Long Term Care - Financial Services	REPORT NO.	R 81/2022
DATE PREPARED	04/19/2022	FILE NO.	
MEETING DATE	06/06/2022 (mm/dd/yyyy)		

SUBJECT Non-Consolidated Financial Statements and Reserve Fund Update

#### RECOMMENDATION

WITH RESPECT to Report R 81/2022 (Corporate Services & Long Term Care - Financial Services), we recommend that the Non-Consolidated Financial Statements for the Corporation of the City of Thunder Bay, as appended as Attachment A to this report, be received for information purposes;

AND THAT the 2021 tax-supported surplus of \$10.9 million be transferred to reserve funds as follows:

- \$6.0 million to the General Capital Reserve Fund;
- \$1.9 million to the Winter Roads Reserve Fund;
- \$0.7 million to the Legal Fees Reserve Fund;
- \$0.1 million to the Event Hosting Reserve Fund; and
- \$2.2 million to the Stabilization Reserve Fund;

AND THAT the 2021 update on the Reserve Funds and Investment of Municipal Funds be received for information purposes;

AND THAT Appropriation No. 16, appended as Attachment B, and No. 17, appended as Attachment C, be approved;

AND THAT By-law 123-1992 be repealed upon the closure of the Sandy Beach Reserve Fund;

AND THAT the Mayor and Clerk be authorized to sign all documentation related to these matters;

AND THAT any necessary by-laws be presented to City Council for ratification.

#### EXECUTIVE SUMMARY

For the year ended December 31, 2021, there was an overall favourable variance from taxsupported operations of \$10.9 million non-COVID-19 operations and a favourable variance of \$5.9 million related to COVID-19. The overall favourable tax supported variance of \$16.8 million represents 6.2% of the total net tax supported operating budget of \$273.0 million or 4% excluding the impact of COVID-19.

Rate-supported operations resulted in a favourable variance of 4.9 million - transferred to rate supported reserve funds – representing 8.5% of the total gross rate-supported budget of 57.4 million.

Reserves and reserve funds are a critical component of the City of Thunder Bay's long-term financial plan. This Report also includes an annual reserve fund update.

Generally, the annual non-COVID-19 surplus of \$10.9 million would be transferred to the Stabilization Reserve Fund (Corporate Report 2004.235 (Finance – Accounting) however, Administration is recommending \$6.0 million to the General Capital Reserve Fund, \$1.9 million to the Winter Roads Reserve Fund, \$0.7 million to the Legal Fees Reserve Fund, \$0.1 million to the Event Hosting Reserve Fund and the remaining surplus of \$2.2 million to the Stabilization Reserve Fund.

The amounts recommended to transfer to the Winter Roads Reserve Fund, Legal Fee Reserve Fund and Event Hosting Reserve Fund are equal to the 2021 favourable variances in those areas. Transferring these favourable variances would result in an estimated uncommitted balance of \$3.7 million in the Winter Roads Reserve Fund before factoring in the projected 2022 unfavourable variance, \$3.6 million in the Legal Fees Reserve Fund and \$0.1 million in the Event Hosting Reserve Fund.

The 2022 budget committed \$3.3 million of funds from the General Capital Reserve Fund, leaving an estimated uncommitted balance, before the 2021 year end transfer, of \$0.6 million. Recognizing the need to invest in Capital and given the healthy balance of the Stabilization Reserve Fund, Administration recommends transferring \$6.0 million of the surplus to this reserve fund to provide a source of financing for capital projects identified in future years.

Administration is recommending that the remaining \$2.2 million surplus be transferred to the Stabilization Reserve Fund. Transferring the favourable variance would result in an estimated uncommitted balance at of \$13.1 million in the Stabilization Reserve Fund.

The unaudited non-consolidated financial statements were presented to the Audit Committee on May 19, 2022. The Audit Committee recommends the presentation of the unaudited non-consolidated financial statements of The Corporation of the City of Thunder Bay as at and for the year ended December 31, 2021 to Committee of the Whole on June 6, 2022.

The information regarding the Professional Money Management Program for the period January 1, 2021 to December 31, 2021 is provided for information. The return on the total portfolio (Cash and Short Term Investments, Bonds, and Canadian Equities), before fees, for the fiscal

year ended December 31, 2021 was 2.0% based on realized gains, and -0.19% based on market values. 2021 investment results represent the final full year of investing under the Legal List. The City transitioned to the Prudent Investor Standard effective April 1, 2022.

#### DISCUSSION

#### Non-Consolidated Financial Statements

The non-consolidated financial statements were prepared by Administration for internal purposes only and are not audited. The information contained in these statements is included as part of the audited consolidated financial statements.

The Non-Consolidated Statements, as appended as Attachment A, include:

- Statement of Financial Position
- Schedule 1 Statement of Capital Operations
- Schedule 2 Statement of Continuity of Reserves and Reserve Funds
- Schedule 3 Statement of Financial Activities and Accumulated Net Revenue
- Schedule 3.1 Schedule of Other Revenue

#### FINANCIAL IMPLICATION

#### Non-Consolidated Statement of Financial Position

This statement shows the financial position of The Corporation of the City of Thunder Bay as at December 31, 2021, with comparatives for 2020.

#### Assets

The total assets as at December 31, 2021 are \$468.4 million, an increase of \$33.7 million over 2020.

Cash and investments of \$172.9 million have increased by \$41.2 million from the prior year, primarily resulting from increased in reserve funds of \$42.6 million and deferred revenue of \$2.4 million and a decrease in taxes receivable of \$1.3 million. This is offset by increases in accounts receivable of \$1.1 million, other current assets of \$0.8 million and unfinanced capital of \$0.5 million and a decrease in accounts payable of \$2.5 million.

The increase in accounts receivable of \$1.1 million includes increased Tbaytel performance dividend receivable of \$1.3 million and \$0.5 million in increased receivables from school boards due to higher write-offs offset by reduced grants receivable of \$0.8 million.

Long-term receivables include \$44.7 million due to the City from Tbaytel for long-term borrowing incurred by the City on behalf of Tbaytel, \$1.2 million from local improvement charges and \$0.5 million from Lake Superior Centre for Regenerative Medicine Inc. The decrease of \$3.0 million from the prior year primarily relates to Tbaytel loan repayments.

The capital outlay balance is equal to the municipal long-term liabilities as disclosed in the Liabilities and Equity section of this statement. When the City acquires debentures for capital works that have been completed or are yet to be completed, an asset (capital outlay) is recorded in the same amount as the liability. As the debenture principal is repaid, both the asset and the liability are reduced by the same amount.

#### Liabilities and Equity

The assets are financed by liabilities of \$261.5 million, and equity of \$206.9 million.

Accounts payable and accrued liabilities have decreased by \$2.5 million from 2020, due to decreased provision for tax write offs of \$6.4 million offset by increased payables reflecting the timing of payments year over year.

Amounts included in deferred revenue are revenues that have been received in the year which relate to projects or activities to be completed in the subsequent year. Deferred revenue increased by \$2.5 million in 2021 mainly due increased prepaid taxes and unearned grant revenues.

As at December 31, 2021, outstanding debt related to tax-supported operations comprised \$63.5 million and \$95.6 million represents borrowing for rate-supported operations (water, wastewater, and solid waste). Long-term borrowing by the municipality on behalf of Tbaytel is \$44.7 million.

	2021	2021	2020	Change
	(millions)	%	(millions)	(millions)
Tax-supported	\$63.5	31%	\$69.5	\$(6.0)
Rate-supported	95.6	47%	94.8	0.8
Subtotal - City	159.1	78%	164.3	(5.2)
Tbaytel	44.7	22%	47.9	(3.2)
Total	203.8	100%	212.2	(8.4)

The following table shows the comparative balances for 2021 and 2020:

The decrease in the City long-term liabilities of \$5.2 million from 2020 reflects the increase in construction advances for capital projects in progress and completed capital projects: tax supported (\$6.2 million), waterworks (\$4.7 million), wastewater (\$4.7 million) and solid waste (\$0.9 million); offset by repayments of the principal portion of previously acquired debt (\$21.7 million).

#### Schedule 1 – Statement of Capital Operations

This statement shows the activity related to capital projects for the year. The balance at the beginning and end of the year reflects the expenditures on capital projects that have not yet been financed, net of the unexpended debentures proceeds, and includes the balance in the Land Development account. The Land Development account reflects the net proceeds from the sale and lease of City-owned property and expenditures related to such property.

#### Capital Expenditures

The capital expenditures of \$64.7 million in 2021 include:

- General government \$2.2 million primarily for renovation and repairs to corporate facilities (\$0.6 million), computer hardware replacement and software upgrades (\$0.5 million), eye on the street equipment (\$0.4 million), and a contribution to the Cardiovascular Campaign (\$0.2 million).
- Protection to persons and property \$3.4 million primarily related to police body and incar cameras, vehicles, shooting range, equipment, next generation 911 upgrades and computer software (\$1.8 million) and fire vehicle and equipment including urban search and rescue / Hazmat program (\$1.4 million).
- Transportation services \$28.3 million primarily relating to roads (\$9.2 million), bridges (\$6.6 million), Boulevard Lake Dam (\$3.5 million), transit (\$2.0 million), traffic and street lighting (\$1.9 million), sidewalks (\$1.4 million), fuel farm replacement (\$0.9 million), vehicles and equipment (\$0.7 million), and parkade repairs (\$0.7 million).
- Environmental services \$19.9 million primarily for water main replacement (\$7.1 million), storm sewer upgrades, inspections, repairs and drainage improvements (\$3.4 million), sanitary sewer mains and inspections (\$2.5 million), leachate improvements at the landfill (\$1.9 million), water treatment plant rehabilitation (\$1.5 million), wastewater treatment plant maintenance (\$0.9 million), and \$0.8 million to reduce lead levels at the tap including lead pipe replacement.
- Health services \$2.2 million for SNEMS defibrillators, vehicles, and equipment upgrades.
- Social and family services \$0.7 million primarily for Pioneer Ridge facility renewal and equipment replacement.
- Recreation and culture services \$7.9 million primarily relating to various facility upgrades (\$1.7 million), various parks renewal, maintenance, and sport field upgrades (\$1.4 million), recreational trails (\$1.3 million), annual contribution to library capital works (\$0.8 million), urban forest management and response to the emerald ash borer (\$0.6 million), Conservatory and greenhouse renewal (\$0.4 million), parks vehicles (\$0.4 million), waterfront development projects (\$0.4 million), and contribution to Lakehead University (\$0.2 million).
- Planning and Development \$0.3 million primarily for commercial facility renewal and washrooms at the Terry Fox monument.
## Capital Financing

During 2021, capital financing was obtained from a number of sources.

The net capital contribution from the revenue fund decreased to \$5.6 million from \$6.5 million in 2020 relating to the timing of spend and supply chain delays.

Contributions from reserves and reserve funds decreased by \$4.9 million to \$39.8 million. Ratesupported capital projects funded from reserve funds for solid waste, wastewater and water projects were \$15.3 million. Other contributions include \$7.7 million from the Canada Community Building Reserve Fund, and \$6.5 million from the Ontario Community Infrastructure Reserve Fund for various road, bridge, and storm sewer projects, \$6.9 million from the Capital Expenditure Reserve for various tax supported capital budgeted in prior years but not yet completed and \$1.7 million from the EMS Vehicle & Equipment Reserve Fund.

Contributions to reserve funds of \$8.5 million are \$2.2 million more than 2020 (\$6.2 million) and represents debenture proceeds received for prior years' water and wastewater capital projects.

Debenture borrowing increased \$4.5 million to \$16.5 million in 2021. The increase in borrowing reflects increased capital borrowing in Wastewater (\$2.7 million), tax supported (\$1.3 million), and Solid Waste (\$0.9 million) offset by a reduction in Water borrowing (\$0.4 million). Rate-supported debenture borrowing follows approved long-term financial plans.

The level of Ontario and Canada grants increased \$2.5 million primarily relating to an increase in Investing in Canada Infrastructure Program of \$2.0 million and Northern Ontario Heritage Fund Corporation funding of \$0.5 million.

Other capital financing is mainly comprised of internal debentures for capital projects in parking, landfill, McKellar Mall, LED street lighting, court services, golf and other miscellaneous revenues.

## Schedule 2 – Statement of Continuity of Reserves and Reserve Funds

This Statement provides details of the activities in Reserves and Reserve Funds for the year.

The overall increase of \$42.6 million reflects investment earnings of \$3.1 million, contributions from operations of \$74.4 million, contributions from capital of \$8.5 million, and contributions from developers of \$0.1 million offset by \$39.8 million in net funding for capital projects, and \$3.6 million in funding for operations.

Rate-supported reserve fund balances at December 31, 2021 are 39.6 million (2020 - 26.0 million) and tax-supported reserve fund balances are 174.6 million (2020 - 145.7 million).

## Update of Reserve and Reserve Fund Balances

Reserves and reserve funds are a critical component of a long-term financial plan. Adequate levels of reserves and reserve funds demonstrate financial flexibility and an ability to adapt to fiscal challenges.

## Rate-Supported

Long-range financial plans are in place for the City's rate-supported operations (waterworks, wastewater, and solid waste). User fees are based on future cash flow requirements for operating (including borrowing costs), capital, and reserve fund contributions. The long-term strategy for rate-supported operations is expected to provide for a gradual increase to reserve fund balances for future capital asset replacement.

## Tax-Supported

The 2021 tax-supported reserve and reserve fund balance is \$174.6 million representing an increase of \$29.0 million.

The 2021 increase mainly relates to net contributions to the General Capital Reserve Fund (\$9.0 million), Canada Community Building Reserve Fund (\$5.9 million), Renew Thunder Bay Reserve Fund (\$4.2 million), Capital Expenditure Reserve (\$3.4 million), Winter Roads Reserve Fund (\$2.0 million), and Capital Transit Reserve Fund (\$1.5 million), offset with a net decrease in the Stabilization Reserve Fund (\$1.7 million).

## **Reserve Fund Update**

## Sandy Beach Reserve Fund

Administration is recommending the closure of the Sandy Beach Reserve Fund as it has fulfilled it purpose to provide funds for the purchase of buildings, structures and related assets from tenants of the Corporate at Sandy Beach. Administration recommends the closure Sandy Beach Reserve Fund as at December 31, 2021. No transfer of balance is required as this reserve fund has a nil balance. Following the closure of the reserve fund, Administration recommends that By-law 123-1992 be repealed as it is no longer required.

## Thunder Bay Simpson Street BIA Reserve Fund

Administration is recommending approval of Appropriation No. 16, as appended as Attachment B, which will use the funds that remain in the Thunder Bay Simpson Street BIA Reserve Fund for projects in the Simpson Street Business Improvement Area. The work will include replacement of concrete light bases and poles on Simpson Street. The Simpson Street BIA was dissolved in early 2018. Administration also recommends the closure of the Reserve Fund once all funds have been spent. Following the closure of the reserve fund, Administration recommends that By-law 265-1992 be repealed as it is no longer required.

## Schedule 3 – Statement of Financial Activities and Accumulated Net Revenue

## Gross Revenue Variance

Total revenues were \$420.9 million, a favourable variance of \$26.7 million from the budgeted amount of \$394.2 million. The main components of this variance are:

- Unfavourable variance in Taxation and Payments in Lieu of Taxation of \$0.3 million mainly related to lower than expected supplementary taxes due to very little construction activity.
- Favourable variance in Federal and Ontario grants of \$21.0 million, including \$6.6 million in Canada Community Building Fund top up funding, \$5.0 million from the Federal government for emergency fire evacuations (includes \$0.3 million administration revenue), \$2.8 million in provincial pandemic funding for EMS, Long Term Care and Supportive Housing, \$2.1 million in Federal-Provincial Safe Restart Transit funding, \$1.6 million in COVID-19 Municipal Recovery funding, EMS grant funding \$1.3 million, \$0.9 million in Long Term Care and Supportive Housing funding and \$0.5 million in additional policing grants.
- No significant variance for user fees overall however includes favourable variances in water and wastewater (\$1.3 million and \$0.7 million), recoveries (\$0.9 million), golf revenues (\$0.4 million) and recycling revenue (\$0.3 million), offset by unfavourable variances due to the impact of COVID-19 in recreation facilities (\$1.4 million), Transit (\$1.1 million), landfill site fees (\$0.7 million), and parking revenues (\$0.4 million).
- Favourable variance in other revenue of \$6.0 million primarily relate to a performance dividend from Tbaytel (\$3.9 million), a one time dividend from Thunder Bay Hydro Corporation (\$0.5 million), penalties and interest on taxes (\$0.4 million), interest income (\$0.4 million), provincial offences fine revenue (\$0.4 million), and sales of excess equipment (\$0.3 million).

## Gross Expenditure Variance

Total expenditures were \$344.6 million, a favourable variance of \$8.2 million, representing 2.3% of the budgeted amount of \$352.8 million.

The following provides an overview of the specific expenditure categories:

**General government** – Includes expenditures related to general administration, corporate overhead, members of council, and general financial expenditures. The favourable variance of \$2.2 million relates primarily favourable variances in the provision for tax write offs (\$5.5 million), legal fees (\$0.7 million), and corporate wages mainly related to vacancies (\$0.4 million). These variances were partially offset by unfavourable variances in unbudgeted emergency fire evacuation expenses (\$4.7 million).

**Protection to persons and property** – Expenditures for fire and police constitute the majority of this category (90%) with emergency measures (pandemic costs), provincial offences, licensing and enforcement, animal services and the contribution to the Lakehead Region Conservation

Authority accounting for the balance. The unfavourable variance of \$4.2 million primarily relates to pandemic costs (\$2.6 million) and Police (\$1.5 million). The 2021 pandemic costs have been fully offset by either cost avoidance or pandemic funding.

**Transportation services** – Roads and transit account for 89% of the expenditures in this category with the balance relating to parking, and street lighting. The \$5.0 million favourable variance relates to Roads (\$2.4 million) mainly related to savings in winter control, fleet, materials and vacancy savings, a favourable variance in Transit (\$2.3 million) due to reduced service delivery and vacancy savings, and a favourable variance in Parking (\$0.2 million) related to reduced wages, materials and contracted services during the pandemic. The favourable variance of \$1.9 million related to winter control has been transferred to the Winter Roads Reserve Fund. The non-pandemic portion of the transit favourable variance (\$0.8 million) has been transferred to the Capital Transit Reserve Fund as per Corporate Report 2007.008 (Finance – Accounting & Budgets), the transit pandemic related savings have been used to partially offset lost revenues.

**Environmental services** – Expenditures related to waterworks and sanitary sewers make up 75% of the total, with storm sewers, and garbage collection and disposal and waste recycling and diversion forming the remainder. The favourable variance of \$2.6 million mainly relates to:

- 1. Sanitary Sewers (\$1.5 million) primarily due to vacancy savings (\$1.6 million), lower than budgeted financing costs (\$0.4 million), fleet and energy savings (\$0.3 million), offset by an unfavourable variance in contracted services due to increased cleaning and inspection needs (\$0.9 million).
- 2. Waterworks (\$0.8 million) mainly due to vacancy savings (\$1.1 million), lower than budgeted financing costs (\$0.3 million), partially offset by an unfavourable variance in contracted services due to increased cleaning and inspection needs and use of contractors due to vacancies (\$0.7 million).
- 3. Garbage Disposal & Waste Diversion (\$0.3 million) due to higher internal tipping fee charges (\$0.3 million), savings in materials, contracted services and rents & financial costs (\$0.3 million) partially offset by an unfavourable variance in fleet maintenance costs (\$0.3 million).

**Health services** – Included in this category are expenditures related to Superior North EMS (91%) with the contribution to the Thunder Bay District Health Unit and cemeteries forming the remainder. The unfavourable variance of \$2.0 million mainly relates Superior North EMS, specifically costs associated with the Community Paramedicine program and Transportation of Medically Stable Patients program which are covered by provincial grants as well as higher WSIB and overtime costs partially offset by vacancy savings.

**Social and family services** –General assistance (ex. The District of Thunder Bay Social Services Administration Board levy) and senior services (ex. Pioneer Ridge, 55 Plus) accounts for 93% of the expenditures included here with child care forming the balance. The favourable variance of \$0.9 million primarily from savings from pandemic related reduced services in child care (\$1.3 million) offset by increased senior services costs (\$0.3 million).

**Recreation and culture** – This category includes parks, recreation programs, recreation facilities, golf, marina, contributions to the Thunder Bay Public Library and recipients of the Community, Youth, and Cultural funding program. The favourable variance of \$3.5 million primarily relates to the closure and reduced operations in recreation facilities and recreation programs due to the pandemic.

**Planning and development** – This category includes planning and zoning activities, economic development, and tourism. The favourable variance of \$0.2 million is largely due to facility savings in Victoriaville and the Whalen building.

## Net Variance

The preceding analysis of year-end variances is in accordance with the presentation of gross revenues and gross expenditures as required to produce audited financial statements for Ministry of Municipal Affairs and Housing reporting purposes. For internal quarterly variance reporting during the year, the variances are identified on a net basis by departments.

For the year ended December 31, 2021, there was an overall favourable variance from taxsupported operations of \$10.9 million for non-COVID-19 operations and a favourable variance of \$5.9 million related to COVID-19. The overall favourable tax supported variance of \$16.8 million represents 6.2% of the total net tax supported operating budget of \$273.0 million or 4% excluding the impact of COVID-19.

Rate-supported operations resulted in a favourable variance of \$4.9 million (which was transferred to rate supported reserve funds), representing 8.5% of the total gross rate-supported budget of \$57.4 million.

Generally, the annual non-COVID-19 surplus of \$10.9 million would be transferred to the Stabilization Reserve Fund (Corporate Report 2004.235 (Finance – Accounting) however, Administration is recommending \$6.0 million to the General Capital Reserve Fund, \$1.9 million to the Winter Roads Reserve Fund, \$0.7 million to the Legal Fees Reserve Fund, \$0.1 million to the Event Hosting Reserve Fund and the remaining surplus of \$2.2 million to the Stabilization Reserve Fund.

The amounts recommended to transfer to the Winter Roads Reserve Fund, Legal Fee Reserve Fund and Event Hosting Reserve Fund are equal to the 2021 favourable variances in those areas. Transferring these favourable variances would result in an estimated uncommitted balance at December 31, 2021 of \$3.7 million in the Winter Roads Reserve Fund,\$3.6 million in the Legal Fees Reserve Fund and \$0.1 million in the Event Hosting Reserve Fund.

The 2022 budget committed \$3.3 million of funds from the General Capital Reserve Fund, resulting in an estimated uncommitted balance, before the 2021 year end transfer, of \$0.6 million. Recognizing the need to invest in Capital and given the healthy balance of the Stabilization Reserve Fund, Administration recommends transferring \$6.0 million of the surplus to this reserve fund to provide a source of financing for capital projects. On May 9<sup>th</sup>, 2022 Council approved the use of \$1.8 million of the 2021 surplus funds in the General Capital

Reserve Fund, as a result Appropriation No. 17 (Attachment C) has been prepared and included in this report for approval.

Administration is recommending that the remaining \$2.2 million surplus be transferred to the Stabilization Reserve Fund. Transferring the favourable variance would result in an estimated uncommitted balance at December 31, 2022 of \$13.1 million in the Stabilization Reserve Fund.

The following chart highlights the net variance in both tax-supported and rate-supported operations with explanations for the key drivers. The tax-supported section excludes variances related to COVID-19. Within rate-supported operations, the impacts of COVID-19 on waterworks and wastewater were minimal and have been absorbed by their overall favourable variance. The impact of COVID-19 on Solid Waste has been excluded from the chart below and is noted in the COVID-19 Summary.

	+(-)	
Section	Variance	Comments
	(\$ millions)	
	I	TAX SUPPORTED
City Manager's Office	0.3	City Solicitor - vacancy savings (0.1); Strategic Initiatives &
		Engagement - vacancy savings and reduced costs in printing
		and advertising (0.1); City Clerks – vacancy savings and
		process savings due to electronic agendas (0.1)
Community Services	0.3	Recreation & Culture – primarily utility savings (0.3)
Corporate Services &	0.8	Revenue $-$ increased fine revenue and vacancy savings (0.6);
Long Term Care		Financial Services – vacancy savings (0.1);
	0.5	Long Term Care – primarily revenues, vacancy savings and
		utility savings
Development &	0.3	Fire – primarily relating to evacuation revenues
Emergency Services	0.2	Licensing & Enforcement – additional user fee revenues and
		vacancy savings
	(0.6)	Superior North EMS – additional revenues offset by
		increased overtime & WSIB costs
Infrastructure &	0.3	Parks – primarily relating to increased revenues in golf and
Operations		campground fees (0.6) offset by unplanned repairs at marina
		park rink and splash pad repairs and landscaping (0.3)
	0.6	Roads – primarily relating to increased revenues and fuel
		and utility savings
	1.9	Winter control savings due to mild season
Police Service	(0.8)	Primarily relating to increased wages, OT and WSIB (1.0)
		and increased contracted services for OIPRD initiatives (0.6)
		offset by additional revenues (0.7)
Police Service Board	(0.5)	Legal fees, community engagement and administrative costs
Corporate Legal &	0.6	Favourable Legal Fees 0.7; Unfavourable Insurance claims
Insurance		0.1

Taxation related	5.8	Favourable tax write-off provision adjustment (5.5) and
		penalties & interest (0.4), rebates (0.2) offset by
		unfavourable supplementary tax revenue (0.4)
Miscellaneous	1.0	Thunder Bay Hydro Dividend (0.5), Interest Income (0.4)
corporate revenues		and Commodity Tax Rebate (0.1)
Miscellaneous	0.2	Favourable Debenture costs (0.2) and Corporate WSIB (0.1)
corporate expenditures		offset by unfavourable Early Leave (0.2)
Total Tax Supported	<u>10.9</u>	Represents 4% variance excluding COVID-19

Section	+(-) Variance (\$ millions)	Comments							
	RATE SUPPORTED								
Waterworks	2.2	Primarily relating to higher user fee revenues $(1.3)$ , vacancy savings $(1.1)$ reduced debt costs $(0.3)$ and utility savings (0.1) offset by increased cleaning, inspection and contractor costs $(0.7)$							
Wastewater	2.4	Primarily relating to vacancy savings $(1.6)$ , surplus revenues $(0.7)$ , reduced debt costs $(0.4)$ , utility and fuel savings $(0.4)$ offset by increased cleaning and inspection costs $(0.9)$							
Solid waste	0.3	Savings in contracted services $(0.1)$ and rents & financial $(0.1)$							
<b>Total Rate Supported</b>	<u>4.9</u>								

## COVID-19

For the year ended December 31, 2021, there was a favourable variance of \$5.9 million related to COVID-19 due primarily to the following:

- Childcare favourable, net impact of reduced operations (\$1.6 million)
- 2021 COVID-19 Recovery Funding favourable, funding announced March 4, 2021 (\$1.5 million)
- 2021 Phase 3 Safe Restart Transit Funding favourable, funding announced March 4, 2021 (\$1.2 million)
- Recreation & Culture favourable, savings due to facility closures primarily in wages, reduced utilities and fuel offset by lost revenues (\$1.5 million)
- SNEMS favourable, additional COVID related revenues (\$0.6 million)
- Long Term Care and Senior Services favourable, increased revenues offset by increased operating expenditures (\$0.4 million)
- Parking unfavourable, lost revenues worse than originally budgeted due to impact of Grey and Red zone regulations (\$0.6 million)

• Solid Waste-Landfill unfavourable, lower revenues due to the extended closure of many businesses (\$0.5 million)

The following chart summarizes the final COVID-19 2021 impact to the Stabilization Reserve Fund.

Projected COVID-19 2021 Impact	\$ (in millions)
2021 COVID-19 impact (Per Approved Budget)	\$ 7.2
Less: 2021 COVID-19 favourable variance	(\$ 5.9)
2021 COVID-19 Impact (Updated)	\$ 1.3
Less: Operating Safe Restart funding carried forward to 2021	(\$ 4.3)
Remaining Operating Safe Restart funds carried forward to 2022	(\$ 3.0)

## Investment of Municipal Funds Update

The following chart reports the market value return of the City's investment portfolio for the fiscal year ended December 31, 2021 compared to the benchmarks.

For the Fiscal Year Ended December 31, 2021									
	Total Portfolio	Cash & S Invest	hort Term ments	Bond Portfolio	Equity Fund				
		TD Money Market	HISA						
Market Value Return (before Fees)	-0.19%	0.16%	0.35%	-3.03%	20.98%				
Benchmark (before Fees)	1.70%	0.09%	0.09%	-2.97%	25.09%				
Market Value Return (after Fees)	-0.33%	-0.02%	0.30%	-3.21%	20.53%				
Market Value Portfolio Balance at Dec 31, 2021 (millions)	\$173.0	\$2.0	\$69.2	\$78.7	\$23.1				

The City's return on investments in bonds for the year ended December 31, 2021 was -3.03% similar to the benchmark return of -2.97%. Overall negative performance of the Bonds is attributed to the resurgence of COVID-19 cases and newly reinstated lockdowns in 2021 that caused investment-grade credit spreads to widen.

The market value return on the City's investment in equities for the year ended December 31, 2021 was 20.98% before fees. The benchmark posted a market value return of 25.09%, before fees.

The return, after fees, to the City during the year ended December 31, 2021 yielded \$3,940,879 in realized investment income. The realized rate of return on the total portfolio which represents actual income earned and received, was 2.0%, before fees, broken down as follows: Cash and

Short Term Investments - \$672,757, Canadian Bonds - \$1,912,717, and Canadian Equity - \$1,355,405.

2021 investment results represent the final full year of investing under the Legal List. The City transitioned to the Prudent Investor Standard effective April 1, 2022.

## **Investment Fees**

For the year ended December 31, 2021, the total fees of \$203,815 included:

- 4. Investment Advisory Services \$42,472
- 5. Investment Management Services \$142,379
- 6. Custodian Services \$18,964

## **Investment Reporting Requirements**

The City's Investment policy requires the General Manager – Corporate Services & Long Term Care and City Treasurer to report on the date of each transaction in or disposal of the city's own securities, including a statement of the purchase and sale price of each security.

The records of each transaction are summarized in the custodial statements of RBC Dexia Investor Services on a monthly basis. The statements for all purchases, sales, and maturities of securities are provided to the City and filed/archived following review by Administration. The statements for these purchases and sales have been filed and kept in safekeeping, and are available for review by members of City Council upon request.

It is the opinion of the General Manager – Corporate Services & Long Term Care and City Treasurer that all investments were made in accordance with the investment policies and goals adopted by the City.

There were no investments held by the City that fell below the standard required under the Municipal Act for that investment during 2021.

## CONCLUSION

It is concluded that the Non-Consolidated Financial Statements (Attachment A) and Reserve Fund and Investment of Municipal Funds update for the Corporation of the City of Thunder Bay should be received by City Council for information purposes.

It is also concluded that City Council should approve the year end reserve fund transfers to the General Capital Reserve Fund, Stabilization Reserve Fund, Winter Roads Reserve Fund, Legal Fees Reserve Fund and Event Hosting Reserve Fund as detailed in this Report and in Schedule 2 to the non-consolidated financial statements.

It is also concluded that City Council should authorize the closure of the Sandy Beach Reserve Fund.

It is further concluded that Appropriation Change Order No. 16 and 17 be approved.

## BACKGROUND

The long-term strategy for Waterworks is based on the City of Thunder Bay Environment Division – Water Authority Financial Plan which was approved by City Council in July, 2018 (Report No. 101/2018 (Environment)). This was the third update of the plan and included borrowing for capital projects and small annual increases in reserve funds over the 20-year term of the plan. The Financial Plan projects a Waterworks Reserve Fund balance of \$24.6 million in 2037 with a debt to reserve ratio of 0.73.

The long-term strategy for Wastewater is based on the City of Thunder Bay Environment Division – Wastewater Long Term Financial Plan, which was approved by City Council on March 2, 2015 as part of the 2015 Budget review and approval process. This plan included borrowing for capital projects and annual increases in reserve funds over the 20-year term of the plan. The Financial Plan projects a Wastewater Reserve Fund balance of \$25.0 million in 2034 with a debt to reserve ratio of 0.80.

The long-term strategy for Solid Waste is based on The City of Thunder Bay Environment Division – Solid Waste (Landfill) Financial Plan (R 130/2019 (Environment)) and was approved by City Council in September 2019. This was the first update of the plan and included borrowing for capital projects, and annual increases in reserve funds over the 20-year term of the plan. The Financial Plan projects a Solid Waste Reserve Fund balance of \$2.6 million in 2038 with a debt to reserve ratio of 3.16.

## REFERENCE MATERIAL ATTACHED

Attachment A – Non-Consolidated Financial Statements Attachment B – Appropriation No. 16 Attachment C – Appropriation No. 17

## **PREPARED BY:** LAUREN PARADIS, MANAGER – ACCOUNTING & EMMA WESTOVER, DIRECTOR – FINANCIAL SERVICES

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Linda Evans, GM Corporate Services & Long Term Care, City Treasurer	May 17, 2022

## THE CORPORATION OF THE CITY OF THUNDER BAY NON-CONSOLIDATED STATEMENT OF FINANCIAL POSITION As at December 31, 2021 (Unaudited - Prepared by Management)

	<u>2021</u>	<u>2020</u>
	\$	\$
Assets		
Cash and investments	172,858,286	131,624,855
Accounts receivable	72,634,696	71,485,120
Taxes receivable	11,506,552	12,843,706
Other current assets	5,849,071	5,048,710
Long term receivables	46,450,071	49,497,944
Capital outlay	159,113,451	164,257,817
	468,412,127	434,758,152
Liabilities and Equity		
Accounts payable and accrued liabilities	44,138,317	46,674,449
Deferred revenue	13,574,596	11,126,637
Long term liabilities - municipal	159,113,451	164,257,817
Long term liabilities - on behalf of Tbaytel	44,675,000	47,925,000
Capital fund (Schedule 1)	(7,370,881)	(6,886,615)
Reserves and reserve funds (Schedule 2)	214,281,644	171,660,864
Operating fund (Schedule 3)	-	-
	468,412,127	434,758,152

## THE CORPORATION OF THE CITY OF THUNDER BAY

NON-CONSOLIDATED STATEMENT OF CAPITAL OPERATIONS

Schedule 1

Year ended December 31, 2021

with comparative figures for 2020 (Unaudited - Prepared by Management)

	<u>2021</u>	<u>2020</u>
	\$	\$
Unfinanced capital outlay,		
beginning of year	6,886,615	8,597,085
Capital expenditure		
General government	2,190,817	2,169,166
Protection to persons and property	3,358,035	2,425,385
Transportation services	28,272,960	27,115,425
Environmental services	19,860,775	21,857,959
Health services	2,155,937	1,058,484
Social and family services	695,661	878,289
Recreation and cultural services	7,875,959	8,068,259
Planning and development	255,959	219,745
	64,666,103	63,792,712
Capital financing		
Net contributions from revenue fund	5 552 464	6 484 082
Contributions from reserves and reserve funds	39 772 351	44 663 187
Contributions to reserves and reserve funds	(8 465 845)	(6 225 645)
Contributions from trust funds	-	(0,220,010)
Long-term liabilities incurred	16 506 836	12 040 778
Canada grants	4 757 552	3 928 148
Ontario grants	2 913 541	1 204 345
Interest earned on debenture proceeds	1 569	2 482
Net proceeds from land development account activity	677 002	960 564
Insurance proceeds	-	-
Other	2.466.367	2,445,241
	64,181,837	65,503,182
Unfinanced capital outlay, end of year	7,370,881	6,886,615
Descreted by		
Represented by Canital projects to be financed by depenture	5 317 769	4 319 950
Canital projects funded by internal loans	9 568 735	9 653 717
Unexpended depenture proceeds	(84 148)	(82 570)
I and development account	(7 431 475)	(02,073) (7 004 473)
	7.370.881	6.886.615

	Reserves & Reserve Funds <u>Total</u>	Animal Control <u>Donations</u>	Arthur <u>Street</u>	Building <u>Permit</u>	Canada Community <u>Building</u>	<u>CEDC</u>	Capital <u>General</u>	Capital <u>Landfill</u>	Capital Sewage <u>(Wastewater)</u>
Balance at beginning of year	\$ 171,660,864	195,198	95,486	1,405,603	1,982,985	534,562	1,058,123	2,200,524	8,906,876
Revenue									
Interest earned	3,104,659	3,717	1,814	26,706	92,484	12,057	47,702	54,289	248,089
Contribution from revenue fund	74,353,705	882	-	-	13,424,706	200,000	6,250,000	1,625,179	8,600,270
Transfer from reserves and reserve funds	3,782,266	-	-	-	-	-	2,800,000	-	-
Contribution from capital fund	8,465,845	-	-	-	-	-	-	-	3,885,052
Contribution from developers	85,531	-	-	-	-	-	-	-	-
Total revenue	89,792,006	4,599	1,814	26,706	13,517,190	212,057	9,097,702	1,679,468	12,733,411
Expenditures									
Contribution to capital fund	39,772,351	-	-	-	7,655,549	-	145,000	311,556	4,184,486
Transfer to capital fund	-	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	3,782,266	-	-	-	-	-	-	-	-
Contribution to revenue fund	3,616,609	-	-	-	-	-	-	-	-
Total expenditures	47,171,226	-	-	-	7,655,549	-	145,000	311,556	4,184,486
Balance at end of year	\$ 214,281,644	199,797	97,300	1,432,309	7,844,626	746,619	10,010,825	3,568,436	17,455,801

	Capital <u>Transit</u>	Capital <u>Waterworks</u>	<u>CIT</u>	Clean Green & <u>Beautiful</u>	Community <u>Centres</u>	Community <u>Partnership</u>	Corporate Energy <u>Innovation</u>	Dedicated <u>Gas Tax</u>	Digital Parcel <u>Mapping</u>
Balance at beginning of year	5,872,673	14,791,816	3,041,508	673,723	37,373	438,039	569,215	2,848,885	10,789
Revenue									
Interest earned	124,871	312,428	57,977	13,572	710	8,913	10,873	35,227	205
Contribution from revenue fund	2,601,096	9,517,151	557,201	208,100	-	100,000	6,118	1,552,129	-
Transfer from reserves and reserve funds	-	-	-	-	-	-	-	-	-
Contribution from capital fund	-	4,579,534	-	-	-	-	-	-	-
Contribution from developers	-	-	-	-	-	-	-	-	-
Total revenue	2,725,967	14,409,113	615,178	221,672	710	108,913	16,991	1,587,356	205
<u>Expenditures</u>									
Contribution to capital fund	-	10,793,148	537,368	126,889	-	37,861	-	340,282	-
Transfer to capital fund	-	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	-	-	-	-	-	-	-	-	-
Contribution to revenue fund	1,202,166	-	-	-	-	_	_	-	-
Total expenditures	1,202,166	10,793,148	537,368	126,889		37,861		340,282	
Balance at end of year	7,396,474	18,407,781	3,119,318	768,506	38,083	509,091	586,206	4,095,959	10,994

	Election <u>Expense</u>	EMS <u>Facility</u>	EMS Vehicle <u>&amp; Equipment</u>	Event <u>Hosting</u>	55+ Food <u>Program</u>	55+ Ctre <u>Endowmt</u>	55+ Ctre <u>Southside</u>	Fire <u>Equipment</u>	Fire <u>Training Centre</u>
Balance at beginning of year	327,431	285,569	2,052,987	-	48,900	1,543,668	133,283	225,813	52,874
Revenue									
Interest earned	7,458	5,426	31,134	713	929	29,330	2,544	4,586	1,044
Contribution from revenue fund	135,000	-	826,000	64,565	-	-	-	31,097	4,154
Transfer from reserves and reserve funds	-	-	-	75,000	-	-	-	-	-
Contribution from capital fund	-	-	-	-	-	-	1,259	-	-
Contribution from developers	-	-	-	-	-	-	-	-	-
Total revenue	142,458	5,426	857,134	140,278	929	29,330	3,803	35,683	5,198
Expenditures									
Contribution to capital fund	-	-	1,654,666	-	-	-	-	-	-
Transfer to capital fund	-	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	-	-	-	-	-	-	-	-	-
Contribution to revenue fund	4,800	-	-	-	-	-	-	-	
Total expenditures	4,800		1,654,666				_		
Balance at end of year	465,089	290,995	1,255,455	140,278	49,829	1,572,998	137,086	261,496	58,072

	Ft William <u>Stadium</u>	Fuel <u>Farm</u>	Hillcourt <u>Estates</u>	Indoor <u>Turf</u>	<u>Insurance</u>	Legal <u>Fees</u>	Marina <u>Capital</u>	McKellar Mall <u>Capital</u>	MTO Transit <u>Capital</u>
Balance at beginning of year	92,905	82,568	714,287	15,397,640	2,518,959	2,850,806	88,318	170,273	151,302
Revenue									· · · · ·
Interest earned	1,765	1,577	13,571	300,438	47,860	61,085	2,732	3,758	2,875
Contribution from revenue fund	-	16,972	-	-	-	728,371	138,202	55,000	-
Transfer from reserves and reserve funds	-	-	-	907,266	-	-	-	-	-
Contribution from capital fund	-	-	-	-	-	-	-	-	-
Contribution from developers	-	-	-	-	-	-	-	-	-
Total revenue	1,765	18,549	13,571	1,207,704	47,860	789,456	140,934	58,758	2,875
Expenditures									
Contribution to capital fund	-	16,100	-	77,537	-	-	27,294	-	-
Transfer to capital fund	-	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	-	-	-	-	-	-	-	-	-
Contribution to revenue fund		-	-	-	-	-	-	-	-
Total expenditures		16,100	-	77,537	-	-	27,294		-
Balance at end of year	94,670	85,017	727,858	16,527,807	2,566,819	3,640,262	201,958	229,031	154,177

	Municipal Accommodation <u>Tax</u>	Ontario Community Infrastucture Fund	Ontario Municipal <u>Cycling</u>	Parking <u>Revenue</u>	Police Capital <u>Projects</u>	Pioneer <u>Ridge Structural</u>	Post Employment <u>Benefits</u>	PRO <u>Kids</u>
Balance at beginning of year	282,155	1,309,343	108,410	442,200	13,157	1,830,654	5,209,482	736,535
Revenue								
Interest earned	4,940	18,663	2,015	10,211	250	36,226	98,980	14,636
Contribution from revenue fund	907,266	5,816,059	-	190,419	-	151,909	-	85,299
Transfer from reserves and reserve funds	-	-	-	-	-	-	-	-
Contribution from capital fund	-	-	-	-	-	-	-	-
Contribution from developers	-	-	-	-	-	-	-	-
Total revenue	912,206	5,834,722	2,015	200,630	250	188,135	98,980	99,935
Expenditures								
Contribution to capital fund	44,274	6,470,267	4,670	-	-	-	-	-
Transfer to capital fund	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	907,266	-	-	-	-	-	-	-
Contribution to revenue fund		-	-	-	-	-	-	17,726
Total expenditures	951,540	6,470,267	4,670	-	-	-	-	17,726
Balance at end of year	242,821	673,798	105,755	642,830	13,407	2,018,789	5,308,462	818,744

	Recreation <u>Trails</u>	Renew <u>Thunder Bay</u>	Sandy <u>Beach</u>	Sick Pay <u>Liability</u>	Simpson <u>Street BIA</u>	<u>Stabilization</u>	Subdivision <u>Deposits</u>	Tax Assessment <u>Appeals</u>	Tournament <u>Centre</u>
Balance at beginning of year	95,908	24,229,356	-	1,984,695	18,797	22,428,168	406,305	8,830,187	316,458
Revenue									
Interest earned	2,198	496,004	-	37,709	357	385,433	8,532	167,774	6,250
Contribution from revenue fund	39,500	4,158,467	-	-	-	3,152,711	-	-	25,000
Transfer from reserves and reserve funds	-	-	-	-	-	-	-	-	-
Contribution from capital fund	-	-	-	-	-	-	-	-	-
Contribution from developers	-	-	-	-	-	-	85,531	-	-
Total revenue	41,698	4,654,471	-	37,709	357	3,538,144	94,063	167,774	31,250
Expenditures									
Contribution to capital fund	-	406,237	-	-	-	7,249	-	-	-
Transfer to capital fund	-	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	-	-	-	-	-	2,875,000	-	-	-
Contribution to revenue fund	-	-	-	-	-	2,391,917	-	-	-
Total expenditures	-	406,237	-	-	-	5,274,166	_		
Balance at end of year	137,606	28,477,590	-	2,022,404	19,154	20,692,146	500,368	8,997,961	347,708

	Vested <u>Property</u>	Victoriaville <u>Capital</u>	Waterfront <u>Capital</u>	Whalen <u>Building</u>	Winter <u>Roads</u>	<u>WSIB</u>	Reserve Funds <u>Total</u>	Equipment <u>Replacement</u>
Balance at beginning of year	5,830,948	51,429	131,898	1,172,872	1,776,056	2,629,469	151,235,443	500,642
Revenue								
Interest earned	110,788	1,025	2,744	25,183	51,947	52,335	3,104,659	-
Contribution from revenue fund	-	5,000	25,000	378,314	1,915,972	250,000	63,743,109	307,393
Transfer from reserves and reserve funds	-	-	-	-	-	-	3,782,266	-
Contribution from capital fund	-	-	-	-	-	-	8,465,845	-
Contribution from developers	-	-	-	-	-	-	85,531	-
Total revenue	110,788	6,025	27,744	403,497	1,967,919	302,335	79,181,410	307,393
Expenditures								
Contribution to capital fund	-	-	-	73,186	-	-	32,913,619	-
Transfer to capital fund	-	-	-	-	-	-	-	-
Transfer to reserves and reserve funds	-	-	-	-	-	-	3,782,266	-
Contribution to revenue fund	_	-	-	-	_	-	3,616,609	
Total expenditures				73,186	-		40,312,494	
Balance at end of year	5,941,736	57,454	159,642	1,503,183	3,743,975	2,931,804	190,104,359	808,035

	Capital <u>Expenditure</u>	Working <u>Capital</u>	Reserves <u>Total</u>
Balance at beginning of year	15,624,779	4,300,000	20,425,421
Revenue			
Interest earned	-	-	-
Contribution from revenue fund	10,303,203	-	10,610,596
Transfer from reserves and reserve funds	-	-	-
Contribution from capital fund	-	-	-
Contribution from developers	-	-	-
Total revenue	10,303,203	-	10,610,596
Expenditures			
Contribution to capital fund	6,858,732	-	6,858,732
Transfer to capital fund	-	-	-
Transfer to reserves and reserve funds	-	-	-
Contribution to revenue fund		-	-
Total expenditures	6,858,732	-	6,858,732
Balance at end of year	19,069,250	4,300,000	24,177,285

#### THE CORPORATION OF THE CITY OF THUNDER BAY NON-CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND ACCUMULATED NET REVENUE Schedule 3 Year ended December 31, 2021

	Budget <u>2021</u>	Actual <u>2021</u>	Actual <u>2020</u>
	\$	\$	\$
Revenue			
Taxation	195,913,800	195,367,089	192,142,460
Payments in lieu of taxes	8,703,000	8,928,874	8,934,444
Federal and Ontario grants	69,328,500	90,339,716	84,599,899
Fees and service charges	87,781,000	87,833,914	83,113,157
Other (Schedule 3.1)	32,447,300	38,450,874	34,484,095
	394,173,600	420,920,467	403,274,055
Expenditure			
General government	23.729.521	21.542.840	27.828.894
Protection to persons and property	96.593.870	100.797.316	98,138,899
Transportation services	49,873,006	44,907,061	45,568,548
Environmental services	54,823,808	52,226,880	51,085,821
Health services	33,181,895	35,171,055	31,751,427
Social and family services	44,908,357	43,967,452	41,986,294
Recreational and cultural	41,467,550	37,986,455	35,585,872
Planning and development	8,192,493	8,031,848	7,537,439
- ·	352,770,500	344,630,907	339,483,194
Excess of revenue over expenditure			
for the year before the undernoted	41,403,100	76,289,560	63,790,861
Net transfers to capital	(15,900,700)	(5,552,464)	(6,484,082)
Net transfers to reserves	-	(10,610,596)	(7,593,574)
Net transfers to reserve funds	(25,502,400)	(49,254,581)	(45,629,379)
Year end Surplus	-	10,871,919	4,083,826
Yearend surplus transfer to Reserve Funds	-	(10,871,919)	(4,083,826)
Excess of revenue over expenditure after reserve fund transfer	-	-	
Accumulated net revenue, beginning of year	-	-	-
Recognition of accumulated net revenue	-	-	-
Accumulated net revenue, end of year	-	-	-

## THE CORPORATION OF THE CITY OF THUNDER BAY

NON-CONSOLIDATED SCHEDULE OF OTHER REVENUE

Schedule 3.1

Year ended December 31, 2021

	Budget <u>2021</u>	Actual <u>2021</u>	Actual <u>2020</u>
	\$	\$	\$
Licences and permits	1,498,600	1,409,518	1,485,443
Fines	2,642,300	2,782,372	1,987,827
Penalties and interest on taxes	2,725,000	3,123,213	2,892,627
Tbaytel contribution	18,000,000	21,908,467	21,208,505
Recoveries from district municipalities	3,939,900	4,122,631	3,813,591
Miscellaneous	3,641,500	5,104,673	3,096,102
	32,447,300	38,450,874	34,484,095

DEPARTMENT: Infrastructure & Operations		The City of Thunder	Bay FION CHANGE		DATE:	May 4,	2022
DIVISION: Engineering		REQUEST FOR ADDITIONAL	APPROPRIATIC	N	X	APPRO	P NO.
WBS			BUDGET	INCREASE	DECREASE		N USE
	DESCRIPTION Simpson Street Light Page/Pr		AVAILABLE	10 152		IN POSITION	Fund Code
101-RD3-220010-3E-18-1	Simpson Street BIA Reserve	Fund		19,155	10 153	5.5.0	50
		i ulu			13,133		
				19,153	19,153		
EXPLANATIONS/REASONS: Report R81/2022			EFFECT ON LI	EVEL OF SERV	/ICE: MAINTAINED		
Non-Consolidated Financial Statemen	nts and Reserve Fund Update			X		]	
					DATE:		
				R	RECOMMENDE	D/APPROVED	)
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		Corporate Services & Long Tel	rm Care Departm	ient			

DEPARTMENT:			The City of Thunder		DATE:	N	/lay 9, 2022
DIVISION: Engineering	_	REQUES	T FOR APPROPRIA	APPROPRIATION	X	17 APPROP N	10.
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EXPLANATIONS/REASONS:			EFFECT ON LEVE	L OF SERVICE:			
Memo from Mayor B. Mauro dated April 26, Motion for Additional Roadwork 2022	2022		DECREASE	INCREASE X	MAINTAINED		
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				City Treasurer			-
				Norm Gale			-
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PREPARED BY: Shari Dykeman		VERIFIED FINANCE	<b>) BY</b> : Moíra Gallagh	er	APPROVED	NOT APPROVED	]
REVIEWED BY: Kerrí Marshall		Moira Gal	lagher, CPA, CMA				]
K. Marshall GENERAL MA Committee of the Whole - Monday Infrastructure of	NAGER June 6, 2022 & Operations	Budget & Corporate	Planning Accountant Services & Long Ter	rm Care Department	DATE:	Page 96	of 206



## Corporate Report

<i>DEPARTMENT/ DIVISION</i>	Corporate Services & Long Term Care - Revenue	REPORT NO.	R 92/2022
DATE PREPARED	05/12/2022	FILE NO.	
MEETING DATE	06/06/2022 (mm/dd/yyyy)		
SUBJECT	Property Tax Assessment Appeals		

### **RECOMMENDATION**

For Information Only.

## EXECUTIVE SUMMARY

This report provides information on the outstanding number of assessment appeals, current and historical impact of assessment appeals on annual tax write-offs, and the status of the assessment appeal reserve fund.

## **DISCUSSION**

An assessment appeal arises when a property owner disagrees with the assessed value of their property. If a property is in the residential, farm or managed forest property class, the property owner is required to file a request for reconsideration (RFR) to have their assessment reviewed with the Municipal Property Assessment Corporation (MPAC). If the property owner is unsatisfied with their assessed value after the RFR is complete, an appeal with the Assessment Review Board (ARB) can be filed. Properties in the remaining property classes may file a RFR with MPAC or may by-pass this step and immediately file an appeal with the ARB.

The ARB is an independent adjudicative tribunal (decision-making board) with a mandate to hear appeals about property assessment and classification. Historically, it could take several years to settle an assessment appeal. As a result, municipalities experienced significant financial implications related to the excessive time to resolve appeals and accumulated write-offs. In 2017, the ARB made changes to the Board's rules and administrative practices to promote efficiency and ensure appeals are resolved faster. The changes also resulted in the need for municipalities to play a more active role in the appeal process. Additional updates to the rules of practice and procedure came into effect on April 1, 2021 further reducing the time it takes to settle appeals.

## **Current Assessment Appeals**

The City of Thunder Bay has 64 outstanding assessment appeals related to the 2017-2021 taxation years, representing \$680 million in current value assessment and \$19.9 million in municipal taxes. Some properties have outstanding appeals spanning multiple years resulting in the 64 outstanding assessment appeals relating to 28 properties. The following three charts provide a breakdown of appeals by tax year, property type and property code. As shown, the majority of appeals relate to the 2020 and 2021 taxation years with 91% (\$18.2 million) of outstanding appeals relating to the commercial property class, followed by 7% in the multi-residential class and 2% in the residential property class. The third chart provides further insight into the types of properties with outstanding appeals.







## Assessment Appeal Impact on Tax Write-offs

The chart below compares the municipal tax losses realized by tax year, with the tax appeals that were processed and refunded to property owners in a given year. Significant refunds were issued in 2008, 2015, and 2017. These large swings occur because appeals often took several years to settle, resulting in a number of tax years being written-off at once. To smooth the impact these write-offs would have on the tax levy, the annual tax appeal loss is estimated based on the historical losses as a percentage of the tax levy, and a provision is set up and expensed annually.

The blue line shows the assessment appeal tax losses by effective tax year. Tax losses are trending down. The average tax loss from 2008-2012 was \$3.1 million annually representing 2.13% of the tax levy, from 2013-2017 was \$2.1 million which is 1.25% of the tax levy, and from 2018-2021 it is currently \$900k annually representing 0.46% of the tax levy. After factoring in estimated municipal tax losses on outstanding appeals, the average tax loss from 2018-2021 increases to \$1.8 million and .94% of the tax levy.



This recent positive trend is in part, attributed to the following factors:

- In 2019, the City became actively involved in defending its tax assessment for significant assessment appeals. MTE Paralegal was engaged to provide assessment base management support and represent the City in significant assessment appeals.
- The Assessment Review Board rules of practice and procedures changed resulting in quicker resolution of assessment appeals with more appeals being withdrawn or dismissed.
- During the appeal process, when MPAC's revised assessment is lower than the returned assessment, MPAC is often updating the following year returned roll instead of waiting for the appeal to be resolved.

## Assessment Appeal Reserve Fund

The Assessment Appeal Reserve Fund was established in 1996 to provide funds for contingent exposure to outstanding tax assessment appeals. The Reserve Fund reached a high of \$11.5 million in 2012 but was drawn down to \$3 million in 2015 after a number of assessment appeals resulted in losses that were significantly higher than the estimated annual provision. \$5 million was transferred into the reserve fund in 2017 from the Vested Property Rehabilitation reserve fund with the balance in the reserve fund at December 31, 2021 at \$8.7 million.

## FINANCIAL IMPLICATION

As a result of lower assessment appeal tax losses realized in the last five years along with a healthy \$8.7 million balance in the Assessment Appeal Reserve Fund, a positive adjustment to the tax write-off provision was made in 2021, resulting in a favorable variance of \$5.5 million in tax write-offs. This one-time 2021 adjustment to the tax write-off provision and resulting \$5.5 million favorable variance represents the majority of the 2021 year end Corporate-wide favorable variance.

## **CONCLUSION**

It is concluded that this report be received for information purposes.

## BACKGROUND

Property taxes are calculated based on the current value assessment of properties as determined by the Municipal Property Assessment Corporation (MPAC) along with the municipality's annual budgetary requirements. MPAC assigns current value assessment and classification for all properties in Ontario.

At the September 25, 2017 Committee of the Whole meeting, Council passed a motion relative to Report R 147/2017 – Assessment Review Board Changes & Delegation of Authority – Property Assessment Appeals delegating the municipality's authority related to property assessment maintenance to the Director – Revenue.

The annual tax assessment appeal loss is estimated based on the historical losses as a percentage of the tax levy, and a provision is set up and expensed annually. In addition to assessment appeal tax write-offs, there are annual tax write-offs related to section 357/358 municipal tax appeals, and failed tax sale properties. The operating budget provides for annual tax write-offs and in 2022, the approved budget is \$2.5 million.

## REFERENCE MATERIAL ATTACHED

None.

## PREPARED BY: Kathleen Cannon, Director of Revenue

THIS REPORT SIGNED AND VERIFIED BY:	DATE:
Linda Evans, GM Corporate Services & Long Term Care, City Treasurer	May 18, 2022



## **Corporate Report**

DEPARTMENT/	City Manager's Office - Office of	REPORT	R 88/2022
DIVISION	the City Clerk		
DATE PREPARED	05/03/2022	FILE	
<b>MEETING DATE</b>	05/16/2022 (mm/dd/yyyy)		
SUBJECT	Election Sign By-law		

### RECOMMENDATION

WITH RESPECT to Report R 88/2022 (City Manager's Office – Office of the City Clerk), we recommend that the draft Election Sign By-law, as outlined in this report and appended as Attachment A, be approved;

AND THAT the Election Sign By-law, BL 56/2022, be presented to City Council on June 13, 2022.

## EXECUTIVE SUMMARY

The City of Thunder Bay's Sign By-law, 135-1992, as amended, does not include specific information relating to the management of election signs during federal, provincial, municipal elections, including any by-elections. Administration is recommending the approval of a standalone by-law to regulate signs for all elections. This will provide greater clarity for the public, for candidates and assist By-Law Enforcement with managing complaints.

#### DISCUSSION

The current Sign By-law 135-1992, as amended, does not specifically address signage used in an election. Administration has used the provision in section 5.12, to inform candidates that no sign shall be placed on any property owned by the municipality. Because of this, Administration is now of the opinion that a standalone by-law to manage and regulate election signs should be adopted by the City for greater clarity and transparency.

Restrictions on the placement of election signs within the City exist for a number of reasons. It is important that election signs not be placed in locations that interfere with the safe movement and visibility of vehicular and pedestrian traffic. It is also important that election signs be placed in accordance with certain Provincial and Federal legislative requirements, including requirements that election signs not be placed in or on voting locations. Lastly, though election signs play an important role in promoting the democratic electoral process, election signs should be placed in a manner that is consistent with the positive aesthetic of the City. The majority of complaints received by Administration relating to election signage is the placement on public property.

A review of Ontario municipalities revealed that several have either included provisions in their sign by-laws or have standalone by-laws to manage election signage. The draft by-law, as appended to this report as Attachment A, includes the provisions that Administration recommends as important for the management of election signs in the City. Most of the by-laws reviewed also included a permitting process and fees. It is Administration's opinion that neither are required at this time and would be more burdensome to both the City and the sign owner. This may be reevaluated in the future.

The By-law includes provisions under the *Provincial Offences Act* which would allow the City to charge the sign owner (or other person) with an offence, where compliance cannot be achieved and also establish out-of-court set-fine system. At this time, based on previous federal, provincial and municipal elections, Administration does not expect this to be a significant source of revenue. Most election signs that have been improperly placed are removed upon notice of the city and all signs have historically been removed shortly following the close of an election.

An amendment to the *Municipal Elections Act* in 2018 provides regulatory requirements for registered third parties and third party advertising. With these amendments, third parties will be permitted to erect signs and use other advertising media to support or oppose election candidates as long as they are registered with the Clerk. Third party advertising must contain the following information:

- The name of the registered third party.
- The municipality where the registered third party is registered.
- A telephone number, mailing address or email address at which the registered third party may be contacted during the restricted period.

Other provisions included in the new by-law include the following:

- Clearly defines the election sign restrictions to private property only;
- Ensures consistency for all election signage include those by a candidate or a registered third party advertiser;
- Provides specific timelines for installation and removal of signs following the election; and
- Provides authority to the municipality to remove signs that do not adhere to the by-law.

Administration will continue to use section 5.12 of Sign By-law 135-1992 to manage and regulate election signs for the 2022 provincial election. The new standalone by-law is scheduled to be approved by Council to allow its use for the 2022 Municipal and School Board Election.

## FINANCIAL IMPLICATION

There are no financial implications associated with this report.

## CONCLUSION

It is concluded that Council approve this report and that the Election Sign By-law BL 56/2022 be presented to City Council on June 13, 2022.

## BACKGROUND

The City's Sign By-law BL 135-1992, as amended, provides for the regulation and management of all permanent and temporary signs in the municipality. The By-law, however, does not have provisions specifically to the temporary signs used in an election or by-election.

## **REFERENCE MATERIAL ATTACHED:**

Attachment A – Election Sign By-law BL 56/2022

## **PREPARED BY:** Dana Earle, Deputy City Clerk – Office of the City Clerk

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Norm Gale, City Manager	May 5, 2022



Memorandum

## Corporate By-law Number BL 56/2022

TO:	Office of the City Clerk	FILE:
FROM:	Dana Earle City Manager's Office - Office of the City C	lerk
DATE:	05/04/2022	
SUBJECT:	BL 56/2022 - Election Sign By-law	
MEETING DATE:	City Council - 06/27/2022 (mm/dd/yyyy)	

**By-law Description:** A By-law to manage and regulate Election Signs in the City of Thunder Bay, in the District of Thunder Bay.

Authorization: Report R 88/2022 (City Manager's Office / Office of the City Clerk) - Committee of the Whole – June 6, 2022.

**By-law Explanation:** The purpose of this by-law is to manage and regulate the placement of election signs for federal, provincial, municipal and school board elections and by-elections.

Schedules and Attachments:

Amended/Repealed By-law Number(s):



## THE CORPORATION OF THE CITY OF THUNDER BAY BY-LAW NUMBER BL 56/2022

A By-law to manage and regulate Election Signs in the City of Thunder Bay, in the District of Thunder Bay.

## Recitals

1. The *Municipal Act*, 2001, S.O. 2001, c.25, as amended, subsection 5(3) provides that a municipal power shall be exercised by by-law.

2. The *Municipal Act*, 2001, S.O.2001, c.25, as amended, subsection 10(2) authorizes the City to pass by-laws respecting signs.

3. The *Municipal Act*, 2001, S.O. 2001, c.25, as amended, subsection 63(1) authorizes the City, if it passes a by-law for prohibiting or regulating the placing of an object on or near a Highway, to provide for the removal and impounding of such object placed on or near a Highway in contravention of that by-law.

4. The *Municipal Act*, 2001, S.O. 2001, c.25, as amended, section 425 authorizes the City to pass by-laws providing that any person who contravenes a by-law of the municipality is guilty of an offence.

5. The *Municipal Act*, 2001, S.O. 2001, c.25, as amended, section 429 authorizes a municipality to establish set fines for offences under a by-law of the municipality.

6. The *Municipal Act*, 2001, S.O. 2001, c.25, as amended, section 445 authorizes a municipality to make an order requiring a person who has contravened a by-law or who has caused or permitted the contravention, or the owner or occupier of land on which the contravention occurred to do work to correct the contravention.

7. The City of Thunder Bay's Sign By-law was enacted on May 25, 1992, therefore it is deemed necessary to enact a stand-alone by-law which regulates Signs for the federal, provincial, municipal and school board elections.

# ACCORDINGLY, THE COUNCIL OF THE CORPORATION OF THE CITY OF THUNDER BAY ENACTS AS FOLLOWS:

## 1. Scope

- 1.1 This by-law shall apply to:
  - a) All regular Federal, Provincial, Municipal and School Board Elections, including any by-election; and
  - b) Candidates, Third-Party Advertisers and all other persons erecting Election Signs.

1.2 If any provision of this by-law conflicts with any provision of any other City of Thunder Bay by-law, the provision of this by-law shall take precedence.
#### 2. Short title

2.1 This by-law may be referred to as the "Election Sign By-law."

## 3. Definitions

- 3.1 In this by-law:
  - a) "Abandoned Signs" means an Election Sign that remains following the conclusion of the election and is not removed.
  - b) "Billboard Sign" means a sign structure and sign face, erected under the authority of a Sign By-law permit, which lawfully allows advertising space to be upon which the space is sold or rented to a person who does not occupy the premises where the Sign is located.
  - c) "Boulevard" means all parts of a Highway except the Roadway, Shoulder or Sidewalk.
  - d) "Campaign Office" means one building or structure, or part of one building or structure, used by a Candidate.
  - e) *"Canada Elections Act"* means the *Canada Elections Act*, S.C. 2000, c.9, as amended and any successor legislation.
  - f) "Candidate" means a person who has been nominated under the *Canada Elections Act*, the *Election Act*, or the *Municipal Elections Act*, 1996.
  - g) "City" means the Corporation of the City of Thunder Bay.
  - h) "City Clerk" mean the City Clerk or their designate.
  - i) *"Election Act"* means the *Election Act*, R.S.O. 1990, c.E.6, as amended and any successor legislation.
  - j) "Election Sign" means any officially authorized sign by a candidate or registered third party advertiser or other election advertising device, including, without limitation, posters, placards, bulletins, banners, notices, pictures or any combination thereof.
    - i. Advertising or promoting by use of words, pictures, graphics or any combination thereof is used by or on behalf of a candidate in a federal, provincial or municipal election or by-election; or
    - ii. Intended to influence persons to vote for or against any candidate or any question or by-law submitted to the electors under the *Municipal Elections Act*, 1996.
  - k) "Election Vehicle Sign" means and Election Sign(s) that is non-illuminated and is affixed securely to the vehicle in a one dimensional plane (flat), except where a vehicle wrap is employed.
  - "Highway" means property owned by the Corporation that is opened to the public as a route for vehicular Traffic. The term includes the entire property, encompassing all of the: Roadway, Boulevards, Curbs, Crosswalks and Shoulders.
  - m) "Manager of Licensing & Enforcement" means the Manager or their designate.
  - n) "Mobile Sign" means a mobile sign as set out in the Sign By-law but does not include mobile billboard signs.

- o) *"Municipal Act"* means the *Municipal Act, 2001*, S.O. 2001, c.25, as amended and any successor legislation.
- "Municipal Elections Act, 1996" means the Municipal Elections Act, 1996, S.O.
   1996, c.32, as amended and any successor legislation.
- q) "Municipal Law Enforcement Officer" means a person appointed by the Corporation to enforce its By-laws.
- r) "Officer" means a Municipal Law Enforcement Officer appointed for the City of Thunder Bay, or a Police Officer.
- s) "Owner" means the person who Places or permits the placing of an Election Sign or any person described on the Election Sign, whose name, address or telephone number is on the Election Sign or who benefits from the message on the Election Sign and for the purposes of this By-law there may be more than one owner of an Election Sign. For these purposes an "Owner" would be a candidate or registered third party advertiser.
- t) "Park" shall include any land or premises under the control and /or ownership of the City for park and recreational purposes and includes any lane, walkway or public parking area leading thereto, and also includes any and all buildings, structures, equipment, facilities, and improvements located in or on such land.
- u) "Person" includes a corporation.
- v) "Place" means attach, affix, install, erect, build, construct, reconstruct, move or display.
- w) "Private Property" means real property that is not a Highway or Public Property.
- "Public Property" means real property owned or under control of the City of Thunder Bay, Provincial Government, Federal Government or any of their respective agencies, boards or commissions including but not limited to Highways, all road allowances, Boulevards, Parks, open spaces and vacant public lands.
- y) "Roadway" means that part of a Highway, a private road, a Lane, or a driveway that is designated or ordinarily used for vehicular traffic, but does not include the Shoulder. Where a Highway includes two or more separate Roadways, the term refers to any one Roadway separately and not all of the Roadways collectively.
- z) "Sidewalk" means a portion of a Boulevard which is improved with concrete or pavement to accommodate pedestrian travel. The term expressly excludes any such walkway that is considered to be part of the Corporation's recreational trail system and signed as such.
- aa) "Sign" means any sign or other advertising device, surface or structure and any component or appurtenant parts, used or capable of being used as a visual medium to attract attention to a specific subject matter or to create a design or convey a message, and includes a banner, awning, canopy, marquee, menu board, poster or billboard.

- bb) "Sign By-law" mean the City of Thunder Bay Sign By-law 135-1992, as amended, or any successor by-law.
- cc) "Sign Height" means the vertical height of a Sign from the finished grade to the highest part of the Sign.
- dd) "Third Party" means an individual, corporation or trade union that is registered as a third party under any legislation in force that regulates third party advertisers.
- ee) "Voting Location" means the entire building where voting will occur and the entire property associated with the building where voting is scheduled to take place, including advance voting days, on those dates when voting is to occur and includes the 24 hours preceding any established voting date.

## 4. General Requirements

4.1 Election Signs that are erected in accordance with the provisions of this By-law, are exempt from the requirements of the Sign By-law, to obtain a permit.

4.2 Election Signs are permitted on any Billboard Sign or Mobile Sign, where such sign is authorized with a permit issued for the location under the Sign By-law; Election Vehicle Signs are permitted without a permit during the period Election Signs are permitted under this by-law.

4.3 Where a Billboard Sign is a digital sign, the operation of the sign for the purposes of displaying Election Signs, must conform to the rules for "Illuminated and Electronic Signs" as contained within the Sign By-law, as amended by By-law 125/2016 (section 5.6), regardless of then the authorizing permit was issued to erect and operate the sign structure.

4.4 Election Signs permitted under this by-law shall have dimensions that are not more than 1.2 meters in side width, for each of two sides, and not more than 2.0 meters Sign Height, except where a Billboard sign or mobile signs is utilized under a valid permit, then this Sign Height restriction for Election signs does not apply.

## 5. Contents of elections signs

5.1 Each Election Sign that is erected on behalf of the candidate shall clearly identify who is responsible for the messaging, in a font easily readable at a distance of five (5) meters except that such identity on Billboard Signs and mobile signs must be visible from the adjacent street level.

5.2 Each Third Party sign shall identify the name of the registered Third Party, the municipality where the Third Party is registered and a telephone number, mailing address or email address at which the registered Third Party may be contacted.

5.3 No person shall display any of the City's official marks or the City's logo or the City's municipal election logo, in whole or in part, on any Election Sign.

## 6. Timing

6.1 Every candidate or their agent, Third Party or any other person shall only affix, erect or otherwise display an Election Sign or cause an Election Sign to be erected, affixed, or otherwise displayed:

- a) the Tuesday following Nomination Day of a referendum, a municipal question or a municipal or school board election or by-election; or
- b) after the issuance of the writ for a provincial or federal election or by-election; and
- c) shall be removed within 72 hours following voting day.

6.2 Nothwithstanding subsection 6.1 (c) above, Election Signs at a Campaign office have fourteen (14) days to remove Election Signage.

## 7. Locations in general

7.1 No person shall Place or permit to be placed an Election Sign, in any ward that they are not officially nominated or registered in.

7.2 No Election Sign shall be located where it will interfere with the safe movement or visibility of any vehicle or pedestrian traffic or where it is a general hazard to public safety.

7.3 No Election Sign shall be located so as to obstruct or impede any fire escape, fire exit, door, window, scuttle, skylight, flue, air intake or air exhaust, nor so as to prevent or impede the free access of emergency personnel to any part of a building, including any emergency water connection or fire hydrant.

## 8. Election signs on private property

8.1 No Election Sign shall be placed or permitted to be placed on Private Property without the property owner's or an occupant's consent.

8.2 No more than three (3) Election Signs will be allowed per Private Property lot.

8.3 Notwithstanding subsection 8.2, one Election Sign per Candidate per 500 meters of frontage is allowed for commercial or industrial properties.

## 9. Election signs on public property

9.1 No person shall Place or permit to the placed an Election Sign on any Public Property, including City boulevards and highways.

## **10.** Election signs near voting locations

10.1 No person shall, at any time on any election voting day including those says when advance election voting is held, erect, cause or permit to be erected an Election Sign or display a vehicle sign on any grounds associated with any place being used as a Voting Location.

10.2 No person shall at any time erect, cause or permit to be erected, or maintain an election Sign or vehicle sign within 150 meters of a Voting Location except on Private Property.

#### 11. Campaign office exemptions

11.1 Despite the foregoing provisions regarding the timing of Placing Election Signs, Election Signs may be erected on a Candidate's Campaign Office, once the Candidate has filed their nomination with the City Clerk.

#### 12. Removal or damage of election signs

12.1 Every Owner shall remove all Election Signs within 72 hours (3 days) immediately following 11:59 p.m. of the day of the election, except as otherwise provided.

12.2 No person shall deface, remove or willfully cause damage to a lawfully erected campaign sign.

12.3 The Manager of Licensing & Enforcement, or designate, may remove or cause to be removed immediately, without notice, any Election Sign that does not comply with this By-law.

12.4 The Manager of Licensing & Enforcement, or designate, may recover the expense for the removal of an Election Sign from the Owner of the Sign and may commence proceedings against the Owner to recover such expense.

12.5 The Manager of Licensing & Enforcement, or designate, without notice or compensation, shall destroy or otherwise dispose of Election Signs removed in accordance with this by-law.

12.6 The City shall not be liable for any damage or loss of an Election Sign that was displayed in accordance with this by-law or that was removed by the City.

#### 13. Enforcement

13.1 This by-law may be enforced by an Officer.

#### 14. Offence and penalty

14.1 Every person who contravenes any provision of this By-law is guilty of an offence and on conviction is liable to a fine as provided for in the *Provincial Offences Act*, R.S.O., 1990, c. P. 33, as amended.

14.2 Any person who contravenes a provision of this By-law is also subject to a system of fines set out in section 429 of the *Municipal Act, 2001*, any and all contraventions of this By-law are designated as continuing offences for each day they continue.

14.3 Every person who is convicted of an offence is liable to a minimum fine of three hundred dollars (\$300.00) and a maximum of five thousand dollars (\$5,000.00) and then to a maximum fine of ten thousand dollars (\$10,000.00) for each subsequent conviction under the By-law to a maximum prescribed in the *Municipal Act, 2001*.

14.4 In addition to the fine amounts set out in section 14.3, for each day or part of a day that an offence continues, the minimum fine shall be three hundred dollars (\$300) per day or part day for the first conviction, but the total of all daily fines, shall not exceed five thousand dollars (\$5,000.00) for the first offence, where the convictions are registered to a person, that is not a corporation. 14.5 Where a corporation is convicted of a second and subsequent conviction, the minimum fine shall not be less than five thousand dollars (\$5,000) for each subsequent conviction to a maximum fine of one hundred thousand dollars (\$100,000).

15. This by-law shall come into force and take effect upon the date it is passed.

Enacted and passed this 27th day of June, A.D. 2022 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

Bill Mauro
Mayor
Krista Power
City Clerk



## **Corporate Report**

<i>DEPARTMENT/ DIVISION</i>	Infrastructure & Operations - Environment	REPORT NO.	R 24/2022
DATE PREPARED	2/2/2022	FILE NO.	
MEETING DATE	6/6/2022 (mm/dd/yyyy)		

**SUBJECT** Food and Organic Waste Diversion (Green Bin) Program – First Report

#### RECOMMENDATION

WITH RESPECT to Report R 24/2022 (Infrastructure & Operations – Environment), we recommend the implementation of a curbside Food and Organic Waste Diversion (Green Bin) Program to single family households starting in 2025 and multi-family properties in 2026 be approved;

AND THAT Green Bin service to local businesses and institutions be evaluated once the residential program is implemented;

AND THAT the City's curbisde Leaf and Yard Waste collection program be expanded to four (4) collection events annually beginning in 2023;

AND THAT Garbage Collection services be amended by utilizing proven industry best practices as outlined in this report to achieve compliance with the required diversion targets for Green Bin waste as identified in the Provincial Policy Statement;

AND THAT automated cart-based collection of Garbage and Green Bin waste be implemented for single-family households starting in 2025;

AND THAT all waste collection vehicles purchased between 2022 and 2025 be outfitted autocart ready and with split body compartments to accommodate co-collection of Garbage and Green Bin waste;

AND THAT an aerobic Green Bin processing solution as identified through the Request for Information (RFI) process is the preferred option for the City of Thunder Bay;

AND THAT Administration release a Request for Proposal (RFP) for the procurement of an aerobic Green Bin processing solution for the City's program and report back to Council by December 2022 with a recommendation and source of financing;

AND THAT Administration finalize a detailed program implementation plan, including program costs and design parameters and report back to Council by January 2023;

AND THAT the costs associated with this new program development and expansion be added to the Solid Waste and Recycling Services Operating and Capital Budgets for 2023 and beyond for Council's consideration;

AND THAT any necessary by-laws are presented to City Council for ratification.

## LINK TO STRATEGIC PLAN

This report directly supports the 'Serve' pillar of the 2019-2022 Corporate Strategic Plan: Advance service excellence through citizen focus and best use of technology. This report also directly supports the fifth goal under the 'Lead' pillar of the Plan to 'Further [previous] commitments to sustainability and climate adaptation.'

## EXECUTIVE SUMMARY

The Provincial Policy Statement on Food and Organic Waste creates legal obligations for the City of Thunder Bay.

This report includes recommendations for the development and implementation of a food and organic waste diversion (Green Bin) program to achieve and maintain compliance with the requirements of the Provincial Policy Statement.

The report also includes recommendations for the optimization of the City's collection services with the use of new technology and policies to minimize the cost of implementing the new program and achieve effective participation.

## DISCUSSION

The City of Thunder Bay provides a range of solid waste collection, diversion and disposal services to both residents and local businesses. Curbside services include garbage, blue bag recycling and leaf and yard waste collection. Additional services are offered at the City's Solid Waste and Recycling Facility. Waste collection services are offered to approximately 37,018 single-family households, 9,133 multi-family units located in 439 buildings, approximately 956 small businesses, and a range of municipal facilities and public spaces.

#### Provincial Food and Organic Waste Framework

The Province introduced its Food and Organic Waste Framework on April 30, 2018. The Framework is structured in two parts including the Food and Organic Waste Action Plan, and the Food and Organic Waste Policy Statement.

Amongst the many obligations found within the Policy Statement, there are two requirements of particular relevance to the City of Thunder Bay. The Policy Statement requires municipalities in Northern Ontario with a population greater than 50,000 and density greater than or equal to 300 persons per km<sup>2</sup> to provide curbside collection of food and organic waste to single-family dwellings in the urban settlement area by 2025. The target for municipalities in Northern Ontario, like the City of Thunder Bay, is a 50 percent waste reduction and resource recovery of food and organic waste by that date.

#### What is Food and Organic Waste?

Food waste means the edible parts of plants and animals that are produced or harvested but are not ultimately consumed (i.e. kitchen scraps and discarded food). Organic waste means inedible parts of plants and animals, as well as other organic material that may be processed along with food waste. Examples of organic waste can include, but are not limited to leaf and yard waste, compostable products and packaging, soiled paper, diapers and pet waste.

#### Waste Stream Analysis

The City of Thunder Bay conducted a four season curbside waste composition study (undertaken by AET Consulting Ltd.) between 2018 and 2019. The study results indicated kitchen food waste represented 43.2% of curbside residential collected garbage. The waste composition study also identified that approximately 7% of the curbside residential garbage collected was leaf and yard. The results of the waste composition study suggest there is an additional 17,510 Metric Tonnes of combined kitchen food and yard waste available to be diverted. This tells us that over half of what residents discard today is food and organic waste.

## Key Program Design Elements to Meet Obligation

Food waste is a challenging material to divert and lessons have been learned by other communities suggesting implementation requires careful planning and effective communications. There are a number of parameters and options that will need to be considered in designing a program that meets the obligations of the Policy Statement.

#### Service Level Considerations

The City must provide a curbside collection program for food and organic waste from singlefamily households and achieve the required 50 % diversion rate by 2025. It does not, however, have to provide this service to multi-family households or the ICI sector. Those property owners are responsible for meeting their obligations under the Policy statement on their own. However, reconizing the City provides garbage and blue bag reycling collection service to both multifamily properties and garbage collection service to selected businesses, it is proposed the City provide Organic ('Green Bin') service to mulit-family households starting in 2026 and consideration be given to expanding Green Bin collection service to local businesses and institutions on a cost recovery basis after roll out of the residential program is complete. Delaying roll out of service to these sectors allows for sufficient time to successfully launch the curbside single-family household program and provides adequate time to develop an appropriate service level policy.

#### Expanded Leaf and Yard Waste Collection

The City currently diverts roughly 2,100 Metric Tonnes/year of leaf and yard waste and the most recent curbside waste compostion study identified that at least an additional 2,422 Metric Tonnes/year of leaf and yard waste may still be available for diversion from the residential wastestream. Expanding the City's leaf and yard waste collection program is the least expensive and easiest option available to partially meeting the 50% diversion requirement. Leaf and yard waste is significantly less expensive to process than food waste

Expansion of the City's leaf and yard waste collection to four events annually from two, at a minimum, is expected to capture an additional 920 Metric Tonnes/year of material. Expansion of the leaf and yard waste collection services is recommended in 2023 to allow time to assess the diversion potential of this option and reflect this information in upcoming collection and processing contracts.

## Weekly Organics (Green Bin) Collection

The Policy Statement does not specify a collection frequency for food waste collection. However, almost all municipalities providing Green Bin service offer weekly collection to minimize the generation of odours and sanitation issues resulting from food storage between collection cycles. Every other week Green Bin collection has been tried in the past by other municipalities, but faced strong public opposition, suffered from poor participation and is not expected to meet the City's diversion requirements. Weekly collection is, therefore, recommended.

#### Bi-Weekly Garbage Collection

Experience throughout the Province has demonstrated that residents will not fully participate in food waste diversion programs unless the program is accompanied by strict garbage set out limits. While bag or item limits can be useful to some extent, the better practice has been proven to be coupling weekly Green Bin collection with every other week garbage collection. Communities with weekly garbage and Green Bin service will typically achieve capture rates of 80kg/household to 140kg/household whereas those providing every other week garbage and weekly Green Bin collection often divert as much as 110kg/household to 340kg/household material. As an example, in 2021 the City of Greater Sudbury switched to every other week garbage collection.

It is recommended, therefore, that the City move to every other week garbage collection along with implementation of a Green Bin program in 2025 for single family households as a means of ensuring success of the program. Every other week garbage collection does not generate a net savings since the same amount of waste is still being handled irrespective of which week it is collected.

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## Projected Diversion Rate of Recommended Options

Green Bin capture rates for single-families average between 55%-65% of available material depending on what incentives are used to encourage participation (e.g., every other week garbage service). Multi-family properties tend to have lower participation rates ranging between 15%-35% depending on building demographics.

Expanding the leaf and yard program as proposed and including every other week garbage collection, would allow the City to achieve the required provincial diversion target without immediate implementation of multi-family household Green Bin service as shown below in Table 1.

 Table 1: Predicted Capture Rate of Green Bin Program with Expanded Yard Waste

 Program

Housing Type	HHLDs*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participatio n Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	60%	6,680	180	
Multi-Family	9,133	2,445	27%	660	72	
Yard Waste	N/A	4,500	70%	3,150	N/A	
		Total Sing	9,830		8,435	
		Total including	10,491		9,794	

\*Households

\*\*Excludes diapers and incontinence products

\*\*\*Assumes every other week garbage collection

If the City decides to continue with the current weekly garbage collection service and defer expansion of the leaf and yard waste collection program, it is expected it would fail to meet the required provincial diversion requirements as shown below in Table 2.

Table 2: Predicted Generation and Captur	e Rates with Green Bin Implementation On	ly
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Housing Type	HHLDs*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	30%	3,340	90	
Multi-Family	9,133	2,445	20%	489	54	
Yard Waste	N/A	4,500	50%	2,250	N/A	
		Total Sing	5,590		8,435	
		Total includin	6,079		9,794	

\*Households

\*\*Excludes diapers and incontinence products

\*\*\*Assumes weekly garbage collection

#### Fleet Requirements and New Technology

Green Bin collection is typically done using carts and trucks fitted with either 'lift assist' tippers or automated collection arms. Mechanical assistance is necessary because the weight of the containers typically exceeds safe manual lifting limits. Consideration will need to be given to undertaking separate collection of the new waste stream or employment of split body vehicles to allow co-collection of garbage and Green Bin waste aboard the same truck but in separate compartments.

#### Co-Collection of Material

The City currently collects garbage and blue bag recycling with separate fleets. Introduction of a third collection truck at the curb to collect Green Bin waste would run counter to the City's climate change policy goals and increase traffic congestion on City streets. Instead, it is proposed that the City begin purchasing split body side loading trucks that would allow for the co-collection of garbage and Green Bin waste, in separate compartments, onboard the same truck. Given that there is no change in the actual volume of waste being managed, there should be no need to change the number of trucks utilized by the City. Instead, it is recommended that split body trucks be purchased by the City as existing waste collection fleet is replaced.

#### Automated Cart Based Collection Service

Automated cart-based collection or 'auto-cart' is considered a best practice in the solid waste management industry, where improvements can be made in collection efficiency, worker safety and satisfaction, reductions in injuries and climate change impacts.

Typically, single operator collection trucks are capable of achieving 650-850 stops per day. The same driver operating an automated collection vehicle in the same conditions can easily exceed a route efficiency of 1,100-1,500 stops per day. The City currently achieves an average of 1,100 stops per day but does so with two operators on each truck. Moving to automated trucks would reduce net operating costs by as much as 16% or almost \$827,000 per year.

More importantly, a transition to auto-cart collection would significantly improve the safety of collection staff. The waste management industry, as a whole, pays amongst the highest WSIB premiums of any industry in Ontario. Over the last five years, the City has incurred average costs of \$200,000 per year because of WSIB claims. Eliminating the manual collection service will go a long way to reducing these costs and protecting staff.

Introduction of a Green Bin program necessitates use of carts with some sort of mechanical lift assist and co-collection of garbage and Green Bin waste is the recommended collection methodology, therefore a move to automated collection of both garbage and Green Bin waste in concert with the program rollout to single family households is being recommended.

## **Staffing Implications**

Implementation of a Green Bin program and automated cart-based collection will require significant changes to how waste is currently managed and resourced throughout the City.

Different staffing roles are required to support the roll out and long-term success of the new programs. These include staffing roles related to promotion and education, compliance, project development and implementation, and customer service. The new roles are also consistent with other municipalities' experience in rolling out similar programs, which has demonstrated that adequate resourcing is required for implementation and long-term success of solid waste programing.

Despite the need for these new staffing roles, the proposed conversion to automated cart-based collection is projected to result in a net reduction of up to 5.34 FTEs in Solid Waste and Recycling Services. The main driver in this reduction is that automated cart collection only requires one driver per collection vehicle, as opposed to the current two-person crew required for manual collection.

## Food and Organic Waste Processing Options

It is expected that the City will require a minimum of 7,300 Metric Tonnes/year of food waste processing capacity to service immediate single-family and multi-family needs. Should it expand service to the ICI sector, and with population growth, additional capacity may be required in the future.

A number of different technologies have been trialed to process various types of food and organic wastes. Generally, technologies fall into two categories including aerobic (decomposition in the presence of oxygen) and anaerobic (decomposition in the absence of oxygen) systems. Each has their advantages and disadvantages. Home based supplemental solutions for food and organic waste traditionally involve methods such as backyard composting, vermicomposters or dehydrators.

In the fall of 2021, the City released a Request for Information (RFI) to solicit information about technologies and capacity from prospective vendors. The City received feedback from vendors representing the primary types of composting technologies confirming their interest in providing a solution for the City. The various technology options were comparatively evaluated against a suite of weighted criteria that considered environmental, social, financial and technical factors as well as risk. The evaluation concluded that an aerobic processing solution for Green Bin waste is the best option for the City of Thunder Bay.

Further, a feasibility study for placing an anaerobic digester at the Mapleward Road Solid Waste and Recycling Facility was completed. Findings suggest this is not a feasible option at this time. Key reasons include not having adequate economies of scale in regards to volume of Green Bin material available for processing to bring down capital and operating costs. Based on the review

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of processing technologies it is recommended to proceed with an RFP for the procurement of an aerobic Green Bin processing solution for the City. It is also recommended that the use of supplemental home based solutions continue to be promoted for homeowners who are unable or unwilling to use a cart-based collection system.

#### Partnerships – Synergy North

A third party consultant, Archibald Engineering, was retained by the City to estimate the potential gas recovery impacts at its landfill site of removing green bin organics from the waste stream (beginning mid-year 2025) over the remaining five (5) years of the current gas supply Agreement with Synergy North. A reduction of up to 2% in gas production per year is projected. The findings from both this study and the anaerobic digester feasibility study have been reviewed with Synergy North.

#### Sustainability Implications

Introduction of a Green Bin program has the potential to help the City meet its goals as outlined in the Net-Zero Strategy and EarthCare Sustainability Plan. In anticipation of development of a food and organic waste diversion program, emissions from the City's current solid waste management program were reviewed and updated. It is expected that implementation of a Green Bin program will reduce the City's carbon footprint by 5,380 tCO2e per year and increase the City's residential waste diversion rate from 25% to 42%.

## LINK TO EARTHCARE SUSTAINABILITY PLAN

The introduction of a food and organic waste diversion program supports actions within the Waste Section of the EarthCare Sustainability Plan and priority objectives within the Net-Zero Strategy.

Sustainability Plan Objective A, Corporate Action A "Develop and implement a Solid Waste Management Strategy (SWMS) for the next 20 years".

Sustainability Plan Objective A, Corporate Action C "Maintain and promote provincial waste minimization programs".

Sustainability Plan Objective A, Corporate Action E "Investigate the implementation of a curbside organic collection program".

Net-Zero Strategy, Priority Action "Establish residential organics collection program".

Net-Zero Strategy, Priority Action "Integrate NZS principles into solid waste management operation".

Net-Zero Strategy, Priority Action "Assess feasibility of rerouting organics to an anaerobic digester".

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## FINANCIAL IMPLICATION

Program changes are projected to increase the cost per household for waste management services by an average of approximately \$33 per household or \$1.5 million per year. Offsetting savings of \$827,000 per year is projected with automated cart collection after implementation in 2025. Table 3 below outlines projected incremental new program costs:

		2022	2023	2024	2025	2026	2027	2028
Green	Capital	\$195,000	\$330,000	\$1,092,031	\$491,532	\$109,798	\$0	\$0
Bin Program	Operating	\$0	\$61,435	\$370,470	\$1,653,819	\$1,774,545	\$1,553,242	\$1,487,645
Total		\$195,000	\$391,435	\$1,462,501	\$2,145,351	\$1,884,343	\$1,553,242	\$1,487,645
Expan de d	Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Yard Waste Collection	Operating	\$0	\$161,646	\$164,879	\$168,176	\$171,540	\$174,971	\$178,470
Total		\$0	\$161,646	\$164,879	\$168,176	\$171,540	\$174,971	\$178,470
Auto	Capital	\$100,000	\$150,000	\$3,442,674	\$886,387	\$9,133	\$0	\$0
Cart Program	Operating	\$0	\$0	\$27,764	(\$785,203)	(\$828,638)	(\$863,318)	(\$891,916)
Total		\$100,000	\$150,000	\$3,470,438	\$101,184	(\$819,505)	(\$863,318)	(\$891,916)
Grand Total		\$295,000	\$703,081	\$5,097,818	\$2,414,711	\$1,236,378	\$864,895	\$774,199

#### Table 3: Incremental New Program Costs

Note: All figures are compounded by a CPI rate of 3% annually.

In order to have adequate waste collection vehicles in place to support program role out in 2025, an additional four (4) collection vehicles over the Fleet Services 2023 capital budget envelope will need to be procured in 2023. Supply chain issues are causing delays across the industry, and we can expect to wait up to two (2) years from date of procurement before actually receiving the vehicle The approximate cost for the additional collection vehicles required in 2023 is \$2,280,000 (\$1.8k base unit truck costs + \$480k new truck upgrade costs). Fleet Services only have a budget envelope in 2023 for the purchase of two (2) base unit waste collection vehicles. Table 3 above accounts for the costs associated with the required truck upgrades to make vehicles green bin and auto cart compatible, however it does not account for base vehicle costs.

## **CONCLUSION**

The recommendations contained within this report will allow the City to meet its obligations under the Provincial Policy Statement for Food and Organic Waste. The adoption of an automated cart-based collection program will not only improve service efficiency, but will improve worker safety and help mitigate the long term cost of the required Green Bin program. The recommendations will also allow the City to make significant progress towards its stated susitanability goals.

It is concluded that City Council should approve the recommendations to develop a food and organic waste diversion program, including the use of auto-cart technology as outlined in this report.

## BACKGROUND

At the April 7, 2014 Committee of the Whole meeting, Report No. 2014.017 – Solid Waste Management Strategy was approved by City Council in principle. The Strategy called for the development of a food and organic waste diversion program, including the use of auto-cart technology.

At the December 9, 2020 Committee of the Whole Meeting, Report R 144/2020 (Program and Service Review) was presented - Administration was directed to evaluate integration of curbside organics program to meet the provincial mandated deadline of 2025 and conduct a feasibility study of moving to automated collection for waste and consider integration of the organics program which will begin 2025 in addition to a number of other diversion actions.

At the March 7, 2022 Committee of the Whole Meeting, a presentation on the development of the City of Thunder Bay Organics (Green Bin) Diversion Program and the City's obligations under the Provincial Policy Statement on Food and Organic Waste was provided.

## **REFERENCE MATERIAL ATTACHED:**

## Attachment A – Development of an Organics Program Implementation Plan

#### PREPARED BY: JASON SHERBAND, MANAGER – SOLID WASTE AND RECYCLING SERVICES

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	May 27, 2022

# **City of Thunder Bay:**

# Development of an Organics Diversion Program Implementation Plan



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May 19, 2022

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#### **Executive Summary**

In April of 2018, the Ministry of Environment Conservation and Parks (MECP) introduced its Food and Organic Waste Framework (Framework). The Framework included a Food and Organic Waste Action Plan (Plan) and Food and Organic Waste Policy Statement (Statement). Amongst the many obligations found in the Policy Statement are two requirements of particular relevance to the City of Thunder Bay (City). The Policy Statement requires municipalities in Northern Ontario with a population greater than 50,000 and density greater than or equal to 300 persons per km<sup>2</sup> to provide curbside collection of food and organic waste to single-family dwellings in the urban settlement area by 2025. Moreover, the program must achieve a 50% waste reduction and resource recovery of food and organic waste by that date.

This report includes recommendations for the development and implementation of a food and organic waste diversion (Green Bin) program to ensure compliance with the requirements of the Province's Policy Statement. The proposed program would service the City's single-family and multi-family dwellings as well as qualifying businesses taking a phased-in approach to the program's implementation. The report also includes recommendations for the optimization of the City's collection services and policies to minimize the cost of implementing the new program and ensure effective participation. To ensure the policy statement's diversion target is met and the program costs are optimized, the following recommendations, as detailed in Section 16 of this report, are proposed:

- 1) Expand current leaf and yard waste services in 2023.
- 2) Implement a curbside food and organic waste program for single-family dwellings in 2025.
- 3) Phase in Green Bin collection services for multi-family and local businesses over time.
- 4) Optimize garbage collection service to achieve diversion targets and reduce costs.
- 5) Hire necessary staff to support roll out of Green Bin services.
- 6) Implement automated cart-based collection of garbage and Green Bin materials.
- 7) Finalize program costs and design parameters as a next step.

The report also examines options for processing the collected organic waste while taking into consideration the implications of this new program on the City's landfilling operations and renewable energy partnership with Synergy North Inc. To ensure the City is consistent with the Policy Statement, future amendments to the City's official plan, waste collection and zoning by-laws may also be necessary. These recommendations are intended to support the City's climate change goals, reduce operational costs and ensure the province's food waste and organics diversion target will be met. The proposed changes are expected to increase the City's residential waste diversion level from 25% to 42% and reduce the City's climate change footprint by an estimated 5,380 tCO2e per year.

Implementation of these recommendations will not be without financial impact on the City. Roll out of the proposed program is expected to increase the cost per household for waste management services by an average of \$33 per household or \$1.5 million per year between the proposed seven year (2022-2028) planning and implementation timeframe. Implementation of automated cart collection is, however, expected to reduce that program cost increase by almost \$827,000 per year or almost \$18 per household after implementation in 2025.

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## 1. Background

Located on Lake Superior, the City of Thunder Bay (City) is the most populous municipality in Northwestern Ontario and the second most populous municipality (after Greater Sudbury) across Northern Ontario. In 2016, the national census reported the City population as being 107,909. By comparison, the metropolitan area of Thunder Bay, which includes the City, the municipalities of Oliver Paipoonge, Neebing and Shuniah, the townships of, Conmee, O'Connor, and Gillies, and the Fort William First Nation had a population of 121,621 in the same census year. In recent years, the City and surrounding area's population has seen modest but consistent growth. Based on Statistics Canada population estimates, the population of the metropolitan area and City is averaging just under 2% growth per year. The City has a culturally diverse population and significant Indigenous population and is home to Confederation College and Lakehead University.

The City provides a range of waste collection, diversion and disposal services to both residents and local businesses. Waste collection services are offered to approximately 37,018 single-family households, 9,133 multi-family units located in 439 buildings, approximately 956 small businesses, and a range of municipal facilities and public spaces. Manual garbage collection is provided by City staff using a fleet of City owned vehicles. Manual 'blue bag' recycling (recycling) and leaf and yard waste (yard waste) collection is provided by private contractors. Garbage is disposed of at the City owned and operated Solid Waste and Recycling Facility (SWRF). Recycling is shipped to a local private Material Recycling Facility (MRF) and yard waste is composted at the City's SWRF. The City also has three depots that receive recycling from local residents including two in the City and one at the SWRF. The SWRF also receives a variety of additional materials such as household hazardous waste for diversion.

Waste volumes have been declining in recent years. In 2018, the City generated 104,090 tonnes of waste. By comparison, only 82,699 tonnes was generated in 2021. Of that quantity, 47,641 tonnes was generated by the residential sector and the City's current waste diversion programs diverted 11,697 tonnes of material to achieve a diversion rate of 25%. In March of 2014, the City commissioned development of its Comprehensive Solid Waste Management Strategy. Key amongst the various recommendations was development of an enhanced leaf and yard waste program and implementation of a food waste diversion (i.e., "Green Bin") program. This latter recommendation was broadly supported by the public showing 67% of respondents favouring the implementation of a Green Bin program. In addition to the Comprehensive Solid Waste Management Strategy, the City's EarthCare Thunder Bay Sustainability Plan 2014-2020, Climate-Forward City: Thunder Bay Net-Zero Strategy, 2020, Program and Services Review, Phase 2 Final Report, 2020 and One City, Growing Together Corporate Strategic Plan 2019-2022 were relied upon to inform the development of this plan.

## 2. Ontario's Food and Organic Waste Framework

Ontario's Food and Organic Waste Framework (Framework) was developed as a key component of the Province's Strategy for a Waste Free Ontario. The Framework is structured in two parts including the Food and Organic Waste Framework Action Plan (Action Plan), and the Food and Organic Waste Policy Statement (Policy Statement). As implied by its title, the Action Plan lays out a series of 17 proposed initiatives intended to:

- Reduce food and organic waste
- Recover resources from food and organic waste

- Support resource recovery infrastructure
- Promote beneficial uses of recovered organic resources

The majority of the action items focus on immediate opportunities (i.e., to be implemented between 2018 and 2020) to work with federal and provincial partners to facilitate the goals of the framework. Longer term objectives of significance include commitments to:

- amend the 3Rs Regulations to include food and organic waste to increase recovery from the Industrial Commercial & Institutional (IC&I) sector;
- ban food and organic waste from disposal sites;
- support recovery from multi-unit residential buildings;
- promote on and off-farm end-use soil amendments from recovered organic resources; and
- support development of renewable natural gas including consideration for linkages to food and organic waste.

Arguably the most significant implications of the Action Plan to the City are the Province's plans to ban food and organic waste disposal at waste disposal sites (e.g., landfills, incineration facilities) and support the beneficial use of recovered organic resources. The Action Plan contemplated developing, consulting on, and implementing a disposal ban regulation under the Environmental Protection Act with a phased in implementation starting as early as 2021. Public comment was sought by the Province in the fall of 2020 on proposed amendments to the Policy Statement but given the current global pandemic it is unclear what the government's current timeline or plans are.

By comparison, the Policy Statement issued pursuant to Section 11 of the Resource Recovery and Circular Economy Act, 2016 (RRCEA), supports the provincial vision of a circular economy and is an important tool to help move the province towards its climate change goals. Section 2 of the Policy Statement sets out specific obligations and targets for the diversion of food and organic waste from various persons or entities including certain municipalities, industrial and commercial facilities, multiunit residential buildings, educational institutions and hospitals. Of particular note, policy 4.3 requires:

Municipalities in Northern Ontario that, as of the effective date, do not provide curbside collection of source separated food and organic waste shall provide curbside collection of food and organic waste to single-family dwellings in an urban settlement area within a local municipality if:

*i.* The population of the local municipality is greater than 50,000 and the population density of the local municipality is greater than or equal to 300 persons per km<sup>2</sup>.

Furthermore, Section 2.1 requires that Municipalities in Northern Ontario that are subject to policy 4.3 achieve a "50% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2025".

Policy 4.10 requires that *"Multi-unit residential buildings shall provide collection of food and organic waste to their residents."* Additionally, Section 2.1 requires that such buildings achieve a *"50% waste reduction and resource recovery of food and organic waste generated at the building by 2025."* While the Policy Statement does not make collection from multi-family buildings a responsibility of municipalities, consideration is given to inclusion of service to this portion of the City later on in this report.

The Policy Statement also requires that municipalities and other planning authorities ensure that official plans are consistent with the Policy Statement with amendment of official plans occurring within the

next scheduled update. Municipal zoning by-laws must also be amended within three years after the related official plan amendment. By-laws made under other acts related to waste reduction and resource recovery, as well as relevant prescribed instruments, must also be made consistent with the proposed Policy Statement within two years of the proposed Policy Statement coming into effect.

In summary, the Policy Statement will create several obligations for the City. In addition to the requirement that it implement a curbside, food and organic waste diversion program for single-family households and achieve a diversion level of 50% by no later than 2025, the City will also need to consider how it intends to process collected food and organic waste and whether it wishes to extend food and organic waste collection service to its multi-family and business properties.

## 3. Current Program Overview

The City provides a range of waste collection, diversion and disposal services to both residents and local businesses. Curbside services include garbage, blue bag recycling and yard waste collection. Additional services are offered at the City's Solid Waste and Recycling Facility.

## 3.1 Waste Disposal Operations

#### 3.1.1 Garbage Collection

Single-family households are currently eligible for curbside collection of garbage, recycling and seasonal yard waste. Garbage is collected on a weekly basis (i.e., Tuesday to Friday) subject to a two-item limit with an allowable additional tagged (i.e., for a fee) item for overflow. An additional item is allowed free of charge after specific statutory holidays including New Years Day, Victoria Day and Labour Day. As noted, collection services are provided using a City owned and operated fleet of collection vehicles.

Multi-family buildings also receive weekly garbage collection services from the City, subject to a limit of 3.75 m<sup>3</sup> (or 66 items) of waste per site. Property owners with additional collection needs may arrange for a second pick up from the City on a 'fee for service' basis and/or arrange for private collection services. Properties are added to the program on an 'as requested' basis and the City requires that garbage be stored in locked sheds on site.

The City provides garbage collection services to almost 40 municipal properties and approximately 956 local businesses. Municipal properties include various city buildings, works yards, community centres, arenas, pools and parks. Services to IC&I properties include weekly collection of no more than 66 items of waste and a 'fee for service' agreement for a second weekly pickup. Larger businesses, local universities, colleges, schools, hospital, nursing homes and City Hall arrange for private collection services due to the volumes involved. It should be noted that the City currently has two Business Improvement Areas (BIAs) including the Waterfront District BIA and the Fort William District BIA many of whom receive waste collection services from the City.

#### 3.1.2 Thunder Bay Solid Waste and Recycling Facility

The City's primary waste management asset is the Thunder Bay Solid Waste and Recycling Facility (SWRF) located at 5405 Mapleward Blvd. The SWRF is operated by City staff and governed under

provincial Environmental Compliance Approval (ECA) No. A590106 which currently approves the use and operation of a 439 hectare waste disposal site. The site includes a 76.83 hectare landfilling area for the disposal of domestic and commercial solid non-hazardous industrial waste and currently has an estimated 20 years of remaining capacity.

Operating buildings on the site include an administration building for landfill operations and McIntyre Roads staff, a garage and maintenance shop housing landfill and roads equipment, a weigh scale building and an attendant shelter at the onsite transfer station. The SWRF has two sets of weigh scales including a single, 80 foot automated (i.e., RFID tag based) commercial account scale and a tandem set of 80 foot inbound and outbound weigh scales for the general public.

The site also has an active landfill gas collection system which was installed between 2009 and 2010 consisting of 104 vertical wells, 3 horizontal wells, lateral and header piping, condensate traps, an abstraction plant, a candlestick flare and a 3.2 megawatt power generation plant. The power generating plant is equipped with two Caterpillar G3520C engines and electricity generated from the plant is exported to the grid.

## 3.2 Waste Diversion Operations

#### 3.2.1 Blue Bag Recycling Collection

Single-family household recycling is set out by residents in translucent blue or clear plastic bags and collected bi-weekly by GFL Environmental Inc. (GFL), under contract to the City, in a 'two-stream' format (i.e., recyclable containers are collected separately from paper and paper products). Cardboard is typically bundled for collection where there is sufficient quantity. There are no volume limits associated with recycling set outs from single-family households.

Multi-family buildings are also eligible to receive bi-weekly recycling collection services of unlimited volumes from each site. As with garbage collection for multi-family buildings, the City requires that recyclables be stored in locked sheds on site.

Residents can divert excess quantities of recycling at the SWRF or either of the City's two recycling depots located at Front Street. and Mountdale Avenue. The two sites in the City are operated six days per week by GFL utilizing front end loader (FEL) containers. It is noteworthy that, collectively, these sites receive significant traffic averaging an estimated 300 vehicles per day.

Local businesses are not eligible for City recycling services. The City does, however, provide recycling services to almost 30 different municipal properties including various community centres, golf courses, parks, works yards and public buildings. Collection is primarily done using rear packers supplemented with FEL service for large cardboard generators.

#### 3.2.2 Leaf & Yard Waste Collection

Leaf and yard waste (excluding grass clippings) is collected curbside twice a year (i.e., once in the spring and once in the fall) from single-family and multi-family residences by GFL. Throughout the remainder of the year, leaf and yard waste can be dropped off at the SWRF composting facility at the regular tipping fee or collected as garbage at the curb. The City also operates nine seasonal sites throughout the community where, for a three week period, it receives and chips Christmas trees. Pumpkins are collected seasonally at three collection sites between November 1st and November 10th of each year.

Businesses are not eligible for leaf and yard waste collection. Collection of leaf and yard waste generated at municipal buildings and public spaces is managed by other City departments or private haulers.

#### 3.2.3 Additional Diversion Services

The City provides a range of supplemental diversion options for residents including depot based collection of tires, household hazardous waste (HHW), discarded electronics (e-waste), fluorescent tubes, and scrap metal including 'white goods' (e.g., CFC-free refrigerators, freezers, air conditioners). HHW, fluorescent tubes and e-waste is received at the City's HHW transfer facility located at the SWRF. Tires and scrap metal is received at the SWRF tire transfer station and public drop off area bins respectively.

#### 3.2.4 Waste Diversion Infrastructure

In addition to the two recycling depots operated in the City, the SWRF also includes a recycling depot, HHW transfer facility, tire transfer station, and leaf and yard waste composting facility. The yard waste receiving area and compost pad has a 4.65 acre pad and is an open windrow composting operation licensed to receive 6,000 MT (i.e. metric tonne) per year.

Collected recyclables are delivered to, and processed at, GFL's local Materials Recycling Facility (MRF) at 3000 Highway 61, Slate River, Ontario.

#### 3.3 Current Collection Fleet

The City's waste collection fleet consists of 15 International packers and one ½ tonne pickup. The packers range in age from 2007 to 2016 of which five are rear load packers (Figure 1) and 10 are side loading packers.

The fleet operates on a four-day week (Tuesday to Friday). Nine side loading trucks are dedicated to residential collection Tuesday to Thursday and eight on Friday. In addition, the City dedicates one rear loading packer to multi-family collection and two rear loading packers to IC&I collection. The ½ tonne pickup operates as a customer service vehicle collecting missed collections and locations the primary fleet is unable to collect from due to space constraints (e.g., narrow roadways). It averages 30-50 stops per day.



#### Figure 1: Rear Packer

The City also maintains three spare vehicles and has ordered four new side loaders. Two vehicles arrived in 2022 and two are scheduled to arrive in 2023. Supply chain issues resulting from the current Covid 19 pandemic have delayed vehicle deliveries out as much as 24 months from the order date and increased costs dramatically. As a result, funds have been budgeted in 2022 for two new side loaders and one rear loader but delivery is not expected before 2024. The two vehicles delivered in 2022 are 'kitted' out to be automated cart (auto cart) capable subject to having the hydraulic arm purchased and installed. The latter two vehicles will come with arms already installed. City staff has confirmed that the vehicles scheduled for delivery in 2023 can also be retrofitted to incorporate split bodies as required to allow for separate compartmentalization of different waste streams. The solid waste collection unit's Supervisor and Leadhand also have dedicated pickup trucks.

## 3.4 Staffing

The City's Solid Waste and Recycling Services (Section) oversees the City's waste collection, diversion and landfill operations. The Section consists of a manager and two supervisors as noted in Figure 2. They are supported by a waste diversion coordinator who, amongst other duties, is responsible for day-to-day management of processing, collection and educational service contracts, statistical analysis and regulatory reporting. The Section includes a total of 38 full time (FT) staff and 9.13 full time equivalents (FTEs).



Figure 2: Solid Waste Management and Recycling Services Organization Chart

The City's waste collection staff include 23 full time operators and up to 15 relief operators (equivalent to 6.78 full time staff). Sixteen full time staff and two relief staff manage single-family household collection, an additional six full time staff manage multi-family and IC&I collection and the remaining full time staff operates the customer service pickup. The remaining relief operators cover off vacation and sick leave as required.

The solid waste collection unit is overseen by a Supervisor who is supported by a Leadhand. The Leadhand's primary responsibilities are intended to focus on direct support and guidance of the collection staff in the field with a portion of their time spent on administrative duties. The Section also receives indirect support from a number of other City departments to support its operations (e.g., Fleet, Clerks, Human Resources, Finance).

#### 3.5 Contracted Services

The Section currently manages ten service contractors including GFL, Titan Contracting, Miller Environmental, Tim Walters Trucking and Equipment Rentals, Junk Away Inc., Mike Jewett Construction, Enviroshred, Rutter Urban Forestry and EcoSuperior.

GFL provides collection of recyclables and yard waste to the City's single-family and multi-family properties along with recycling collection from municipal buildings. They are also responsible for administering the City's event recycling program, operation of the City's two 'downtown' recycling depots and for processing of collected recyclables at their local MRF.

Junk Away operates under contract to the Section to collect items left illegally as litter (e.g., couches, brush and general garbage) and deliver them for disposal to the City landfill on an 'on demand' basis.

Tim Walters Trucking and Equipment Rentals provides rental of up to two landfill D7 bulldozers with skilled operators to assist with daily landfilling operations. Mike Jewett Construction provides one excavator rental with operator for landfill daily cover support.

Titan Contracting is responsible for grinding of yard waste at the City's SWRF and also manages the composting operations. Rutter provides seasonal tree chipping services at the City's temporary tree collection sites and mulch delivery to the SWRF.

Miller Environmental is responsible for operation of City's Household Hazardous Waste facility at the SWRF.

The Section maintains a contract with Enviroshred to provide secure on-site shredding services to the various City departments. EcoSuperior is unique in that it supports the City in the delivery of four key waste management educational programs and waste diversion related services.

The City has a long-term partnership with Synergy North Inc. (Thunder Bay Hydro Renewable Inc.) for the supply of landfill gas and operation of its power generation station.

Contractor	Service	Contract Term
EcoSuperior Environmental Programs	'Spring up to Clean up' litter campaign; Waste Reduction Week activities; school waste reduction education program; storefront sale of backyard composters	Annual purchase order
Enviroshred	Secure on-site shredding services.	Expires: March 31, 2023 Two 1yr renewal options
GFL	Single-family and multi-family recycling collection; Processing of collected recyclables; operation of the Front St. and Mountdale Ave. recycling depots	Start: July 1, 2020 7 yrs + two 1 yr renewal options Expires: Jun 30, 2027
GFL	Single-family and multi- family yard waste collection	Expires: April 30, 2023
Junk Away Inc.	Pick up/disposal of debris as it relates to items left illegally as litter (e.g. couches, brush and general garbage). On demand/as required.	Expires: December 31, 2022 Two 1 yr renewal options
Mike Jewett Construction	Provides one excavator rental with operator for landfill daily cover support.	Expires: September 30, 2023
Miller Environmental	Operation of HHW facility.	Expires: June 30, 2023
Rutter Urban Forestry	Christmas tree grinding at 9 seasonal municipal drop off sites and mulch delivery to City landfill.	Expires: December 25, 2022
Synergy North Inc.	Operation of landfill gas power generation station.	Expires: 2030
Tim Walters Trucking and Equipment Rentals	D7 bulldozer rental service with operator for assisting with daily landfill tip face operations.	Expires: September 30, 2022
Titan Contracting	Yard Waste grinding and composting operations at City SWRF.	Starts: May 1, 2021 3 yrs + two 1 yr renewal options Expires: April 30, 2024

#### Table 1: Contracted Services

## 3.6 Current Operating Costs

The City's waste management system is currently funded through several sources including tipping fees at the SWRF, property taxes, revenue from power generation, the sale of recyclables, and funding from operation of extended producer responsibility programs (e.g., diversion of recyclables, electronic waste and household hazardous waste). Landfill site operations are rate supported by tipping fee revenues. Collection services and waste diversion program operating and capital costs are supported through taxbased funding.

The City's waste management system has three primary activities including landfill operations, solid waste collection and solid waste diversion. The 2022 gross budget for these activities is \$10,049,000 with a projected net cost of \$5,226,000. Landfill operations represents the single largest gross expenditure (i.e., 29% of gross costs) and in 2020 the use of Federal-Provincial 'Safe Restart' funding was necessary to offset the negative impacts of the current economy downturn. Stabilization reserve funds were used in 2021 and are predicted to be necessary in 2022 to cover pandemic related short falls. Garbage and recycling collection represent the largest system costs (i.e., 57% of gross costs). It is

notable that labour represents a significant proportion of the Section's budget. In particular, labour represents 73% of the 2022 gross garbage collection budget.

It should also be noted that there are currently no tipping fees collected on household or commercial waste brought to the landfill site by the City' solid waste collection packers, which means disposal revenues from the landfill site are all drawn from residential and IC&I customers who bring their waste over the scales.

## 4. Waste Stream Analysis

As previously noted, the City's population has remained relatively stable year over year. Chart 1 shows that residential garbage disposal quantities have trended consistently with the City's population except in 2020 and 2021. Between 2017 and 2019 there was a decline in tonnage of approximately 2% which is consistent with typical variances in yard waste volumes and the overall global trend to light weighting and reduction of consumer packaging. The noticeable increase in residential disposal in 2020 and 2021 can be directly attributed to the COVID 19 pandemic. Municipalities across Ontario reported similar increases due to travel restrictions and employees working from home.





By comparison, Chart 2 shows the marked negative impact of both the declining economic conditions of 2019 and the pandemic in 2020 and 2021 had on local businesses; many of whom were forced to curtail operations for much of both years. The extent to which these quantities will return to historical norms as the global economy recovers from the current pandemic is as of yet unknown.



Chart 2: Residential versus IC&I Total Waste Generation (2017-2021)

As noted, waste quantities from the residential sector have been relatively consistent and predictable prior to the pandemic. Data from the past five years show the City collected and/or received an average of 47,096 MT/yr of residential waste (i.e., including both garbage and recyclables). A review of the last five years of landfill data shows that quantities by material type have not changed dramatically with the exception of materials that normally vary by season or participation (e.g., yard waste).

Analysis of the City's residential waste composition also shows that garbage represented 74% (i.e., 34,942 MT/yr) of the reported total average annual residential waste quantity. The remaining 26% (i.e., 12,154 MT/yr) was diverted through the City's various waste diversion initiatives.

## 5. Food and Organic Waste Generation Estimates

Based on a four season waste composition study undertaken by AET Consulting Ltd. between 2018 and 2019, kitchen food waste represented 43.2% of curbside collected garbage which, based of an average landfilled quantity of 34,942 MT/yr, equates to 15,088 MT/yr of food waste.



Chart 3: Food Waste in Residential Waste Stream (2017-2021 Average)

It should be noted, however, that the study in question was based on curbside single-family households. In reality, garbage collected and landfilled by the City includes a mix of quantities from residential and multi-family sources. By comparison, multi-family households typically generate 8 to 10% less food waste than their single-family counterparts. As a consequence this preliminary estimate is likely overstated.

As previously noted, the City currently collects from approximately 37,018 single-family households and 9,133 multi-family units located in 439 buildings. Adjusting for the proportion of the population in multi-family dwelllings and the lower food waste generation estimates for this group, it is expected that approximately 12,371 MT/yr of food waste is generated by single-family households and 2,717 MT/yr from multi-family households and would be potentially available for diversion.

By comparison, the March 2014 City of Thunder Bay Comprehensive Solid Waste Management Strategy (Waste Management Strategy) estimated there was 11,500 MT of food waste available for diversion. The lower number found in the Waste Management Strategy is likely due to assumptions made by its authors about the types of organics that might be collected and/or reasonable capture rates.

The AET study also identified that approximately 7% of the residential waste was leaf and yard waste suggesting there is an additional 2,422 MT/yr of yard waste available to be diverted from disposal. Yard waste volumes vary dramatically from one year to another. Historically, the City has diverted roughly 1,825 to 2,720 MT/yr (i.e., ~ 2,100 MT/yr on average) as shown in Table 2, which would suggest the City could divert an average of 4,500 MT/yr with an expanded program. This range is somewhat lower but consistent with the Waste Management Strategy which had predicted the City could capture approximately 5,800 MT of yard waste annually with an expanded leaf and yard waste collection program.

Year	Direct Drop Off at Site (leaf/yard waste)	Curbside Collection Spring	Curbside Collection Fall	Christmas Tree Program	Pumpkin Collection	Total
2018	1,599	558	500	34	27	2,718
2019	1,122	459	305	47	28	1,961
2020	881	591	435	18	30	1,955
2021	950	453	381	18	23	1,825

#### Table 2: Collected Yard Waste Volumes (2018-2021)

Note: Leaf and yard waste tonnages are approximations only

## 6. Policy Statement Compliance

As outlined in Section 2, the City is required to establish and provide a curbside food and organic waste collection program for single-family dwellings and divert 50% of its food and organic waste by 2025. In general, food waste consists of common materials such as kitchen scraps and discarded food. Organic waste represents a broader range of materials such as leaf and yard waste, pet waste, paper towels, tissue paper and other biodegradable materials.

While the City has an obligation to provide a curbside organics collection program, it can achieve the diversion goal through the collection of both food waste (aka Green Bin program) and yard waste. As noted in Section 5, a recent curbside waste composition study undertaken in the City suggests there is approximately 15,088 MT/yr of food and organic waste present in the curbside wastestream. The same waste composition study suggests the City generates approximately 4,500 MT of yard waste (including approx. 2,100 MT/yr currently being diverted). Assuming the single-family households generate 12,371 MT/yr and effectively all the available yard waste, the City would need to divert 8,435 MT/yr of food and organic waste to meet the provincial requirements. Should the City wish to assist multi-family property owners with their obligations under the Policy Statement, the City would likely need to divert approximately 9,794 MT/yr to ensure compliance with the provincial requirement.

Source	Available Food & Organic Waste (Tonnes/yr)	Available Yard Waste (Tonnes/yr)	Policy Statement Obligation (Tonnes/yr)	
Single Family Only	12,371	4,500	8,435	
Single & Multi-Family	15,088	4,500	9,794	

Table 3: Policy Statement Requirement of 50% Diversion for Single & Multi-Family Sources

## 7. Program Design Considerations to Meet the Policy Statement Obligations

There are a number of parameters and options that will need to be considered in designing a program that meets the obligations of the Policy Statement. They include:

Service level considerations:

- Mandatory collection of food waste and yard waste from single-family households
- Optional collection of food waste and yard waste from multi-family households
- Optional collection of food waste and yard waste from local businesses

Options for achieving the 50% diversion target:

- Expanded yard waste collection;
- Weekly collection of food waste;
- Every other week garbage collection;
- Garbage item limits; and
- Types of acceptable organic waste

Other program design considerations:

- Co-collection of yard and food waste
- Choice of collection containers for containing food waste
- Use of new technologies such as automated cart collection

#### 7.1 Service Level Considerations

As noted, the City must provide a curbside program collecting both food and organic waste from singlefamily households and achieve the required diversion rate. It does not, however, have to provide this service to multi-family households or local businesses and institutions. Those property owners are responsible for meeting their obligations under the Policy statement. Nonetheless, it is recognized the City curently provides garbage and blue bag collection service to both multi-family properties and garbage collection service to selected businesses. It is proposed therefore, that the City plan to provide Green Bin service to multi-family buildings no later than 2026. Delaying roll out of service to this group is proposed in order to allow staff time to ensure the successful launch of the curbside single-family collection service and give staff time to develop an appropriate service policy. This latter point is important because of issues with material storage and contamination which, if not considered carefully, could jeopardize the entire program.

It is further recommended that consideration be given to expanding Green Bin collection service to local businesses and institutions on a cost recovery basis after rollout of the residential program is complete. Expanding the program to include local businesses and institutions may allow for improvements in economies of scale on processing costs and even collection services.

This proposed approach will spread out the cost impact on the City's customers and give staff more time to refine delivery of the program.

#### 7.2 Options for Achieving the 50% Diversion

Food waste diversion programs, more commonly known as Source Separated Organics (SSO) or Green Bin programs, are commonplace throughout southern Ontario and in many cities throughout Canada.
They have been in operation in the Greater Toronto Area (GTA) since 2002 and as of 2016, roughly 70% of Ontario's population had access to Green Bin service<sup>1</sup>.

The programs in question collect a broad range of organic materials including yard waste, food waste, soiled paper, and pet waste but vary in how the materials are collected and what is included in their program. Food waste, because of its unique characteristics, is a challenging material to divert and many lessons have been learned by other communities suggesting implementation requires careful planning and effective communications. Numerous factors affect program performance. Key considerations include collection frequency, collection policies, materials collected, container selection and communications.

# 7.2.1 Expanded Yard Waste Collection

As noted in Section 5, the City currently diverts roughly 2,100 MT/yr of yard waste and both the Waste Management Strategy and AET waste compostion study identified that at least an additional 2,422 MT/yr of yard waste may be available for diversion from the residential wastestream. While the Policy Statement requires collection of both food and organic waste, expanding the City's yard waste collection program is the least expensive and easiest option available to partially meeting its diversion requirement.

Yard waste is significantly less expensive to process than food waste. Doubling the City's yard waste collection to four events annually from two, at a minimum, is expected to capture an additional 920 MT/yr (i.e., 3,035 MT/yr on average). Expansion of the yard waste collection services in 2023 is recommended to allow staff to assess the diversion potential of this option and reflect this information in upcoming collection and processing contracts. Negotiations would be required with the City's yard waste collection and processing contractors whose contracts end in 2023 (i.e., GFL – collection) and 2024 (i.e., Titan – processing) but is not expected to be an issue.

Expansion of the City's yard waste program to four collection events annually is expected to increase collection costs by approximately \$157,000 per annum and processing costs by \$5,000 per annum assuming an average cost of \$170/MT. Review of the service in subsequent years to consider further expansion or refinement is also recommended.

# 7.2.2 Green Bin Collection - Weekly

The Policy Statement does not specify a collection frequency for food waste collection. However, resident participation in Green Bin programs is driven primarily by convenience and the effective use of public policy. Almost all municipalities providing Green Bin service offer weekly collection to minimize the generation of unpleasant odours, sanitation issues, and attraction of vectors resulting from food storage in the household between collection cycles. Every other week Green Bin collection was tried in the past but faced strong public opposition, suffered from poor particiation and is not expected to meet the diversion requirements of the City. Weekly collection is, therefore, recommended.

# 7.2.3 Weekly versus Every Other Week Garbage Collection

<sup>&</sup>lt;sup>1</sup> Ontario Ministry of the Environment and Climate Change, 2017

Past experience throughout Ontario has also unequivocally demonstrated that residents will not fully participate in food waste diversion programs unless the program is accompanied by strict garbage set out limits. While bag or item limits can be useful to some extent, the better practice has been proven to be coupling weekly Green Bin collection with every other week garbage collection. This fact is borne out in capture rate data for the two types of programs. Communities with weekly garbage and Green Bin service will typically achieve capture rates of 80kg/household to 140kg/household whereas those providing every other week garbage and weekly Green Bin collection often divert as much as 110kg/household to 340kg/household as shown in Table 4.

Municipality	Kg/year Single-Family Households	Percentage Diversion of Total Residential Waste	Green Bin Sizes in Use (litres)	Garbage Collection Frequency
Guelph, City of	340	18%	80	Bi-weekly
Toronto, City of	340	20%	97	Bi-weekly
York, Region of	310	26%	45	Bi-weekly
St. Thomas, City of	300	23%	240*	Weekly
Ottawa, City of	260	22%	46, 80	Bi-weekly
Peel, Region of	180	12%	100	Bi-weekly
Waterloo, Region of	170	13%	46	Bi-weekly
Halton, Region of	160	14%	46	Bi-weekly
Dufferin, County	140	15%	46	Weekly
Durham, Region of	130	11%	46	Bi-weekly
Barrie, City of	110	8%	46	Bi-weekly
Simcoe County	90	9%	46	Bi-weekly
Hamilton, City of	80	6%	46, 120	Weekly
Kingston, City of	80	9%	80	Weekly
Niagara, Region of	70	6%	46	Bi-weekly

### Table 4: Impact of Garbage Collection Frequency on Green Bin Participation

\*St. Thomas co-collects yard waste and food waste in their green bin<sup>2</sup>

Of particular interest are the experiences of Sudbury, Waterloo and Niagara Regions. All three initially offered weekly garbage and Green Bin service only to switch to every other week garbage collection. In 2021 Sudbury switched to every other week garbage collection and saw an immediate 16% increase in Green Bin program participation. Waterloo switched in the spring of 2017 and saw an immediate 150% increase in food waste diversion, a 26% increase in yard waste diversion and a 5% increase in Blue Box recycling. Niagara Region, which was still offering weekly garbage collection at the time the data found in Table 4 was developed, switched to every other week garbage collection in 2021 and observed a 24% increase in food waste diversion and an 8% increase in Blue Box recycling.

<sup>&</sup>lt;sup>2</sup> City of London, Civic Works Committee Report, November 17, 2020, Community Engagement on Green Bin Program Design

Every other week garbage collection does not generate a net savings since the same amount of waste is still being handled irrespective of which week it is collected in. However, when the City transitions out of provision of Blue Box (blug bag) service in July of 2024 as required under O.Reg 391/21, it will no longer be obliged to manage the cost of Blue Box (blue bag) recycling. As a result, it will be in the City's best interest to maximize the diversion of recyclables out of the residential garbage stream. It is recommended, therefore, that the City move to every other week garbage collection along with implementation of a Green Bin program in 2025 as a means of ensuring the success of the Green Bin program.

# 7.2.4 Garbage Item Limits and "Pay as You Throw"

The City currently permits a weekly set out limit of two items of waste per household with an allowable additional tagged (i.e., for a fee) item for overflow. Recognizing that over 43% of the garbage set out by residents consists of food waste and 7% is yard waste, implementation of a Green Bin program and an expanded yard waste collection program has the potential to cut garbage volumes by half. With this in mind, the City could combine implementation of a weekly Green Bin program with an expanded yard waste collection program along with a garbage set out of two items every other week without having any negative impact on its current level of service. Moreover, with the City's recent expansion of its blue bag program to include additional plastics, the majority of residents will produce far less than one item per week (i.e., two items every other week) of non-putrescible (i.e., non-organic) waste with no negative impact to the public on set out volumes.

Irrespective of whether the City moves to every other week garbage collection, it is recommended that the City reduce allowable item limits by 50% (1 item per week). Recognizing that some residents, such as those with large families, may continue to be challenged with strict volume limits, consideration should be given to continuing the City's policy of permitting residents to purchase tags for extra volumes of waste. Should there be a preference to allowing the continued use of bag or item tags, it is recommended that the City amend its waste collection by-law to require mandatory participation in waste diversion programs and consider adopting a clear garbage bag policy, at some point in the future, as a condition for receiving garbage collection services. This approach prevents residents from 'buying their way' out of participating in diversion programs. It should be noted that, while bag or item limits can be used as an alternative means of encouraging participation, every other week garbage collection has been demonstrated to be a more effective means of achieving participation in Green Bin programs.

# 7.2.5 Acceptable Materials

The types of materials accepted in a Green Bin program can impact both the quantity and quality of materials collected. As shown in Table 5, municipalities collecting quantities in excess of 250kg/household are typically collecting materials other than food waste in their Green Bin program. Top performing programs typically collect pet waste as part of their acceptable materials and may include diapers and sanitary products or have separate weekly collection for such materials. Inclusion of pet waste can increase organics diversion by an additional 20% and diapers by another 10%. Some municipalities, such as St. Thomas, allow their residents to include yard waste in their Green Bin program will be determined by their organic waste processor. It is recommended that the City prioritize a processing solution that includes pet waste and kitty litter in its process to maximize its diversion efforts.

Municipality	Food waste, soiled paper, cooking oils & grease, household plants	Pet Waste	Diapers, Sanitary Products	Yard Waste
Toronto, City of	$\checkmark$	$\checkmark$	$\checkmark$	
York, Region of	$\checkmark$	$\checkmark$	$\checkmark$	
Guelph, City of	✓	✓		
Niagara, Region of	$\checkmark$	$\checkmark$		
Ottawa, City of	$\checkmark$	$\checkmark$		✓
Simcoe, County	$\checkmark$	$\checkmark$		
St. Thomas, City of	$\checkmark$	$\checkmark$		$\checkmark$
Waterloo, Region of	$\checkmark$	$\checkmark$		
Barrie, City of	$\checkmark$			
Dufferin, County	$\checkmark$			
Durham, Region of	$\checkmark$			
Hamilton, City of	$\checkmark$			
Halton, Region of	$\checkmark$			
Kingston, City of	$\checkmark$			$\checkmark$
Peel, Region of	✓			

# Table 5: Green Bin Programs – Acceptable Materials Comparison<sup>3</sup>

# 7.2.6 Projected Diversion Rate of Recommended Options

In summary, it is proposed that the City adopt the following recommendations:

- Expanded leaf and yard waste collection to four events per year
- Weekly Green Bin collection from single-family households
- Every other week garbage collection
- Garbage set out limit of three items per household every other week
- Green bin waste to include food, soiled paper, household plants and pet waste
- Weekly Green Bin collection from multi-family households no later than 2026
- Weekly Green Bin collection from local business and not-for-profits for future consideration

As noted in Section 7.2.1, an expanded yard waste collection program is expected to conservatively capture 3,035 MT/yr of yard waste.

Currently almost 20% of the residential dwellings serviced by the City are multi-family sites (i.e., 9,133 units). Multi-family properties are known to generate less food waste although exact generation rates vary by occupancy (e.g., retirement complex versus young families in rental units). Provincial waste composition studies suggest it is reasonable to assume the City's multi-family housing stock will generate 9% less food waste. Thus, as noted in Section 6, it is estimated that the City generates approximately 15,088 MT/yr of food waste from its single-family and multi-family residences combined.

<sup>&</sup>lt;sup>3</sup> City of London, Civic Works Committee Report, November 17, 2020, Community Engagement on Green Bin Program Design

However, it is unlikely that the City's future Green Bin waste processor will be able to receive diapers and incontenence products directly. As a result, at least 10% of this total available organic waste currently discarded by residents is expected to be be ineligible for inclusion in the City's Green Bin program at this time. As a consequence, roughly 13,579 MT/yr is assumed to be available for diversion.

Past studies show Green Bin capture rates for single-families average between 55%-65% of available material depending on what incentives are used to encourage participation (e.g., every other week garbage service). Multi-family properties tend to have lower participation rates ranging between 15%-35% depending, again, on building demographics.

Based on these assumptions, the City could reasonably expect to divert approximately 6,680 MT/yr of food waste from its single-family households and an additional 660 MT/yr from its multi-family households. Combined with its current yard waste diversion program which collects an average of 2,100 MT/yr, this would amount to a diversion rate of approximately 9,440 MT/yr which would come close to meeting the calculated Policy Statement diversion requirement of 9,794 MT/yr as shown in Table 6.

However, as shown in Table 6, expanding the City's yard waste program as proposed and including every other week garbage collection, would allow the City to achieve the provincial diversion target without immediate implementation of multi-family Green Bin service. It is recommended, therefore, that implementation of multi-family Green Bin service be deferred until 2026 subject to council approval of the proposed yard waste collection service expansion.

Housing Type	HHLDs*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	60%	6,680	180	
Multi-Family	9,133	2,445	27%	660	72	
Yard Waste	N/A	4,500	70%	3,150	N/A	
Total Single-Family only			9,830		8,435	
	Total including Multi-Family			10,491		9,794

#### Table 6: Predicted Capture Rate of Green Bin Program with Expanded Yard Waste Program

\*Households

\*\*Excludes diapers and incontinence products

\*\*\*Assumes every other week garbage collection

If, however, the City opts to retain its current weekly garbage collection service and defer expansion of its yard waste collection services, it is expected that it would divert approximately 6,079 MT/yr of combined food and yard waste and fail to meet the Policy Statement requirements as shown in Table 7.

Housing Type	HHLDs*	Predicted Generation Rates (Tonnes/Yr)**	Anticipated Participation Rate***	Predicted Capture Rate (Tonnes/Yr)	Per capita Capture Rate (kg/hh/yr)	Provincial Target (Tonnes/Yr)
Single-Family	37,018	11,134	30%	3,340	90	
Multi-Family	9,133	2,445	20%	489	54	
Yard Waste	N/A	4,500	50%	2,250	N/A	
Total Single-Family only				5,590		8,435
Total including Multi-Family			6,079		9,794	

Table 7: Predicted Generation and Capture Rates with Green Bin Implementation Only

\*Households

\*\*Excludes diapers and incontinence products

\*\*\*Assumes weekly garbage collection

# 7.3 Other Program Design Considerations

While the issues identified in Section 7.2 are key drivers of program diversion, there are a number of other issues that affect operating costs and public acceptance of Green Bin programs. They include factors such as collection containers, use of liners and co-collection of yard waste and food waste.

# 7.3.1 Collection Containers

For most municipal Green Bin programs, wheeled carts, commonly known as "Green Bins", are provided to participating households along with a small (typically 7.5 litre) kitchen-sized food waste container (see Figure 3 for examples).

Green Bins can come installed with a locking mechanisms on them to prevent access by vectors such as raccoons. Green Bins can range in size from 45 litres to 240 litres. The largest capacity carts are normally offered in municipalities co-collecting leaf and yard waste with food waste. Weight is a significant factor in determining collection container size. An 80 litre Green Bin can easily exceed typical municipal health and safety policies and collection by-law weight restrictions (i.e., normally 22 kg max) if filled with high moisture content waste (e.g., fruit, grape pressings or pet waste). As a consequence, most collection fleets picking up larger Green Bins utilize trucks equipped with a mechanical lift device known as a lift assist. The largest capacity bins (i.e., 240 litre) would normally only be picked up by fully automated collection vehicles using a mechanical arm to lift and dump the containers.

These choices have significant financial implications to a municipality's fleet and are discussed later in this report. Given that one 45 litre container is typically sufficient to meet the needs of the average householder, it is recommended that the City adopt this size of container as its program standard and provide additional containers on an 'as needed' basis. An exception to this recommendation would be if the City opted to move to automated cart collection in which case larger 80 litre bins would be more cost effective.



#### Figure 3: Examples of Proposed New Garbage and Organics Containers

### 7.3.2 Container Liners

As part of the City's plans to roll out a food diversion program, it will select a contractor to provide organics processing services or plan to build its own processing operations. The selected processing system and operating licence will ultimately determine the types of materials that can be included in the City's Green Bin program and any restrictions in collection methodology. Based on past experience in Ontario, it is likely that the contractor will not want, or be permitted by the Ministry of the Environment, Conservation and Parks (MECP), to accept food waste collected in plastic bags.

This limitation has two important impacts on the design of the City's Green Bin program:

- 1. It will prevent the City from collecting diapers and other sanitary products as part of its Green Bin program; and
- 2. It also means that food waste will need to be collected loose or with a non-plastic liner bag.

Most municipalities encourage their residents to use paper liners. This can take the form of lining a Green Bin with sheets of newspaper or paper bags that are designed to line the resident's Green Bin or kitchen food waste containers.

Some allow the use of certified compostable/biodegradable non-paper liners (see Figure 4 for examples of allowed certification logos). Use of the latter can be problematic because they can be difficult to differentiate from regular plastic grocery bags. However, restricting the use of liners to paper products can have a negative impact on participation rates, as most residents object to managing food waste in unlined containers and find the cost of paper bags to be an issue.

Allowing the use of compostable plastic bags inevitably results in some level of cross contamination with regular plastic bags, which may result in surcharges or fines from the composting facility or outright rejection of loads. In general, most Ontario municipalities opt to achieve higher levels of diversion by allowing residents to include both types of liners.

Should the City pursue this option, an additional promotion and education budget to educate residents and local stores on the correct types of bags should be considered for the program. It is recommended that input from the City's processing contractor be sought before a final decision is made.

### Figure 4: Compostable Liners



Certified Compostable Logos

Certifies that the bag is made from plant-based material and is tested to ensure it can compost fully.

# 7.3.3 Co-Collection with Yard Waste

Food waste and other types of organic waste can have very high moisture levels as noted above, compared to leaf and yard waste. As a consequence, composting facilities managing food waste will often use large volumes of leaf and yard waste as a bulking agent. This fact has led some municipalities, as shown in Table 5 above, to co-collect food waste and yard waste. In other instances, municipalities opt to collect leaf and yard waste separately and may or may not transport it to their organics processing facility for use as a bulking agent. Generally, favourable processing costs can be obtained if a municipality commits both their food and yard waste to the same facility because of the symbiotic nature of the waste streams.

That said, it is usually more cost effective to collect leaf and yard waste separately because of the significant difference in processing costs between the two materials (i.e., food waste composting costs are typically three times that of leaf and yard waste). It is recommended that this issue be considered as part of discussions with vendors developing processing solutions for the City prior to finalizing program details such as bin size.

# 7.3.4 Program Implementation and Communications

Green Bin programs have been successfully launched in numerous communities to date throughout Ontario. The Waste Management Strategy plan also noted that the most recent public survey undertaken by the City *"found that 67% of respondents favour the implementation of an SSO collection program"*. It also noted that, *"One of the most common responses when residents were asked about the top issues with respect to waste management was that too much organic material is being landfilled."* 

Nonetheless, these programs represent a significant change in the way waste is managed in the household and as such require careful pre-planning to ensure public concerns are addressed effectively and a smooth roll out is achieved. Past experience shows that successful programs have involved high levels of public engagement in advance of the program launch and throughout the first year of operations. For this reason it will be necessary for the City to allocate additional staff resources to the development, implementation and ongoing maintenance of the new program as further described in Section 9 of this report.

An analysis of recent program launches by other municipalities suggests the City also set a preliminary budget of \$0.90 per household per year as a baseline communications budget over a five year period starting in 2024 to support the program launch. This is a conservative amount compared with the recommendations of the Waste Management Strategy which cited a KPMG best practices report<sup>4</sup> recommending \$3 to \$4 per household for new program launches and an ongoing communications budget of \$1 per household. The City may also wish to consider the potential involvement of local partners like EcoSuperior and local schools in supporting communications about the new program and aiding in meeting elements of the Provincial policy statement related to the development of local food waste diversion options.

# 8. Fleet Modifications and New Technology

Roll out of a Green Bin diversion program will also have a dramatic impact on waste collection from single and multi-family households in the City. Green Bin collection is traditionally done using 45 litre carts and trucks fitted with either 'lift assist' tippers or automated collection arms. Mechanical assistance is necessary because the weight of the containers typically exceeds safe manual lifting limits.

Additionally, with the potential to divert over 30% of the residential waste currently collected by the City, consideration will need to be given to undertaking separate collection of the new waste stream or employment of split body vehicles to allow co-collection of garbage and Green Bin waste aboard the same truck but in separate compartments. Driver training will also be necessary irrespective of the selected collection system.

# 8.1 Separate Trucks versus Co-collection

The City currently collects garbage and blue bag recycling with separate fleets. Introduction of a third collection truck at the curb to collect Green Bin waste is an option but would run counter to the City's climate change policy goals and increase traffic congestion on City streets. Instead, it is proposed that the City begin purchasing split body side loading trucks that would allow for the co-collection of garbage and Green Bin waste, in separate compartments, onboard the same truck. Given that there is no change in the actual volume of waste being managed, there should be no need to change the number of trucks deployed by the City. Instead, it is recommended that split body trucks be procured by the City as it replaces its existing fleet in the coming years.

The City's waste collection fleet currently consists of 15 International packers and one ½ tonne dump box pickup truck. As noted in Section 3.3, the packers range in age from 2007 to 2016. It is anticipated that by the time the new Green Bin program is rolled out in 2025, all but two of the vehicles will have been replaced.

It should be noted that if the City commits to every other week garbage and weekly Green Bin collection, the varying collection schedules would require reworking existing collection routes and a period of adjustment by its collection crews. This exercise will also help with workload leveling across current routes and improve collection route efficiency.

<sup>&</sup>lt;sup>4</sup> Blue Box Program Enhancement and Best Practices Assessment Project, KPMG, 2007

# 8.2 Lift Assists versus Automated Cart Based Collection Service

Given that introduction of a Green Bin program necessitates use of carts with some sort of mechanical lift assist and that co-collection of garbage and Green Bin waste is the most likely collection methodology, a move to automated collection of garbage in carts should be considered.

Automated cart-based collection, or 'auto-cart' collection, is commonplace throughout much of the USA and Europe. It is becoming increasingly popular in Ontario with municipalities such as Toronto, Peel Region, Guelph, Timmins, Temiskaming Shores, Sault Ste. Marie and Bluewater Recycling Association having already made the switch. The benefits of auto-cart service include significant improvements in collection efficiency, worker safety and satisfaction, reductions in injuries and climate change impacts.



Figure 5: Lift Assist (left) and Automated Collection (right)<sup>5</sup>

Historically many municipalities have been reluctant to switch from manual collection because they collect Blue Box (blue bag) materials in a 'two stream' format (i.e., keeping fibres separate from containers). Switching to auto-cart collection typically involves shifting to 'single stream' Blue Box (blue bag) material collection (i.e., where the fibres and containers are fully co-mingled). For many municipalities doing so was not possible because their recycling facility was unable to accept co-mingled recyclables and single stream auto-cart programs exhibit high contamination problems.

However, the passage of O.Reg 391/21 will allow municipalities to transition out of the provision of residential recycling service across Ontario in the coming years. As municipalities prepare for this fundamental change in service, many are considering the opportunity to switch to auto-cart service for the continued collection of garbage and Green Bin materials. The City transitions out of the blue bag program in July of 2024 creating an ideal opportunity to roll out a fully automated Green Bin and garbage collection service in the following year.

# 8.2.1 Auto-cart Efficiencies

Auto-cart collection's ability to achieve significantly greater collection efficiencies over manual collection is well documented. Typically, single operator collection trucks are capable of achieving 650-850 stops per day depending on the streetscape and housing density. The same driver operating an automated

<sup>&</sup>lt;sup>5</sup> http://www.theglobeandmail.com/news/toronto/winningbidder-for-toronto-garbage-contract-no-stranger-tocontroversy/article559012/; http://www.guelphmercury.com/newsstory/2790723-challenges-encountered-onfirst-day-ofguelph-waste-cart-pick-up/

collection vehicle in the same conditions can easily exceed a route efficiency of 1,100-1,500 stops per day. The City currently achieves an average of 1,100 stops per day but does so with two operators on each truck and overtime costs, on average, of \$50,000 per year. Moving to automated trucks would allow the Section to reduce its net operating costs by as much as 16% or almost \$827,000 per year.

More importantly, a transition to auto-cart collection would significantly improve the safety of its drivers. The waste management industry, as a whole, pays amongst the highest WSIB premiums of any industry in Ontario. Over the last five years, the City has incurred average costs of \$200,000 per year as a result of WSIB claims and these costs continue to rise. Eliminating the manual collection service will go a long way to reducing these costs and protecting the associated staff.

# 8.2.2 Cost Implications of Lift Assists versus Automated Cart Systems

Whether the City opts for manual split body trucks with lift assists or automated split body trucks with cart collection arms, the base cost of the truck remains the same. Split body trucks with lift assists cost approximately \$55,000 more per vehicle than standard body trucks. By comparison a truck equipped with an automated arm would be approximately \$80,000 more per vehicle. If the City were to convert its entire fleet of 15 trucks to automated collection, the one-time incremental difference in the cost of the two types of vehicles would be \$360,000 (i.e., \$40,000 per vehicle). However, as noted above, switching to automated collection is expected to result in a conservative savings of almost \$827,000 per year. While lift assists offer protection to staff from injury, they are slower to load and operate and could result in increased overtime costs.

The savings offered by moving to auto-cart collection are significant but must also be weighed against the significant upfront costs of buying additional carts for garbage for each household and upgraded Green Bin carts capable of being picked up by automated collection arms. Careful advanced planning of routes and driver training is also required to successfully launch an auto-cart program. The planning cycle for a City-wide program launch is typically two years and requires a significant capital outlay. Nonetheless, the savings opportunities for local taxpayers make this option worth considering.

It is recommended, therefore, that the City move to auto-cart based collection for organic waste and garbage in concert with the roll out of its Green Bin program and that a redeployment plan for affected staff be developed to minimize the negative impact on the City's collection workforce. This recommendation is consistent with the Waste Management Strategy and other past reports. Should the City commit to moving to auto-cart collection in 2025, it is also recommended all vehicles purchased in the interim be procured to be auto-cart ready to minimize retrofit requirements.

# 8.3 Front End Loader Service

The City currently requires that multi-family properties store their garbage and blue bag recycling in locked sheds. Multi-family properties are eligible to receive collection of up to 3.75 m<sup>3</sup> (or 66 items) of waste per site at a time. Garbage is emptied manually by City staff, and recycling by the City's contractor, on the appropriate collection day.

Shed-based collection is not commonly practiced elsewhere in the waste industry but offers a number of benefits such as site security, vector control and protection from the elements. By comparison, standard practice in the industry is to provide front end loader (FEL) or cart-based service in this sort of environment. Should the City opt to provide Green Bin service to its multi-family properties,

consideration should be given to explore moving to FEL or cart-based service at the same time. A preliminary assessment of the City's multi-family garbage collection costs suggests there is opportunity to reduce operating costs and improve driver safety by eliminating direct handling of these sorts of waste volumes.

Recognizing that the City has required property owners to install these sheds at their cost as a condition of service, conversion to an FEL or cart-based system will require extensive discussion with affected property owners. It is recommended that the City develop an inventory of its multi-family properties prior to implementation of Green Bin service in the City, assess the potential savings of converting suitable properties to either form of automated service and report back to City council with recommendations on future garbage and organic waste collection standards for this sector. Consideration should also be given to reviewing local businesses serviced by the City to assess the potential of converting suitable properties over to FEL or cart-based collection service for the same reasons.

# 9. Staffing Implications

The City's Solid Waste and Recycling Services consists of a manager, two supervisors, a waste diversion coordinator and the associated operating staff as outlined in Section 3.4. Implementation of a Green Bin program and automated cart-based collection will require significant changes to how waste is currently managed throughout the City. The current organizational structure of Solid Waste and Recycling Services can not support the successful implementation and sustained operation of these new programs. As outlined in Section 7.3.4, different staffing roles are required to support the roll out and long-term success of the new programs including:

- One permanent full time Promotion & Education Coordinator to design, implement and maintain the ongoing communications that will be required to ensure success of our integrated solid waste system;
- One permanent full time Solid Waste Compliance Officer to support public compliance and proper ongoing curbside segregation of waste streams (and also address existing problems like sharps in the waste stream);
- One temporary full time Solid Waste Project Coordinator to assist in coordinating program development and implementation; and
- Two temporary full time Customer Service Advisory staff to assist with program rollout and respond to public questions/concerns.

The temporary full time positions are expected to be two to three year contracts subject to final decisions on the program design and implementation schedule.

These recommendations are consistent with the Waste Management Strategy which recommended hiring a promotion and education coordinator, by-law enforcement officer and support staff to assist with program implementation. The new roles are also consistent with other municipalities' experience in rolling out similar programs which has demonstrated that adequate resourcing is required for implementation and long-term success of solid waste programing. These findings are supported by waste diversion program performance data collected annually across the province which has shown a direct linkage between appropriate staffing resources and programs with high waste diversion and low contamination rates.

Despite the need for these new staffing roles, the proposed conversion to automated cart-based collection is projected to result in a net reduction of up to 5.34 FTEs in Solid Waste and Recycling Services. The main driver in this reduction is that automated cart collection only requires one driver per collection vehicle, as opposed to the current two-person crew required for manual collection. Detailed discussion will be required with the Human Resources and Corporate Safety Division and the union on these proposed changes.

# **10.** Processing Options

Numerous technologies have been trialed to process various types of food and organic wastes. Generally, technologies fall into two categories including aerobic (decomposition in the presence of oxygen) and anaerobic (decomposition in the absence of oxygen) systems. Each has their advantages and disadvantages.

In the fall of 2021, the City released a Request for Information (RFI) to solicit information about technologies and capacity from prospective vendors. The City received feedback from vendors representing the primary types of composting technologies confirming their interest in providing a solution for the City.

The following section provides a brief overview of technologies outlined by the respondents and others that the City may wish to consider. Capital costs are presented as a cost per tonne (\$/MT) of annual design capacity (i.e., capital construction cost divided by the annual design capacity of the facility). Operating costs are presented as a cost per tonne (\$/MT) of Green Bin waste managed.

# **10.1 Home-Based Solutions**

Home based solutions for food and organic waste traditionally involve methods such as backyard composting or more high-tech approaches such as garburators (in-sink grinders), vermicomposters and dehydrators. Garburators are not permitted under the City's sewer use by-law.

Backyard composting is using the natural process of decomposition to convert organic material into "humus", more commonly known as 'compost', which is a rich soil amendment. The City currently has a "Composting at Home" program which involves subsidization and distribution of backyard composters through EcoSuperior. This program distributes an average of 241 units per year and is estimated to divert approximately 1,992 tonnes of organic waste annually. Backyard composters are, however, limited in their efficacy because repeated studies have shown that residents rarely use them during the winter months. Additionally, composting certain food wastes (e.g., bones) in a home environment can be challenging.

Garburators were commonly used throughout the 60's and 70's. While ideal for apartment settings, they were found to cause significant problems to municipal wastewater collection and treatment systems. As a consequence, they have been banned in many parts of Canada including under the City's sewer use by-law.

Vermicomposters (composting using worms in a box) were offered to residents as an alternative. These systems, while technically viable, require close monitoring and only ever appealed to 2-3% of the population.

Food waste dehydrators are an example of a more 'high-tech' approach to managing food waste at home. This is still a somewhat new approach that to date has not been widely implemented in municipalities. Food waste is ground, aerated, heated and in some cases, compressed into a block. This process decomposes and sterilizes the food waste reducing the volume of food waste by about 90%. The resulting material can be used as a soil amendment<sup>6</sup>. As an example, FoodCycler offers its FC-50 for sale in partnership with Vitamix at a retail of \$450<sup>7</sup>.





Each of these technologies represents a viable means of managing certain food and organic wastes in a home setting. However, while the Policy Statement does allow for consideration of alternatives, it does prioritize curbside collection of a food and organic for single family homes. For this reason, it is recommended that the City focus on provision of a curbside collection system but promote the use of this class of options as an alternative for homeowners who are unable or unwilling to use a cart-based collection system.

# 10.2 Open Windrow Composting

Open windrow composting is one of the most common methods of processing solid organic waste in North America. Its prevalence is mainly due to its ability to manage a wide range of feedstocks with minimal infrastructure requirements and at a low operating cost. Windrow composting involves forming the feedstock into piles known as windrows approximately 30 metres long with a typical height of 2.5 metres and base of 4 metres. The composting process goes through two stages known as the active or 'thermophilic' phase followed by a less active stage known as the 'curing' phase. The compost is then screened to remove contaminants and produce a uniformly sized material for market.

<sup>&</sup>lt;sup>6</sup> FoodCycler. How it Works: The Science behind the Magic. https://www.foodcycler.com/how-it-works

<sup>&</sup>lt;sup>7</sup> Vitamix. https://www.vitamix.com/ca/en\_us/shop/compact-food-recycling?COUPON=06-

<sup>860&</sup>amp;cjevent=20b69afa700f11ec825d1ccc0a82b82c&cjdata=MXxOfDB8WXww

<sup>&</sup>lt;sup>8</sup> FoodCycler Operating Manual. https://www.foodcycler.com/how-it-works

Windrows are commonly used for leaf and yard waste but can also be used for a range of food and organic waste. The City currently uses open windrow composting to manage its yard waste. Incorporation of food and organic waste does, however, introduce additional challenges in managing odour and run off (commonly known as leachate) and requires the availability of sufficient bulking material (such as yard waste) to mix with and ensure the right moisture levels are achieved.



#### Figure 7: Open Windrow Composting

# **10.3 Aerated Static Piles and Membrane Covered Windrows**

Similar to open windrow composting, aerated static pile or membrane covered windrow systems typically involve mixing Green Bin waste with ground yard waste and arranging it in either a series of piles or windrows overtop of a perforated concrete pad. Air is distributed by a blower and manifold through a network of pipes under the pad to force air up through the pile or windrow as shown in Figure 8. They often incorporate computerized monitoring and control equipment for oxygen, heat and moisture levels, as well as a collection system for water and leachate.

In more basic systems, the perforated piping is laid directly into the pile as it is built up. This approach is, however, significantly more labour intensive and is typically only used for small volume operations or where labour is inexpensive.



Depending on the complexity of the system and type of material being composted, the piles may simply be covered with finished compost (see Figure 9) or a membrane to trap and contain odours from the decomposing material. Air flow can also be directed positively, negatively or bi-directionally to control fugitive odours and manage oxygen and moisture levels.



#### Figure 9: Positive and Negative Aeration<sup>10</sup>

Based on a literature review, the capital costs for typical food waste aerated static pile or windrow systems range from \$140 to \$180/MT of design capacity, subject to the size and complexity of the system. Operating costs for such a facility with an annual capacity of approximately 10,000 MT/yr or less would be in the order of \$45 to \$65/MT.

<sup>&</sup>lt;sup>9</sup> W. L. Gore & Associates. The Principle of Organic Waste treatment with GORE<sup>®</sup> Cover. https://www.gore.com/sites/g/files/ypyipe116/files/2016-04/gore-cover-composting-en.pdf

<sup>&</sup>lt;sup>10</sup> Environment Canada. Technical Document on Municipal Solid Waste Organics Processing. 2013

### **10.4 In-Vessel Aerobic Systems**

In-vessel composting systems typically process Green Bin waste within an enclosed system, such as a rotating drum, aerated box or tunnel, or aerated concrete channels within an enclosed building. These systems are normally modular in design but are typically used for larger volumes of Green Bin waste because they can be capital intensive compared to outdoor systems. They typically involve an intensive aerated composting phase lasting two to four weeks within the enclosed system followed by several months of standard open windrow composting outside to 'cure' or stabilize the resulting compost. Managing the initial, odorous phase of the composting process within an enclosed system has obvious benefits. It allows for optimal control of environmental conditions such as temperature, moisture, airflow and odours.

Aerobic channel systems include both static pile and actively turned systems. Static pile systems are very similar to outdoor aerated static piles except that the indoor systems consist of concrete channels three to 10 metres wide and upwards of 50 metres long with aerated concrete floors running the length of the channel and reside within a climate-controlled building. Actively turned systems have solid concrete floors in the channels and use a compost turning machine to turn the compost to aerate it. The compost turner will either be mounted on an overhead gantry crane or sit on rails running the length of the channel walls.

In some systems, the channels are replaced by a series of enclosed tunnels with airtight doors at either end to provide better climate and odour control. Given the level of capital investment required, this type of technology is more suitable for facilities that process more than 25,000 MT/yr.

Modular versions of these types of in-vessel systems use enclosed bins or containers. Organic waste is loaded into the container through doors located on either the top or side. Once filled, the containers are sealed and moved to an outdoor pad and connected to a stationary aeration system. Air is pumped into the base of the container and exhausted through the top. The exhausted air can then be collected and treated if desired. These systems are most appropriate for facilities that process less than 15,000 MT/yr but have a limited track record in managing municipal food waste.

The estimated capital cost for an in-vessel system is between \$330 to \$585/MT of annual design capacity, depending on the size and type of in-vessel system used. Operating costs tend to be in the range of \$50 to \$100/MT, with per tonne operating costs decreasing as tonnage increases due to economies of scale. Operating costs for such a facility with an annual capacity of approximately 10,000 MT/yr or less are estimated to be in the order of \$80 to \$100/MT.

# **10.5** Anaerobic Digestion

Anaerobic digestion (AD) is a relatively new method for managing Green Bin waste but is the basis of standard sewage treatment operations. AD is a biological process where organic wastes are broken down by anaerobic microorganisms in the absence of, or low levels of, dissolved oxygen. Energy (in the form of heat and 'biogas') are outputs of anaerobic digestion. For every pound of organic matter digested, approximately 4 cubic metres of biogas are produced. Biogas can contain from 50% to 70% methane gas, depending on the type of material being digested. The remainder of the biogas consists of CO<sup>2</sup> and trace volumes of sulfur compounds. There are many different types of anaerobic digesters, and while the time required to completely process the waste can vary, this initial process typically has an

average duration of eight weeks. AD systems can be generally categorized into "Wet" or "Dry" systems. Wet (or low solids) AD systems typically operate at liquid to solids level of less than 10% solids. Dry AD systems have higher solids levels.

Figure 10 depicts a typical wet AD system. Green Bin feedstock is debagged (i.e., if collected in plastic bags) and shredded and fed into a mixing tank along with 'make up' water. Lightweight materials such as plastics are skimmed off while heavier materials such as glass and stones settle to the bottom and are removed prior to introduction of the slurry to the digestion process. The slurry is continuously stirred in the digester and biogas is removed from the tank and burnt to convert it to heat and 'green' energy. The processed waste liquid is dewatered to produce a semi-solid material called 'digestate'. The liquid is then treated and discharged as effluent. The digestate is then either sent to landfill or a composting facility where it will need to be reprocessed with leaf and yard waste to produce a finished product. Direct land application is possible subject to provincial licensing restrictions and public acceptance. Currently the City's digestate from its wastewater treatment plant (WWTP) is landfilled.



### Figure 10: Typical Wet Anaerobic Digestion Process Flow<sup>11</sup>

AD systems are popular because of their ability to handle a full range of Green Bin materials (including pet waste, diapers and incontinence products) and allow residents to use non-biodegradable plastic bags as container liners. Unfortunately, they are also the most expensive composting systems to build and operate and typically more cost competitive for quantities approaching 50,000 MT/yr.

The approximate capital cost for an AD system would be \$1,000 to \$1,500/MT of annual design capacity and operating costs would be in the range of \$100 to \$200/MT. It is expected that the capital and operating costs for a facility sized to meet the City's requirements would be in the higher end of the cost range due to low economies of scale.

<sup>&</sup>lt;sup>11</sup> Environment Canada, Technical Document on Municipal Solid Waste Organics Processing, 2013

### **10.6 WWTP Co-digestion**

More recently, municipalities have been considering the feasibility of co-digesting Green Bin waste at their existing WWTPs. This option can be appealing if the WWTP has spare capacity as a means of minimizing capital construction costs. Subject to the capacity limits of the existing WWTP, such systems include equipment for the receiving, pre-treatment of the Green Bin waste and injection of the resulting slurry into the existing WWTP digester. Figure 11 illustrates a typical pretreatment system for Green Bin waste.

The capital cost to update a WWTP facility to accommodate food waste processing is estimated to be between \$10M to \$20M, or between \$1,000 to \$1,500/MT of design capacity with operating costs similar to that of an AD facility. It is expected that the capital and operating per tonne costs for a facility sized to meet the City's requirements would be in the higher end of the cost range due to low economies of scale.



### Figure 11: Typical Pre-treatment System for Green Bin Waste<sup>12</sup>

# **11. Processing Capacity and SWRF Infrastructure Requirements**

Based on the program design assumptions noted earlier, it is expected that the City will require a minimum of 7,300 MT/yr of food waste processing capacity to service its immediate single-family and multi-family needs. Should it expand service to local businesses and institutions, and with population growth, additional capacity may be required in the future.

Expansion of leaf and yard waste collection services is also expected to capture an additional 920 MT/yr of additional material which would need to be managed at the SWRF composting operations. The

<sup>&</sup>lt;sup>12</sup> Environment Canada, Technical Document on Municipal Solid Waste Organics Processing, 2013

current operations are licensed to receive up to 6,000 MT/yr so accommodating additional quantities of yard waste at the City's SWRF would not be an issue subject to negotiation of costs with the current contractor.

As noted in Section 10.5, the choice of Green Bin processing technology that the City procures may result in the operator needing the City's leaf and yard waste for use as a bulking agent in their operation. If digestate from anaerobic treatment of Green Bin waste is to be accommodated at the SWRF, the current ECA would need to be amended to accommodate this operation on site. Similarly, operation and maintenance of the composting pad would need to be scaled up to accommodate the new volumes. Consideration may also need to be given to construction of a highway trailer loading ramp and pad if ground yard waste is to be shipped offsite for use as a bulking agent at the Green Bin processing facility. These issues will be a point of future discussions with prospective processing vendors to determine which option is the best.

Recognizing that the City landfills an average of 82,561 MT of waste per year, the proposed program has the potential to reduce landfill tonnages by over 10%. Institution of bag or item limits will also encourage diversion of blue bag materials, which could result in a further reduction in landfilling requirements. A review of landfill staffing and operational requirements in future years may be necessary. Additionally, should the City opt to move to automated cart collection, consideration will need to be given to operational considerations such as specialized truck maintenance and construction of purpose-built storage areas for carts at the SWRF.

# **12.** Evaluation of Processing Options

# 12.1 Methodology

The various technology options were comparatively evaluated against a suite of weighted criteria that considered environmental, social, financial and technical factors as well as risk. This evaluation included:

- Providing a relative weighting of the various evaluation criteria based on their level of criticality in the decision making process;
- Assessment of the technology against each criteria;
- Assignment of a value on a scale of 1 to 5 for the technology based on the assessment; and
- Calculating the numerical score based on the weighting.

Table 8 presents the evaluation criteria and the definitions for the evaluation scale. Table 9 provides the relative weighting of the evaluation criteria with rationale.

An assessment of technologies based on the evaluation criteria is provided in Section 12.2.

		Evaluation Scale
Criteria	1 (Worst	5 (Best Performance)
	Performance)	<i>y</i> 5 (best renormance)
Environmental		
GHG Emissions Reduction	Least emissions reduction	Most emissions reduction
Diversion Potential	Least diversion potential	Most diversion potential
Social		
Odour Avoidance	Greatest risk of odours	Least risk of odours
Customer Convenience	Least customer convenience	Greatest customer convenience
Traffic Impact Avoidance	Most traffic impacts	Least traffic impacts
Financial		
Capital Cost	Highest Cost per Annual Tonne Capacity	Least Cost per Annual Tonne Capacity
Operating Cost	Highest Cost per Annual Tonne	Least Cost per Annual Tonne
Technical		
Proven Technology	Not a proven technology / relatively new technology	Widely used technology
Scalability (for population growth)	Limited scalability; requires significant upgrades to scale	Very scalable; modular technology
Integration with Municipal Programs	Limited ability to integrate with other municipal programs	Able to integrate or integrate other municipal programs
Footprint	Large footprint required	Small footprint required
Risk Management		
Compliance with Policy Statement	Not fully compliant	Fully compliant
Approvals	Minimal approvals needed	Greatest level of approvals required
Ability to meet Timeline	Unable to meet diversion timeline	Comfortably able to meet timelines with little risk
Technical Complexity	High degree of complexity	Low degree of technical complexity

# Table 8: Evaluation Criteria and Scale

Criteria	Weighting (1 to 5)	Weighting Rationale
Environmental		
GHG Emissions Reduction	3	The potential for reducing greenhouse gas emissions is considered a very important component of this program.
Diversion Potential	3	The potential for diverting the most waste from disposal is considered a very important component of this program.
Social		
Odour Avoidance	3	Odours from a waste processing facility can be very disturbing to a community. As such, this criterion has an elevated level of importance.
Customer Convenience	3	Overcoming barriers to participation is a key element to the success of a Green Bin program. As such, this criterion has an elevated level of importance.
Traffic Impact Avoidance	1	The type of technology used will have little impact on potential traffic impacts, which would be expected to be minor. As such, this criterion has a relatively low weighting.
Financial		
Capital Cost	5	The affordability of the technology is a key factor in its suitability for the municipality. As such, this criterion has the maximum level of importance.
Operating Cost	5	The affordability of the technology is a key factor in its suitability for the municipality. As such, this criterion has the maximum level of importance.
Technical		
Proven Technology	3	To limit risk, the municipality wishes to use technologies that have a proven track record, including within Ontario. Widely used technology is a key factor in its suitability for the municipality. As such, this criterion has an elevated level of importance.
Scalability (for population growth)	1	Ability of the technology to accommodate future growth is important and is considered in the evaluation. However, given the opportunity to manage facility sizing during detailed design, this criterion is weighted relatively lower than the others.
Integration with Municipal Programs	1	Ability of the technology to integrate with other municipal programs is important and is considered in the evaluation. However, its weighting is relatively lower compared to the other criteria.
Footprint	1	The potential footprint of the technology is important and is considered in the evaluation. However, its weighting is relatively lower compared to the other criteria.
Risk Management		
Compliance with Policy Statement	5	The Municipality seeks to ensure compliance with the Province's Policy Statement. As such, the technology's ability to help ensure this compliance has the maximum level of importance.
Approvals	3	The quantity and complexity of required approvals can increase the length of time required for implementation as well as lead to increased design and engineering costs. As such, this criterion has an elevated level of importance.
Ability to meet Timeline	5	The ability for the technology to be implemented within the Municipality's desired timeline is critical. As such, this criterion has the maximum level of importance.
Technical Complexity	3	The complexity of the technology can increase the length of time required for implementation as well as lead to increased design and engineering costs. As such, this criterion has an elevated level of importance.

# Table 9: Technology Evaluation Scale and Weighting

# **12.2 Technology Assessment**

This section summarizes the assessment of the primary types of food and organic waste processing technologies considered in this report.

### **12.2.1** Environmental Considerations

#### 12.2.1.1 Greenhouse Gas Emissions

Composting or digesting Green Bin waste in controlled conditions reduces greenhouse gas (GHG) emissions compared to landfilling. Organics disposed in landfill break down anaerobically and generate landfill gases, including methane gas. Methane is a potent GHG with 25 times as much global warming potential compared to carbon dioxide. Methane is known as a short-lived climate pollutant. As such, reducing the emission of short-lived climate pollutants can reduce the atmospheric levels of GHGs at a much quicker pace than comparable reductions from longer-lived GHGs. This means that actions that reduce these particular GHGs can have significant benefits for curbing near-term climate warming<sup>13</sup>.

The anticipated GHG reduction potential for home-based composting systems is low compared to the other options. While home-based technologies would avoid the GHG emissions that are generated by the transport of organics to a processing facility, the potential diversion through such an approach is likely to be less compared to a centralized approach. Therefore, a greater proportion of the City's organics would continue to be landfilled and potentially release methane emissions to the atmosphere even with the City's landfill gas collection system.

The anticipated GHG reduction potential is expected to be greater in a centralized Green Bin system because it has greater potential for diverting Green Bin waste from disposal. GHG reduction is greatest with anaerobic digestion or WWTP co-digestion as it allows for the capture and use of biogas and thus the offsetting of fossil fuels. Aerobic composting processes result in uncontrolled generation of carbon dioxide with limited potential for capture of emissions. Co-digestion at the City WWTP does have the potential to involve an additional trucking element to ship the resulting digestate to an aerobic composting facility or landspreading operation and would also potentially require separate haulage of the slurry and residue depending on the set up. This additional haulage would increase GHG emissions for this option. Similarly, any option involving setup of a facility outside of the City SWRF will involve additional trucking of collected materials and resultant residue.

Evaluation Results - GHG Emissions Reduction									
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion			
1	2	2	3	3	5	4			

<sup>&</sup>lt;sup>13</sup> Environment Canada. Greenhouse gas emissions: drivers and impacts. https://www.canada.ca/en/environmentclimate-change/services/environmental-indicators/greenhouse-gas-emissions-drivers-impacts.html.

### 12.2.1.2 Diversion Potential

Of the various technologies under consideration, the home-based composting methods are expected to have the lowest diversion potential because of the voluntary nature of their use. Diversion through backyard composting would rely heavily on participation which would wane during winter months. Meat and bone scraps also cannot be processed in many home-based systems.

A centralized composting program using any of the aerobic and anaerobic technologies described above would have a greater diversion potential than home-based systems as they could potentially allow a municipality to compost a broader spectrum of organic waste such as pet waste and diapers.

Evaluation Results - Diversion Potential									
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion			
1	3	3	3	3	5*	5*			

\* The score of 5 is based on the assumption that the resulting digestate from these technologies is successfully diverted from landfill.

### 12.2.2 Social Considerations

### 12.2.2.1 Odour Potential

Green Bin waste processing has significant potential to produce odours if managed incorrectly. Homebased approaches such as backyard composting can produce odours if the feedstock mix is unbalanced or if there is insufficient aeration. While the level of odour generation would not impact the broader neighbourhood, it can solicit complaints and discourage participation.

Windrow and static pile composting systems also have the potential for odour issues, particularly during the turning of windrows. These impacts can be mitigated through proper operational procedures and by siting of the processing site away from possible receptors (e.g., households). Membrane covered systems are less likely to generate odours because their design typically includes an emissions collection and treatment system such as a 'biofilter'.

The enclosed nature of in-vessel and digestion technologies tend to lower the risk of odours escaping from the composting or digestion process. Additionally, these facilities often have odour control systems to minimize the risk of fugitive odours but these sites can still generate odours and site location is a key factor in odour management. Co-digestion at the City WWTP does have the potential to involve an additional trucking element to ship the resulting digestate to an aerobic composting facility or landspreading operation which could result in additional odour generating potential. An AD facility may also have similar trucking requirements depending on how the digestate is disposed.

Evaluation Results - Odour Avoidance										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
2	3	3	4	4	5	4				

### 12.2.2.2 Customer/Resident Convenience

Waste diversion programs require a level of convenience for the resident or "customer" to be successful. Home-based systems require active participation by homeowners and, as a result, tend to appeal to a limited portion of the population. Backyard composters, for example, are known to generally not be used during winter months. Curbside collection systems based on weekly collection are common throughout Ontario and are generally found to be the most convenient option for managing Green Bin wastes. Anaerobic digestion and co-digestion options offer the added convenience of potentially being able to accept diapers.

Evaluation Result - Customer/Resident Convenience										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
1	3	3	3	3	4	4				

### 12.2.2.3 Traffic Impacts

Home-based technologies would not have any traffic impacts as the food waste would be managed on the homeowner's property. Co-collection of Green Bin waste with garbage would also mitigate any potential implications associated with a curbside collection program. Haulage of the collected materials to the associated processing facility does have the potential to have traffic impacts but cannot be fully evaluated until the City selects a vendor and processing site location. AD facilities and co-digestion at the City WWTP have the potential to involve additional trucking elements to ship the resulting digestate to an aerobic composting facility or landspreading operation and residue to the landfill.

Evaluation Results - Traffic Impacts										
Home-based Solutions	Home-based Solutions Open Windrow Aeration Static Pile/Windrow Membrane Covered Aeration Systems In-vessel Aerobic Composting Anaerobic Digestion WWTP									
5	4	4	4	4	4	3				

### **12.2.3** Financial Considerations

### 12.2.3.1 Capital Cost

The capital costs for the home-based solutions are high relatively compared with certain other technologies under consideration on a cost per tonne diverted basis. For example, the estimated capital cost of distributing a dehydrator to 75% of households is approximately \$14.5M. The anticipated lifespan of the appliance is unclear. It is, however, reasonable to assume that they will have a similar lifespan to most household appliances after which a second capital investment will be required.

Capital costs are lowest for the windrow-type technologies, generally in the order of \$150/MT of annual design capacity. Capital costs are moderate for in-vessel type technologies, ranging between \$300 to \$585/MT of annual design capacity. The digestion technologies would have the highest capital cost, ranging between \$1,000 to \$1,500/MT of annual design capacity. In all cases, the range depends largely on the design capacity and is generally lower with larger scale facilities. The small volume of organic

waste available from the City is expected to cause these systems to be built out at the high end of their cost bands.

Evaluation Results - Capital Cost									
Home-based SolutionsOpen WindrowAeration Static Pile/ WindrowMembrane Covered Aeration SystemsIn-vessel Aerobic ComposingAnaerobic DigestionWWTP Co-digestion									
1	5	5	5	3	1	1			

# 12.2.3.2 Operating Cost

Operating costs for home-based solutions are the lowest of the systems under consideration because they rely on the resident to undertake the work. In all other cases, costs are incurred by the City for both collection and processing. Operating costs for windrow-type technologies are generally low (\$50 to \$200/MT).

Operating costs for membrane-covered and in-vessel aerobic composting systems are generally higher than windrow-type technologies due to the operational and maintenance requirements of the facility but become more cost competitive in larger capacity operations. Digestion type technologies generally have a higher operational cost (\$100 to \$200/MT) than the other technologies because of the complexity of their operations. The small volume of organic waste available from the City is expected to cause these systems to operate at the high end of their respective cost bands.

Evaluation Results - Operating Costs										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
5	4	4	3	3	1	1				

# 12.2.4 Technical Considerations

### 12.2.4.1 Proven Technology

Home-based technologies such as backyard composting are well-established practices within their inherent limitations. Food dehydrators and similar in-house options are relatively new technologies but pilots in the surrounding communities of Thunder Bay are reportedly generating positive results.

With the exception of WWTP co-digestion, the technologies under review are all commonly used for managing Green Bin waste. The open windrow, however, is more suitable for leaf and yard waste rather than household organics. WWTP co-digestion is a known practice but has not been widely implemented in Ontario.

	Evaluation Results - Proven Technology										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion					
4	3	5	5	5	5	3					

### 12.2.4.2 Scalability for Population Growth

Home-base practices can certainly be scaled to meet the homeowner's needs provided their property or household has sufficient space.

Windrow composting operations can be easily scaled up subject to possible space constraint issues since they require the largest footprint of the various options. Static pile and membrane-covered systems have similar issues but benefit from the flexibility of their design and slightly smaller footprint. The modular nature of most in-vessel aerobic composting technologies make this type of technology well suited for scalability.

Anaerobic digester and co-digestion options generally have some degree of modularity to their design but their complexity makes expansion more complicated. This concern can be mitigated through appropriate capacity planning during the design process.

Evaluation Results - Scalability										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
4	4	4	5	5	3	3				

### 12.2.4.3 Integration with Municipal Programs

Home-based solutions have good potential for integration with existing municipal programs as a complimentary option. Technologies such as food dehydrators and worm composting have potential for use in certain types of housing such as multi-residential buildings but are not likely to be viable solutions for the City's IC&I sector.

Any of the aerobic composting technologies could be easily integrated into the City's existing yard waste composting operation. This approach would minimize the need to ship materials elsewhere if the Green Bin waste was co-collected with garbage since both materials would be hauled to the City's landfill. The City's yard waste would also be required as a feedstock for the composting process making this approach particularly appealing.

The digestion technologies would not be suitable for the management of yard waste and would, therefore, require separate processing. Co-digestion of Green Bin waste at the City's WWTP would potentially allow for its integration into the City's wastewater treatment system. City staff responsible for the WWTP have indicated the facility is at capacity. Expansion of the system would, therefore, be necessary to accommodate the additional material volumes. As noted earlier, the resultant digestate would still need to be managed separately as it cannot be landfilled if these options are to comply with the Provincial Policy Statement.

Evaluation Results - Integration with Municipal Programs										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
3	5	5 5 5 5 3 4								

### 12.2.4.4 Footprint

Home-based technologies require minimal footprint subject to their limited ability to manage the full range of materials requiring diversion under a food and organic waste diversion program.

Windrow composting systems tend to require the largest footprint of the technologies being reviewed as noted under Scalability considerations. Static pile and membrane-covered aerated systems require a somewhat smaller footprint. In-vessel aerobic composting technologies have a similar footprint or larger compared to a membrane-covered system depending on the specific technology used and any required infrastructure. Digestion technologies tend to have the smallest footprint but if the resulting digestate needs to be aerobically composted afterwards, the resulting footprint can end up being comparable.

Evaluation Results - Footprint										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
5	1	1	4	3	3	3				

### 12.2.5 Risk Management Considerations

### 12.2.5.1 Compliance with Ontario Food and Organic Waste Policy Statement

As noted earlier in this report, the Policy Statement requires that the City provide curbside collection for food and organic waste to single-family dwellings in the urban settlement area and achieve 50% waste reduction and resource recovery of food and organic waste by 2025. It does, however, allow for the use of alternative systems provided the same diversion level can be achieved. Unfortunately, there is an absence of curbside performance data on the efficacy of home-based solutions as the sole means of diverting Green Bin waste at a municipal or city level.

As previously noted, the Policy Statement requires diversion of 50% of the available food and organic waste. Managed correctly the various aerobic and anaerobic technologies should be able to produce a finished product that can be diverted from landfill. Anaerobic systems and options involving co-digestion at the WWTP produce a digestate which may require additional treatment and/or permitting to be diverted to beneficial use.

Evaluation Results - Compliance with Ontario Food and Organic Waste Policy Statement										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
1	5	5	5	5	4	4				

### 12.2.5.2 Permits and Approvals

Home-based solutions generally do not require any permits or approvals making them one of the easiest options to implement.

All of the other technologies under review will require a valid Environmental Compliance Approval (ECA) from the Ministry of Environment, Conservation and Parks (MECP). As part of the ECA application review process, the Ministry would consider the following objectives for composting facility management:

- Prevention and control of off-site environmental impacts, especially odour, water contamination, dust, noise and vermin and vectors;
- Protection of public health;
- Prevention of emergency situations;
- Anticipation of seasonal effects that may impact the composting process; and
- Production of compost that meets the Ontario Compost Quality Standards<sup>14</sup>.

Studies and documentation that describe how a composting facility siting and design will meet these objectives (e.g., design and operations plan, contingency plan, odour impact assessment) would be required as part of the ECA application. Generally, the simpler options, such as open windrow systems and technologies that can be sited at existing waste management facilities, will be easier to get permitted provided there are no pre-existing issues at those locations.

Evaluation Results - Permits and Approvals										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
5	1	1	1	1	1	1				

### 12.2.5.3 Ability to Meet Timeline

Roll out of one or more home-based options as a supplementary program is not expected to be an issue, subject to resident interest given that the City already provides subsidized backyard composters through EcoSuperior.

The windrow-style technologies have the greatest potential to meet the City's timelines as the capital construction requirements are not complex. Potential integration with the City's existing composting operations may aid in meeting this timeline, however, the technical feasibility of this would need to be further examined.

Both in-vessel aerobic composting and the digestion technologies should be able to meet the City's timelines barring any unforeseen delays. The need to undertake feasibility studies and risk of unforeseen delays associated with getting required approvals and undertaking construction amidst a pandemic, however, makes these higher risk options.

	Evaluation Results - Ability to Meet Timeline									
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion				
1	5	5	5	4	3	3				

<sup>&</sup>lt;sup>14</sup> Government of Ontario. Guideline for the production of compost in Ontario. https://www.ontario.ca/page/guideline-production-compost-ontario.

### 12.2.5.4 Technical Complexity

Technical complexity increases the risk of implementation delay and operational failure. The windrowstyle aerobic composting technologies have the least technical complexity of the technologies being reviewed. In-vessel aerobic composting has increased technical complexity compared to the windrow methods, followed by the digestion technologies which are most complex. Home-based solutions are also of limited technical complexity from the perspective of design and operation requirements of the City.

	Evaluation Results - Technical Complexity										
Home-based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co-digestion					
5	5 5 4 4 3 2 1										

# **12.3 Evaluation Summary**

As outlined in Section 12.1 Methodology, the scores for each technology are multiplied by the assigned weighting for the relevant criterion to arrive at a weighted score. Table 10 presents the weighted scores of each technology for each criterion and in total. The technology with the highest score is the membrane-covered aeration system, followed by the open windrow and aerated static pile systems. Based on the review, the advantages of the membrane-covered aeration system include:

- avoids generation of methane and controls fugitive emissions better than open windrows;
- capital and operating costs are reasonable based on the anticipated processing volumes;
- proven technology and commonly used in Ontario;
- can be easily integrated into the City's composting operations;
- good flexibility with respect to the required footprint and scalability; and
- low technical complexity should help to ensure the design, approvals and construction process will occur within the City's required timeline.

Criteria	Home- based Solutions	Open Windrow	Aeration Static Pile/ Windrow	Membrane Covered Aeration Systems	In-vessel Aerobic Composting	Anaerobic Digestion	WWTP Co- digestion			
Environmental										
GHG Emissions Reduction	3	6	6	9	9	15	12			
Diversion Potential	3	9	9	9	9	15	15			
Social										
Odour Avoidance	6	9	9	12	12	15	12			
Customer Convenience	3	9	9	9	9	12	12			
Traffic Impact Avoidance	5	4	4	4	4	4	3			
Financial										
Capital Cost	5	25	25	25	15	5	5			
Operating Cost	25	20	20	15	15	5	5			
Technical						-				
Proven Technology	12	9	15	15	15	15	9			
Scalability (for population growth)	4	4	4	5	5	3	3			
Integration with Municipal Programs	3	5	5	5	5	3	4			
Footprint	5	1	1	4	3	3	3			
Risk Management	_					-				
Compliance with FOW Policy Statement	5	25	25	25	25	20	20			
Permits and Approvals	15	3	3	3	3	3	3			
Ability to meet Timeline	5	25	25	25	20	15	15			
Technical Complexity	15	15	12	12	9	6	3			
Total Score	114	169	172	177	158	139	124			

### Table 10: Weighted Score of Green Bin Processing Technologies

# **13.** Environmental Sustainability Implications

The City has produced a number of strategies and plans focusing on climate change, energy conservation and environmental sustainability. These initiatives are broadly supported through the City's current Strategic Plan. Introduction of a Green Bin program in the City has the potential to help the City meet its goals as outlined in its Net-Zero Strategy and Sustainability Plan. The City's Net-Zero

Strategy, in particular, supported the use of anaerobic digestion as a means of diverting the City's organic waste and improving its carbon footprint. Review of the City's various policies and plans also suggests that implementation of a Green Bin diversion program and use of new waste collection technologies (e.g., automated cart collection) would be consistent with, and support, the City's climate change and strategic objectives.

# **13.1 Fleet Considerations**

Several of the City's strategies and plans also make note of the opportunities to consider changes to the City's fleet as a means of reducing its carbon footprint. The Net-Zero Strategy recommends that 100% of heavy-duty commercial vehicles be converted to low-carbon fuels by 2040 and the municipal fleet be converted to 100% electrical powered vehicles within the same time frame. While alternative use fuels are still in their infancy for waste collection, it is recommended that consideration be given to piloting their use as the City's waste collection fleet as trucks are replaced at end of life.

# **13.2** Processing Considerations

The City currently hauls garbage and yard waste to it SWRF. Co-collection of Green Bin waste and garbage is proposed to avoid any increase is traffic and GHG emissions from collection activities. Processing options which can be built and operated at the SWRF would, similarly, avoid any additional hauling costs associated with delivering the Green Bin waste to a separate location.

Of the technologies considered in Section 10, the aerobic composting systems represent the lowest cost options for the quantities of Green Bin and yard waste the City anticipates diverting and are most easily integrated into the City's existing yard waste composting operations. They do not, however, provide any sort of green energy or carbon offset unlike the anaerobic digestion options. Nonetheless, the anaerobic digestion options would require separate diversion and management of the resulting digestate from their systems in order to be compliant with the requirements of the Policy Statement. This likely involves separate co-composting of the digestate with the City's yard waste or landspreading of the material if a suitable host site can be found. Management of the digestate adds cost and complexity to these options and additional GHG emissions which must be accounted for if considered.

# 13.3 Impact of Proposed Technologies and Program on the City's Carbon Footprint

In January 2020, the City declared a climate emergency and set an ambitious goal of becoming net-zero by 2050. Since then it has been implementing a Community Energy and Emissions Plan (CEEP). The City has been inventorying and monitoring its greenhouse gas (GHG) emissions for several years and waste management is known to be a key contributor to the City's overall emissions profile. Waste emissions include both emissions produced from solid waste and wastewater treated at the central wastewater plant. In 2016, waste emissions were estimated to be 48 ktCO2e and were projected to increase to 65 ktCO2e by 2050.

In anticipation of development of a food and organic waste diversion program, emissions from the City's current solid waste management program were reviewed and updated. A summary of current gas emissions from the landfilling and collection of waste and subsequent capture and treatment of landfill gas can be found in Appendix A. Appendix A also summarizes the change in emissions from the impact of implementation of a Green Bin program on landfill and waste hauling activities. There is the potential

to further reduce these emissions subject to the selection of processing technologies and operating site. At a minimum, it is expected that implementation of a Green Bin program will reduce the City's carbon footprint by 5,380 tCO2e per year.

# **14. Financial Implications**

Table 11 summarizes anticipated incremental costs of rolling out a Green Bin program to: single family households in 2025, multi-family households in 2026 and the provision of two additional leaf and yard waste collection events per year starting in 2023. Table 11 also summarizes the cost of transitioning to automated cart-based collection starting in 2025.

Implementation of Green Bin program costs are expected to peak in 2025 at an average cost of almost \$47 per household driven largely by the on-boarding of program staff, purchase and delivery of containers and initial processing costs. Post implementation program costs are expected to average \$1.5 million per year or \$33 per household as shown in 2028. Addition of the two yard waste collection events would increase this cost by \$3.50 per household. Converting to automated cart-based collection results in an incremental cost impact of \$3.8 million between 2022-2025 largely driven by the capital cost of upgraded trucks, Green Bins and purchase of garbage carts. As previously noted, this initiative results in a projected saving of \$827,000 per year for a projected pay back of under six years.

Green Bin Program	2022	2023	2024	2025	2026	2027	2028
Administration							
Temporary staff		\$61,435	\$170,112	\$309,806	\$319,100	\$95,191	
Permanent staff			\$171,848	\$227,451	\$234,274	\$241,303	\$248,542
Communications Campaign			\$18,509	\$97,112	\$50,596	\$21,657	\$18,460
Waste & Participation Audits				\$20,000	\$20,000	\$10,000	
Single Family Implementation	Costs						
Containers - Green Bin, Kitchen Catcher			\$1,092,031				
Container Delivery				\$222,108			
Manual Collection Vehicle Upgrades	\$195,000	\$330,000					
Driver Training			\$10,000				
SSO Processing				\$999,450	\$1,029,434	\$1,060,317	\$1,092,126
Multi-Family Implementation C	Costs						
Containers - Green Bin, Kitchen Catcher				\$269,424			
Container Delivery					\$54,798		
Manual Collection Vehicle Upgrades					\$55,000		
SSO Processing					\$121,140	\$124,774	\$128,517
Sub Total	\$195,000	\$391,435	\$1,462,500	\$2,145,350	\$1,884,342	\$1,553,241	\$1,487,646

Table 11: Summary of Anticipated Incremental Green Bin Program Implementation Costs

Expanded Yard Waste Collection Service	2022	2023	2024	2025	2026	2027	2028
Two Additional Collection Days per Year		\$156,646	\$159,779	\$162,974	\$166,234	\$169,559	\$172,950
Yard Waste Processing		\$5,000	\$5,100	\$5,202	\$5,306	\$5,412	\$5,520
Sub Total		\$161,646	\$164,879	\$168,176	\$171,540	\$174,971	\$178,470

Auto Cart Program	2022	2023	2024	2025	2026	2027	2028			
Administration										
Supplemental P&E			\$27,764	\$41,585	\$22,954	\$13,821	\$11,538			
Single Family Implementation Costs										
Garbage Carts			\$2,480,206							
Container Delivery (Garbage Cart & Green Bins)				\$37,018						
Auto Cart Green Bin			\$962,468							
Upgrade nine curbside trucks with hydraulic arm	\$100,000	\$150,000								
Multi-Family Implementation Costs										
Garbage Carts				\$611,911						
Container Delivery (Garbage Cart & Green Bins)					\$9,133					
Auto Cart Green Bin				\$237,458						
Cost Savings			·							
Conversion to Auto Cart				(\$826,788)	(\$851,592)	(\$877,139)	(\$903,454)			
Sub Total	\$100,000	\$150,000	\$3,470,438	\$101,184	(\$819,505)	(\$863,318)	(\$891,916)			

Grand Total	\$295,000	\$703,081	\$5,097,817	\$2,414,710	\$1,236,377	\$864,894	\$774,200

Note: assumes CPI rate of 3% annually

# 15. Program Critical Path

Planning for complex programs such as Green Bin or auto-cart service is normally initiated a minimum of two years in advance of the launch date. This period allows for adequate time to undertake critical work such as: advance review of streetscapes and properties, route planning, policy and licensing review and amendment, communications planning, public consultation, negotiation with and procurement of contractors. Recognizing that there is no operational Green Bin facility in close proximity to the City, time will also be needed to procure a contractor to either build a facility for the City or provide capacity at a private site. Preliminary feedback received from respondents to the RFI indicated that the City's requirement to have a functional Green Bin processing facility operational by 2025 was possible

provided contracts could be executed in 2022. With this in mind, Table 12 outlines a proposed timeline for program development and delivery.



#### **Table 12: Green Bin Program Timeline**

# **16.** Recommendations

The provincial Policy Statement requires that the City provide curbside food and organic waste collection services to single-family dwellings by 2025 and achieve a diversion rate of 50% for this waste stream. In order to ensure the provincial diversion target is met, the following recommendations are proposed:

1) Expand Current Leaf and Yard Waste Services in 2023

Expand the City's leaf and yard waste collection program from the current level of two events per year to a total of four collection events beginning in 2023 to provide staff with sufficient time to assess the efficacy of this service level enhancement prior to launch of the required Green Bin progam.

Consider further expansion or refinement of the leaf and yard waste collection service in subsequent years, as required, to ensure the City achieves its required diversion target under the provincial Policy Statement.

### 2) Implement a Curbside Green Bin Program in 2025

Design and implement a curbside food and organic waste collection program with the following key components based on proven best practices:

- Weekly curbside Green Bin collection;
- Bins and kitchen containers to be provided to residents free of charge by the City;
- Residents to be permitted to use paper and certified compostable liners in bins and kitchen containers;
- Allowable materials to include pet waste and kitty litter;

- Diapers and incontenence products be excluded unless the City's selected processing solution is capable of receiving such material; and
- Future collection vehicles be procured with split body compartments to accommodate cocollection of garbage and Green Bin materials.
- 3) Phase in Green Bin Collection Services Over Time

Roll out of Green Bin waste collection services to City residents and businesses based on the following schedule:

- Provision to curbside single-family households in 2025;
- Provision to multi-family properties no later than 2026; and
- Provision to local businesses and institutions for future consideration;
- 4) Optimize Garbage Collection Service to Achieve Required Diverion Targetsand Reduce Costs

Amend garbage services as follows:

- Reduce collection to three items of garbage every other week to ensure participation in diversion programs;
- Residents be permitted to set out one additional garbage bag or item every other week subject to purchase of a bag or item tag from the City for the selected bag or item;
- The City to amend its waste collection by-law to reflect the new program and require mandatory participation in waste diversion programs; and
- Direct staff to explore development of a clear garbage bag policy for set out of overflow volumes used in conjunction with bag tags.
- 5) Hire Staff to Support Roll out of Green Bin Services

Hire necessary staff to support the implementation and long term success of the new program:

- One permanent full time Promotion & Education Coordinator to design, implement and maintain the ongoing communications that will be required to ensure success of our integrated solid waste system;
- One permanent full time Solid Waste Compliance Officer to support public compliance and proper ongoing curbside segregation of waste streams (and also address existing problems like sharps in the waste stream);
- One temporary full time Solid Waste Project Coordinator to assist in coordinating program development and implementation; and
- Two temporary full time Customer Service Advisory staff to assist with program rollout and respond to public questions/concerns.
- 6) Implement Automated Cart-Based Collection of Garbage and Green Bin Materials

Convert to automated cart-based collection of garbage and Green Bin materials from single-family households starting in 2025 to reduce operating costs based on the following parameters:

- Provision of garbage and Green Bin auto-carts to residents free of charge by the City;
- Collection vehicles purchased between 2023 and 2025 to be spec'd to be auto-cart ready;
- Consideration be given to piloting the use of electric collection vehicles as trucks are replaced at end of life;
- Review and optimize collection vehicle routing;
- Development of a redeployment plan for affected staff in cooperation with the City Human Resources and Corporate Safety Division and the union; and
- Direct staff to review multi-family properties and current service levels to assess cost benefit of shifting to auto-cart, Front End Loader or other technologies to reduce collection costs and report back to Council with recommendations of future service policy to this sector.
- 7) Finalize Program Costs and Design Parameters as a Next Step

Finally, it is recommended that Council direct staff to release an RFP for the procurement of an aerobic Green Bin processing solution based on the requirements of this report, finalize program costs and design parameters and report back to Council with the results.

### **17.** Conclusions

The recommendations included in this report are intended to ensure the City achieves compliance with the provincial Policy Statement. They are also intended to ensure equitable service levels are provided to residents and businesses while options such as the adoption of an automated cart-based collection program will help mitigate the long term cost of the required Green Bin program. While the proposed recommendations will have significant financial and social implications for the City, they will also allow the City to make significant progress towards its stated environmental goals.

#### Appendix A

Comp	arison of Pre	& Post Gree	en Bin Prog	ram Impleme	ntation on t	he Current G	reenhouse G	as (GHG) Er	nission Pro	file for the C	ity of Thund	der Bay's La	ndfill and W	aste Collection S	System		
Program	Commercial Landfilled Waste (tonnes) <sup>4</sup>	Residential Landfilled Waste (tonnes) <sup>4</sup>	Total Waste (tonnes) <sup>4</sup>	Commercial Diverted Waste (tonnes) <sup>4</sup>	Commercial Diverted Waste (%)	Residential Diverted waste (tonnes) <sup>4</sup>	Residential Diverted waste (%)	Total Diverted Waste (tonnes) <sup>4</sup>	Total Diverted Waste (%)	Landfill Waste GHG (tCO2e) <sup>1,2</sup>	Number of Collection Trucks	Truck Efficiency (km/ltr) <sup>6</sup>	Total Kilometers Traveled	Waste Transport GHG (tCO2e) <sup>1,2</sup>	Gas Capture (m3)/day <sup>7</sup>	Gas GHG (Removed) <sup>1, 3</sup> (tCO2e)	Total GHG Emissions (tCO2e) <sup>1</sup>
Current Program Operations <sup>5</sup>	39 <mark>,</mark> 026	48,504	87,530	5,073	13.00%	13,568	27.97%	18,641	21.30%	112,092	13	2.008	102,800	525	38,465	30,000	82,617
Green Bin Program Implementation <sup>8</sup>	39,026	48,504	87,530	5,073	13.00%	20,904	43.10%	25,977	29.68%	107,395	13	2.008	102,800	525	38,465	30,000	77,920

Notes:

1. Greenhouse gas emissions are primarily characterized as tonnes (tCO2e), Kilotonnes (Kt) or Megatonnes (Mt) of carbon dioxide equivalents (KtCO2e) (a Mt is a thousand Kt). 1 MtCO2 = 1,000,000 tCO2e, 1 KtCO2e = 1,000 tCO2e

2. Greenhouse gas emissions for waste and transportation were derived from the ICLEI April 2018 report. Waste was used in whole and transportation was calculated as ~20% of the total.

3. Greenhouse gas emissions for methane gas removed is based upon the landfill Golder Associates testing report from February 2006. This value was not escalated and is left at a conservative number.

4. Waste generation and diversion rates were derived from the City of Thunder Bay 2020 Landfill Annual Report dated April 1, 2021.

5. Current program operations is based upon the reports from the City (April 2018 report by ICLEI) and focused on total waste received, how much of that waste was diverted, the transportation of that waste to the City landfill and methane production at that landfill.

6. Trucking efficiency derived from "Fuel Consumption, Emissions Estimation, and Emissions Cost Estimates Using Global Positioning Data" article by Betsy J. Agar, Brian W. Baetz & Bruce G. Wilson

7. No reduction in gas production is expected to occur until 3 to 5 years after introduction of the new organic waste diversion program. From ATSDR [Agency for Toxic Substances and Disease Registry] - Landfill Gas Basics.

8. Assumes 0% population growth for comparitive purposes.



<b>MEETING DATE</b>	06/06/2022 (mm/dd/yyyy)
SUBJECT	Receive Report R 24/2022 (Infrastructure & Operations - Environment) as a First Report

#### **SUMMARY**

Recommendation to receive Report R 24/2022 (Infrastructure & Operations - Environment) as a First Report:

#### RECOMMENDATION

WITH RESPECT to Report R 24/2022 (Infrastructure & Operations - Environment) we recommend that the Report be received;

AND THAT Report R 24/2022 (Infrastructure & Operations - Environment) be presented at the June 27, 2022 Committee of the Whole meeting for consideration.



SUBJECT EarthCare Sustainability Plan

#### SUMMARY

Memorandum from Sustainability Coordinator Summer Stevenson dated May 16, 2022 providing an update on the renewal of the EarthCare Sustainability Plan, for information.

#### **ATTACHMENTS**

1. Memorandum - S. Stevenson - May 16, 2022



Infrastructure & Operations

### **MEMORANDUM**

<i>TO</i> :	Krista Power, City Clerk
FROM:	Summer Stevenson, Sustainability Coordinator
DATE:	May 16, 2022
RE:	Update on the Renewal of the EarthCare Sustainability Plan

The purpose of this memorandum is to provide City Council with an update on the renewal of the EarthCare Sustainability Plan.

#### **EarthCare Sustainability Plan Renewal**

The final report of the 2014-2020 EarthCare Sustainability Plan was presented to Council last year (R 61/2021). This report outlined the exceptional progress made on both Corporate and community-wide sustainability efforts from the period of 2014 to 2020.

Following the delivery of this report, the renewal of the EarthCare Sustainability Plan was initiated. The purpose of this renewal is to reflect on the EarthCare framework to ensure continued collaboration with the community, re-establish community sustainability priorities, and determine the role the Sustainability Plan plays now that the Corporation has adopted a Climate Adaptation Strategy (2015) and Net-Zero Strategy (2021).

#### **Updated Timeline**

Report 61/2021 indicated that an updated Sustainability Plan would be presented to Council in 2022. The timeline has been adjusted slightly to reflect an extended period of preliminary public engagement, timing constraints posed by the upcoming municipal election, and limited staff resources.

The renewal of the Plan will occur in six phases:

- 1) Preliminary Engagement
- 2) Analysis and Draft Framework
- 3) Second Engagement Period
- 4) Analysis and Draft Product
- 5) Third Engagement Period
- 6) Draft Product to City Council

[complete] [in progress] [summer/fall 2022] [fall 2022] [winter 2023] [winter 2023]

#### **Preliminary Engagement Results**

An online survey was available on the City's Get Involved page from December 1, 2021 to January 31, 2022. The purpose of this survey was to gather the opinions and perspectives of residents and community members to ensure that the work of EarthCare addresses the sustainability priorities and concerns of the public. 354 people visited the project page, resulting in seven downloads of the Sustainability Plan and 131 survey responses.

Key findings:

- 92% of respondents feel that action towards sustainability is somewhat to extremely urgent.
- 87% of respondents feel that action on climate change is somewhat to extremely urgent.
- Respondents were asked to rate how well Thunder Bay is doing to be a sustainable city using a scale of 1-10, 1 being extremely poorly and 10 being extremely well. The median rating was 5 (average = 4.6), suggesting that respondents feel more could be done to improve sustainability across the city.
- Respondents who indicated that they had read any part of the 2014-2020 EarthCare Sustainability Plan had a similar average rating of Thunder Bay's progress to those who indicated that they had not.
- The cost of sustainable actions was identified as the largest personal barrier to engaging in sustainable action.

In addition, one-hour virtual workshops were held in March and April with the five active EarthCare Working Groups (Climate Adaptation, Community Greening, Mobility, Waste, and Water). The purpose of these workshops was to determine high-level goals and identify the strengths and weaknesses of each group as well as potential opportunities and threats. In total, 42 EarthCare Working Group members participated in the workshops.

A similar exercise was conducted with the EarthCare Advisory Committee in May using an asynchronous online form to gather responses. An additional in-person workshop for the EarthCare Advisory Committee will be held in June to review the feedback provided to date and establish a framework for the final product.

The results from the preliminary engagement phase will be included in the final engagement report, to be completed following phase 5.

Sincerely,

Summer Stevenson Sustainability Coordinator EarthCare Thunder Bay

cc: K. Marshall – General Manager – Infrastructure & Operations



#### SUBJECT Tree Production Feasibility Assessment

#### **SUMMARY**

At the January 10, 2022 City Council meeting, a resolution was passed directing Administration to complete an Expression of Interest related to growing and provision of trees to inform the original report R 168/2021 submitted at the December 6, 2022 COW meeting, and to report back by June 2022.

Memorandum from Manager - Parks & Open Spaces Cory Halvorsen dated May 16, 2022 containing information and a recommendation for Council's consideration, relative to the above noted.

#### RECOMMENDATION

WITH RESPECT to the Memorandum from Cory Halvorsen, Manager – Parks & Open Spaces dated May 14 2022, we recommend that consideration of Report R 168/2021 (Engineering & Operations) Tree Production – Feasibility Assessment be deferred to September, 2023.

#### **ATTACHMENTS**

1. Memorandum - Tree Production Feasibility Assessment - C. Halvorsen - May 16, 2022



TO:	Krista Power City Clerk
FROM:	Cory Halvorsen, C.E.T. Manager – Parks & Open Spaces
DATE:	May 16, 2022
SUBJECT:	Referral: Report R 168/2021 Tree Production – Feasibility Assessment June 6, 2022 – Committee of Whole Meeting

At the January 10, 2022 City Council meeting, a resolution was passed referring Administration to complete an Expression of Interest related to growing and provision of trees to inform the original report R 168/2021 submitted at the December 6, 2022 COW meeting, and to report back by June 2022.

Supply Management developed and released an Expression of Interest (EOI) seeking information and submissions from interested regional tree nurseries, growers and businesses that might be interested in growing nursery stock trees for the City of Thunder Bay. The EOI was posted April 20<sup>th</sup> through May 5<sup>th</sup> on the City's procurement website, advertised in the Chronicle Journal, e-Blasted via Chamber of Commerce, sent to CEDC, PARO, Economic Officers of Fort Francis, Rainy River, Dryden and also sent direct to several regional tree nurseries. Unfortunately, no responses to the EOI were received. This confirms that there are no growers in the region who are capable and/or interested in providing trees to the City.

It is too late in the year to plan and begin implementing a tree nursery this growing season. In addition, since the December 6<sup>th</sup> report Forestry and Horticulture implemented a minor restructuring as part of the 2022 operating budget. Considering these updates, and the fact that Forestry and Horticulture is currently in the early stages of a major restoration and construction project for the Centennial Botanical Conservatory and production greenhouses that requires all available operational capacity to support over the next two years, Administration recommends that further deliberations on Report R 168/2021 be deferred to September 2023 to inform the 2024 budget process, when Administration will provide an update to the report. This will allow time for further planning and operational efficiencies to be considered, and will avoid potentially overloading the work unit with an expansion of services during the Conservatory renewal.

The following recommendation is presented for Council's consideration:

"WITH RESPECT to the Memorandum from Mr. C Halvorsen, Manager – Parks & Open Spaces dated May 14 2022, we recommend that consideration of Report R 168/2021 Tree Production – Feasibility Assessment be deferred to September, 2023."

#### CH

cc: EMT Kayla Dixon – Director – Engineering & Operations



#### SUBJECT Summer Services Update

#### **SUMMARY**

Memorandum from Director - Recreation & Culture Leah Prentice dated May 19, 2022 relative to the above noted, for information

#### **ATTACHMENTS**

1. Memorandum - L. Prentice - Summer Services - May 19, 2022



TO: Krista Power, City Clerk
FROM: Leah Prentice – Director, Recreation & Culture
DATE: May 19, 2022 (For June 6 COW)
SUBJECT: Summer Services Update – Aquatics & Playgrounds

This Memo provides information on planned summer Aquatics and Playgrounds Program services and hours of operation, as well as a preliminary update on the Lifeguard Program Review project. All facilities and locations will operate in summer 2022 in the interest of serving the broadest community needs and interests possible, however adjustments to typical services and hours of operation are required due to ongoing staffing shortages.

#### Summary

All 7 indoor and outdoor aquatics facilities will operate in summer 2022.

9 Playgrounds locations will operate in summer 2022.

Modified hours and services are required, based on staffing capacity. Hours and services will be increased where and when possible, on an ongoing basis.

A Market Rate Exception has been applied to lifeguarding positions, effective May 15, as an immediate measure to help address aquatics staffing shortages.

### **Staffing Shortage**

#### Overview

Staffing shortages in Aquatics, particularly in lifeguarding positions, has been an increasing challenge nation-wide for a number of years. Recruitment and retention of front line staff in other Recreation programs, including Playgrounds, has also been an increasing challenge. The pandemic, associated facility closures and nation-wide staffing shortages across multiple sectors has further amplified this issue for the 2022 summer season.

#### Typical vs Current Staff Complement

Community Aquatics	<b>Full Pre-pandemic Operation</b> 55 (+30 On-call)	<b>Current Confirmed</b> 28 (+6 On-call)
Playgrounds	Up to 40 leaders	15 leaders

Lifeguard Program Review

On April 4, Council directed Administration to undertake a review of the City's lifeguard program and provide for Council's consideration recommendations to increase recruitment and retention of qualified staff. This review is underway.

Due to the severe and immediate staffing challenges for summer 2022, an immediate step has been taken in collaboration with Human Resources to apply a Market Rate Exception to lifeguarding positions:

Effective May 15 - starting wage increased from \$15.71/hr to \$16.70/hr.

Effective July 1 – starting wage will increase to \$19.35/hr, based on the Council-approved realignments to the Non-Affiliated pay schedule.

Additional updates and recommendations regarding lifeguard development, recruitment and retention will be brought back to Council by September 12.

### **2022 Summer Aquatics**

The Recreation & Culture Division offers aquatics opportunities at 7 facilities during the summer:

- Canada Games Complex
- Churchill Pool
- Volunteer Pool
- Widnall Pool

- Heath Pool
- Boulevard Lake Beach
- Sandy Beach (Chippewa)

These facilities serve the full community, tourists, and a variety of neighbourhoods. They provide diverse opportunities to meet demand for specific aquatic interests and experiences. Operating all facilities, with modified schedules as needed, will serve the broadest user base possible, provide safe swimming opportunities, and allow for important learn to swim and aquatic certification programs to be offered.

Modified schedules for summer 2022 have been developed based on staff capacity as well as typical summer use patterns and priority programs for each facility. The initial schedule will be:

	Indoor Pools			Outdoor Po	ols	Beaches		
	CGC	Churchill	Volunteer	Widnall	Heath	Boulevard	Sandy	
Monday	5:45am-10pm		6am-8:30pm	12pm-7pm	12pm-7pm	No Lifeguards	12pm-6pm	
Tuesday	5:45am-10pm	7am-8pm		12pm-7pm	11:30am-7pm	12pm-6pm	No Lifeguards	
Wednesday	5:45am-10pm		6am-8:30pm	12pm-7pm	12pm-7pm	No Lifeguards	12pm-6pm	
Thursday	5:45am-10pm	7am-8pm		12pm-7pm	11:30am-7pm	12pm—6pm	No Lifeguards	
Friday	5:45am-9pm			12pm-7pm	12pm-7pm	12pm—6pm	12pm-6pm	
Saturday	8am-9pm			1pm-7pm	1pm-7pm	12pm—6pm	12pm-6pm	
Sunday	8am-9pm			1pm-5pm	1pm-5pm	12pm—6pm	12pm-6pm	

This schedule will be increased as staffing allows, with a focus on increasing the hours at Churchill and Volunteer Pools.

### 2022 Playgrounds Program

The Division typically offers Playgrounds Program at 9 locations during the summer, with site-specific schedules of 2, 3 or 5 days per week, from 9am-4pm.

Playgrounds locations vary year to year. Sites are determined annually based on site availability and amenities, previous years' attendance, and site distribution. They are typically located at community centres, schools or City rink shacks. In the interest of serving the broadest possible geographical extent of the community, within staffing limitations, the initial schedule for Playgrounds will be:

5 Days per Week

- McKellar School
- North McIntyre Community Centre
- West Arthur Community Centre
- Current River rink shack

1 Day per Week (rotation)

- Ogden School (Monday)
- North End CC (Tuesday)
- Jumbo Gardens CC (Wednesday)
- Oliver Rd CC (Thursday)
- Vickers Heights CC (Friday)

The Playgrounds Program remains free and is very popular. Registration will be required for 2 weeks at a time, and a waitlist will be in place, to allow as much access as possible. Schedules at the 1 day per week sites will be increased should staffing numbers increase.

Free children & family programming is also available through Healthy Kids Thunder Bay. The Recreation & Culture Division is a partner in Healthy Kids with the Thunder Bay District Health Unit and Our Kids Count. This programming is available in the Windsor-Picton-Blucher, Academy, and Dease-McKellar-Simpson-Ogden neighbourhoods.

In addition to the programs mentioned above, YouthMove, Youth Inclusion Program, and Summer Camps (Chippewa, Kidventures and Adventurers) will also continue to be offered in summer 2022 to provide a variety of options for families.

Sincerely,

Leah Prentice

cc Norm Gale – City Manager Krista Power – City Clerk Kelly Robertson – General Manager, Community Services Gerry Broere – Director, Facilities, Fleet & Energy Management



#### SUBJECT Tennis Court Resurfacing - Capital Appropriation

#### **SUMMARY**

Memorandum from Director, Recreation & Culture Leah Prentice dated May 19, 2022, providing a recommendation relative to the above noted.

#### RECOMMENDATION

WITH RESPECT to the Memorandum from Director – Recreation & Culture Leah Prentice dated May 19, 2022, we recommend that Appropriation 19 be approved;

AND THAT any necessary by-laws be presented to City Council for ratification.

#### **ATTACHMENTS**

- 1. Memorandum L. Prentice Tennis Court Resurfacing May 19, 2022
- 2. Appropriation 19 Community Services Recreation & Culture



Date:	May 19, 2022 (for June 6 COW)
To:	Krista Power, City Clerk
From:	Leah Prentice – Director, Recreation & Culture
Subject:	Capital Budget Amendment – Tennis Court Resurfacing (Appropriation 19)

Resurfacing of the courts at the Thunder Bay Community Tennis Centre was approved in the 2020 capital budget. The project is to replace the acrylic surface on all existing courts. The surfaces are past end of life cycle, and not present in the case of Court 1, which was recently repaired and repaved.

The project was budgeted at a value of \$76,000 gross, \$38,000 net. The project includes contribution of \$38,000 from the Tennis Centre. The project was deferred during the pandemic and tendered in early 2022 (RFT 2022-21). Three submissions were received by Supply Management as a result of the tender. Below is a list of bids received and project costs inclusive of all taxes:

Contractor	<b>Bid Amount</b>
Cord's Park Mark Ltd.	\$165,635.40
JFT Contracting Inc.	\$182,721
Bourassa Sport Technologie Plus	\$265,550

Cord's Park Mark Ltd. is the low bidder and is capable of completing the work satisfactorily. Full cost breakdown is below (costs identified below are inclusive of all taxes):

Low Tender	165,635.40
Project Contingency (10%)	<u>16,563.54</u>
Total Cost	182,198.94
Less HST Rebate	(18,123.15)
Less Tennis Centre Contribution	(38,000.00)
Net Cost	\$126,075.79

Administration is recommending a 10% contingency be included in the project. The contingency shall not be expended without proper authorization by City Administration.

The attached Appropriation #19 is required to allocate \$32,900 available capital carry-forward and \$55,200 planned 2022 capital to facilitate completion of this project. This appropriation will require that the planned timing clock upgrade at the Canada Games Complex be deferred, and the appropriated portion of the project resubmitted for consideration in the 2023 capital budget.

#### **RECOMMENDATION**

WITH RESPECT to the Memorandum from Director – Recreation & Culture Leah Prentice dated May 19, 2022, we recommend that Appropriation 19 be approved;

AND THAT any necessary by-laws be presented to City Council for ratification.

Sincerely,

Leah Prentice Director, Recreation & Culture

**ATTACHMENT: Appropriation 19** 

			The City of Thunder E	Bay		DATE:	May 19, 2022	
DEPARTMENT: Community Services		REQUEST FOR APPROPRIATION CHANGE						
DIVISION: Rec & Culture			REQUEST FOR ADDITIONAL A	APPROPRIATIC	N		APPRC	P NO.
WB	S			BUDGET	INCREASE	DECREASE	ADMI	NUSE
	<u>=NI</u>	DESCRIPTION		AVAILABLE		1 400	IM Position	Fund Code
COM-REC-190003-1-N-	-1-1	55+ Infrastructure and Equipment		1,477		1,400	2.5	76
COM-REC-210001-2-N	-1-1	West Arthur Flooring		1 53/		10,000	2.5	70
COM-REC-210001-2-N	-1-1 -4-1	55+ Cabinets		15 000		10,000	2.5	70
COM-REC-210001-3-N	-3-1	Community Centre Infrastructure & F	quipment	10,000		10,000	2.5	76
COM-REC-220001-3-N	-3-4	CGC Timing Clock		65,000		55,200	2.5	76
COM-REC-200001-1-N-	-1-1	Tennis Centre Upgrade			88,100	00,200	2.5	76
					88,100	88,100		
EXPLANATIONS/REAS Please refer to Memo to	SONS: o Council dated May 19, 2	2022 from Leah Prentice - Director Re	ecreation & Culture	EFFECT ON LE	INCREASE	ICE: MAINTAINED X	]	
					R	DATE: ECOMMENDED	)/APPROVED	
						Línda Evans Linda Evans CITY TREASUI	RER	
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REVIEWED BY: Ke	lly Robertson		Moira Gallagher, CPA, CMA					
Committe	<b>ଧ୍ୟ ଟିମ୍ନାଡ଼ୀ କ୍ୟେ</b> ରିle - Monday neral Manager, Commur	, June 6, 2022 nity Services Dept.	Budget & Planning Accountant Corporate Services & Long Tern	n Care Departme	ent	DATE:	Page 19	6 of 206



SUBJECT Licensed Private Home Child Care

#### **SUMMARY**

Memorandum from General Manager, Community Services Kelly Robertson dated May 24, 2022 providing an update and recommendation relative to the above noted.

#### RECOMMENDATION

WITH RESPECT to the Memorandum from General Manager – Community Services Kelly Robertson dated May 24, 2022, we approve the deferral of the termination of the City's administration and delivery of the Licensed Private Home Child Care Program from July 1, 2022 to September 1, 2022;

AND THAT Administration inform the Thunder Bay District Social Services Administration Board of the change in date for contract termination;

AND THAT Administration re-purpose the current staffing complement and remaining 2022 budget for the Licensed Private Home Worker position towards the creation of an Early Childhood Educator I position effective September 2022;

AND THAT any necessary by-laws be presented to City Council for ratification.

#### **ATTACHMENTS**

1. Memorandum - K. Robertson - May 24, 2022 - Licensed Private Home Child Care



TO:	Krista Power
FROM:	Kelly Robertson General Manager, Community Services
DATE:	May 24, 2022
SUBJECT:	Update – Licensed Private Home Child Care Committee of the Whole – June 6, 2022

This memo provides an update and request for deferral of previously approved termination of City's involvement in the administration and delivery of a licensed private home child care program.

At their January 10, 2022 Committee of the Whole meeting (Report R 2/2022 – Licensed Private Home Child Care), Council directed Administration to proceed to provide formal notice to the Thunder Bay District Social Services Administration Board (TBDSSAB) to terminate the City's administration and delivery of the Licensed Private Home Child Care Program by July 1, 2022.

Shortly after receipt of formal notice from the City, the TBDSSAB issued an Expression of Interest to solicit proposals for an alternate provider to administer and operate a licensed private home child care program. The TBDSSAB received interest from one agency and representatives from the TBDSSAB and City Administration have met with representatives of this prospective alternate service provider to respond to their inquiries about the licensed private home child care program. On May 17, the agency confirmed its interest with the TBDSSAB in assuming responsibility for the program. However, in order to assume responsibility for the program, the agency must apply to the Ministry of Education for a license to operate a licensed private home child care program. The licensing process may take 3 – 4 months.

To facilitate as seamless a transition process for licensed providers and their clients as possible, Administration is recommending the deferral of the termination of the City's involvement in the administration and delivery of the licensed private home child care program from July 1 to September 1, 2022.

Subject to Council approval, Administration has confirmed the capacity to extend the temporary assignment of the Private Home Child Care Worker without compromising summer child care operations. There will be minimal financial implications with the deferral as the 2022 operating budget for the licensed private home child care program contemplated a full year of operation. The re-purposing of the balance of the existing .5 FTE complement and remaining budget to support the creation of a part-time Early Childhood Educator I position to support a broader re-opening of municipal child care group centres will be implemented in September.

#### RECOMMENDATION

WITH RESPECT to the Memorandum from General Manager – Community Services Kelly Robertson dated May 24, 2022, we approve the deferral of the termination of the City's administration and delivery of the Licensed Private Home Child Care Program from July 1, 2022 to September 1, 2022;

AND THAT Administration inform the Thunder Bay District Social Services Administration Board of the change in date for contract termination;

AND THAT Administration re-purpose the current staffing complement and remaining 2022 budget for the Licensed Private Home Worker position towards the creation of an Early Childhood Educator I position effective September 2022;

AND THAT any necessary by-laws be presented to City Council for ratification.

Sincerely,

Kelly Robertson General Manager, Community Services

cc: Norm Gale, City Manager Andrea Morrison, Manager, Central Support Services



#### SUBJECT Clean, Green & Beautiful Terms of Reference and Policy Review

#### **SUMMARY**

In June 2018, Council approved a recommendation from Administration and the Clean, Green and Beautiful Committee to review Corporate Policy 02-05-01. The Committee has formed a sub-committee to review the Policy and complete the annual review of the Terms of Reference, required under Council's Procedural By-law.

Memorandum from Councillor Rebecca Johnson, Chair – Clean, Green & Beautiful Committee dated May 24, 2022 containing a recommendation relative to the above noted.

#### RECOMMENDATION

WITH RESPECT to the Memorandum from Councillor Rebecca Johnson dated May 24, 2022 we recommend that the report back date relating to Outstanding List Item 2018-009-ADM Clean, Green & Beautiful Policy review be changed from June 27, 2022, to July 25, 2022;

AND THAT any necessary by-laws be presented to Council for ratification.

#### **ATTACHMENTS**

1. Memorandum – Councillor R. Johnson - May 24, 2022 - Terms of Reference and Policy Review



Office of the City Clerk Fax: 623-5468 Telephone: 625-2230

**TO:** Krista Power, City Clerk

FROM: Councillor Rebecca Johnson, Chair - Clean, Green & Beautiful Committee

**DATE:** May 24, 2022

SUBJECT: Clean, Green & Beautiful Terms of Reference and Policy Review Committee of the Whole – June 6, 2022

In June 2018, Council approved a recommendation from Administration and the Clean, Green and Beautiful Committee to review Corporate Policy 02-05-01. The Committee has formed a subcommittee to review the Policy and complete the annual review of the Terms of Reference, required under Council's Procedural By-law. The Committee will be reviewing the updated documents as well as a 2-year plan for the Committee at their June 2022 meeting. Once the review is complete the documents will be presented in July for your consideration.

I present the following for Council's consideration,

WITH RESPECT to the Memorandum from Councillor Rebecca Johnson dated May 24, 2022, we recommend that the report back date relating to Outstanding List Item 2018-009-ADM Clean, Green & Beautiful Policy review be changed from June 27, 2022, to July 25, 2022;

AND THAT any necessary by-laws be presented to Council for ratification.



#### SUBJECT Outstanding Item - Automated Speed Enforcement

#### **SUMMARY**

Memorandum from Director - Engineering & Operations Kayla Dixon dated May 27, 2022 providing a recommendation relative to Automated Speed Enforcement - Outstanding Item 2020-048-INO.

#### RECOMMENDATION

WITH RESPECT to the Memorandum from Kayla Dixon, Director, Engineering & Operations dated May 27, 2022, we recommend that the report back date relating to Outstanding Item No. 2020-048-INO (Automated Speed Enforcement) be changed from June 6, 2022 to December 12, 2022.

#### **ATTACHMENTS**

1. Memorandum - K. Dixon - Outstanding Item 2020-048-INO - Automated Speed Enforcement



### **MEMORANDUM**

TO:	Krista Power - City Clerk
FROM:	Kayla Dixon, Director Engineering & Operations
DATE:	May 27, 2022
SUBJECT:	Automated Speed Enforcement – Administration Update Committee of the Whole – June 6, 2022

At the November 2, 2020 Committee of the Whole meeting, a resolution was passed that recommended that Administration provide a report to Council with respect to the costs and timelines associated with implementing Automated Speed Enforcement. At the March 7, 2022 Committee of the Whole, a resolution was passed that recommended the report back date be changed from April 4, 2022 to June 6, 2022.

The implementation of an Automated Speed Enforcement program is complex, requiring information from and agreements with multiple private and governmental organizations as well as new internal processes. In order to provide a thorough analysis of the program, more time is necessary to bring this report to a scheduled Operations Committee meeting. As a result the following resolution is provided for Council's consideration.

WITH RESPECT to the Memorandum from Kayla Dixon, Director Engineering & Operations dated May 27, 2022, we recommend that the report back date relating to Outstanding Item No. 2020-048-INO (Automated Speed Enforcement) be changed from June 6, 2022 to December 12, 2022.

KD

cc: Kerri Marshall, General Manager - Infrastructure & Operations Dave Binch, Traffic Technologist



#### SUBJECT Outstanding List for Operations as of May 24, 2022

#### **SUMMARY**

Memorandum from City Clerk K. Power, dated May 24, 2022 providing the Operations Outstanding Items List, for information.

#### **ATTACHMENTS**

1. Memorandum - K. Power - Outstanding List for Operations - May 24, 2022



Office of the City Clerk Fax: 623-5468 Telephone: 625-2230

TO: Mayor & Council

**FROM:** Krista Power, City Clerk

**DATE:** May 24, 2022

**SUBJECT:** Outstanding List for Operations as of May 24, 2022 Committee of the Whole – June 6, 2022

The following items are on the outstanding list for June 6, 2022:

Meeting Session	Reference Number (yyyy-nnn- MTG)	Department/Division	Outstanding Item Subject	Resolution Report Back Date - (on or before date)	Revised Report Back Date - (on or before date) (Memos presented at COW updating or delaying Item)
Operations	2009-015- INO	Infrastructure & Operations	Temporary Street Closures for Special Events	No date included in original resolution	Aug-08-2022
Operations	2014-002- INO	Infrastructure & Operations / Engineering & Operations	Residential Wattage Reduction Report	No date included in original resolution	May-05-2025
Operations	2020-047- INO	Infrastructure & Operations / Engineering & Operations	Electric Scooter Pilot Participation	Dec-01-2026	Feb-01-2027
Operations	2020-048- INO	Infrastructure & Operations / Engineering & Operations	Automated Speed Enforcement (Photo Radar) - Request for Report	Nov-30-2021	Jun-06-2022

Operations	2021-105- INO	Infrastructure & Operations / Engineering & Operations	Boulevard Dam Electrical Power Production	Mar-07-2022	May-31-2023
Operations	2021-108- INO	Infrastructure & Operations/Engineering & Operations	Tactile Walking Indicators	Jan-15-2024	Mar-4-2024
Operations	2021-111- INO	Infrastructure & Operations	School Bus Stop Arm Cameras	Sept-12-2022	Dec-12-2022
Operations	2021-112- INO	Infrastructure & Operations	Neebing River - Request for Report	May-2-2022	Jul-18-2022
Operations	2022-101- INO	Infrastructure & Operations/Parks	Injured Workers Monument & Policy Development	Sep-12-2022	
Operations	2022-102- INO	Infrastructure & Operations/Engineering & Operations	Safety Improvements for Dawson Road - Request for Information	Aug-08-2022	