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**Public Works and Transportation Committee  
Electronic Meeting**

**Council Chambers, City Hall  
6911 No. 3 Road**

**Wednesday, April 17, 2024  
4:00 p.m.**

Pg. #      ITEM

MINUTES

**PWT-5**      *Motion to adopt the **minutes** of the meeting of the Public Works and Transportation Committee held on March 20, 2024.*



NEXT COMMITTEE MEETING DATE

May 22, 2024, (tentative date) at 4:00 p.m. in the Council Chambers.

AGENDA ADDITIONS AND DELETIONS

PLANNING AND DEVELOPMENT DIVISION

1. **SECOND AVENUE TRAFFIC CALMING**  
(File Ref. No. 10-6450-09-01) (REDMS No. 7584183)

**PWT-10**

**See Page PWT-10 for full report**

*Designated Speaker: Sonali Hingorani*

STAFF RECOMMENDATION

- (1) *That Option 2 to implement two speed humps on Second Avenue, as described in the staff report titled “Second Avenue Traffic Calming”, dated March 18, 2024, from the Director, Transportation, be endorsed;*
- (2) *That Option 3 to reduce the posted speed limit on Second Avenue to 30 km/h, as described in the staff titled “Second Avenue Traffic Calming”, dated March 18, 2024, from the Director, Transportation, be endorsed; and*
- (3) *That Traffic Bylaw No. 5870, Amendment Bylaw No. 10543, to revise the posted speed limit of Second Avenue from Steveston Highway to Chatham Street to 30 km/h, be introduced and given first, second and third reading.*



2. **PROPOSED AMENDMENTS TO TRAFFIC BYLAW NO. 5870 FOR SPEED LIMIT REDUCTIONS IN HAMILTON**

(File Ref. No. 10-6450-15-01) (REDMS No. 7606657)

PWT-19

[See Page PWT-19 for full report](#)

*Designated Speaker: Beata Ng*

STAFF RECOMMENDATION

*That the Traffic Bylaw No. 5870, Amendment Bylaw No. 10554, be given first, second and third readings.*



ENGINEERING AND PUBLIC WORKS DIVISION

3. **CLOTHING AND TEXTILE WASTE**

(File Ref. No. 10-6000-01) (REDMS No. 7277586)

PWT-24

[See Page PWT-24 for full report](#)

*Designated Speaker: Kristina Nishi*

STAFF RECOMMENDATION

- (1) *That Option 3, as outlined in the staff report titled “Clothing and Textile Waste”, dated March 5, 2024, be endorsed;*

Pg. #      ITEM

- (2) *That a letter be written to the Honourable George Heyman, Minister of Environment and Climate Change Strategy, to request the establishment of an extended producer responsibility program for post-consumer textile waste in British Columbia; and*
- (3) *That one-time funding of \$60,000 from the General Waste and Recycling Provision for the Clothing and Textile Waste expenditures be approved, and that the Consolidated 5 Year Financial Plan (2024-2028) be amended accordingly.*



4. **RECYCLING AND SOLID WASTE MANAGEMENT – REPORT 2023: BACK TO BASICS**

(File Ref. No. 10-6370-01) (REDMS No. 7605510)

PWT-36

[See Page PWT-36 for full report](#)

*Designated Speaker: Kristina Nishi*

STAFF RECOMMENDATION

- (1) *That the report titled “Recycling and Solid Waste Management – Report 2023: Back to Basics”, dated March 11, 2024, from the Director, Public Works Operations, be endorsed.*
- (2) *That the “Recycling and Solid Waste Management – Report 2023: Back to Basics” be made available to the community on the City’s website and through various communication tools including social media channels and as part of community outreach initiatives.*



5. **PUBLIC ELECTRIC VEHICLE CHARGING NETWORK – USE OF PROCEEDS FROM LOW CARBON FUEL STANDARD (LCFS) CREDITS**

(File Ref. No. 10-6125-01) (REDMS No. 7502514)

PWT-107

[See Page PWT-107 for full report](#)

*Designated Speakers: Arzan Balsara and Owen Sinclair*

STAFF RECOMMENDATION

*That, as described in the report titled “Public Electric Vehicle Charging Network – Use of Proceeds from Low Carbon Fuel Standard (LCFS) Credits”, from the Director, Sustainability and District Energy and Director, Public Works Operations, dated April 17, 2024:*

Pg. #            ITEM

- (1) *Staff be authorized to sell LCFS carbon credits at the highest value to the City;*
- (2) *Revenue from the sale of LCFS carbon credits be put into the City's Carbon Tax Provision account and be reserved for capital and operating costs related to the installation and maintenance of new electric vehicle charging stations;*
- (3) *The Chief Administrative Officer and General Manager, Finance and Corporate Services, be authorized to enter into an agreement for the sale, aggregation and/or contract to sell LCFS carbon credits; and*
- (4) *Staff report back in three years updating Council on use of revenue generated from the sale of LCFS carbon credits to expand the City's EV charging infrastructure.*

**6.    MANAGER'S REPORT**

**ADJOURNMENT**



## Public Works and Transportation Committee

Date: Wednesday, March 20, 2024

Place: Council Chambers  
Richmond City Hall

Present: Councillor Carol Day, Chair  
Councillor Michael Wolfe  
Councillor Kash Heed (by teleconference)  
Councillor Alexa Loo (by teleconference)

Absent: Councillor Chak Au

Also Present: Councillor Andy Hobbs  
Councillor Bill McNulty

Call to Order: The Chair called the meeting to order at 4:00 p.m.

### MINUTES

It was moved and seconded

*That the minutes of the meeting of the Public Works and Transportation Committee held on February 21, 2024, be adopted as circulated.*

**CARRIED**

**Public Works & Transportation Committee**  
**Wednesday, March 20, 2024**

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**PLANNING AND DEVELOPMENT DIVISION**

**1. E-SCOOTER PILOT PROJECT UPDATE**

(File Ref. No. 10-6490-01) (REDMS No. 7529724)

In reply to queries from Committee, staff advised that (i) the e-scooter stations can be relocated if needed, (ii) staff will request statistics from the RCMP on the positive ticketing program related to helmet non-compliance and that education will be part of measures to improve compliance, (iii) the next phase of the Province's e-scooter program will be to work with ICBC and health authorities in regards to collision data and safety aspects of the e-scooters, (iv) the minimum age to ride an e-scooter is 16 years old, (v) staff will reach out to Lime for additional safety measure options, (vi) the majority of respondents that participated in the Let's Talk Richmond survey were Richmond residents, and (vii) safety signage has been installed along the Railway Greenway and staff will provide a sample with details to Council.

It was moved and seconded

- (1) *That the extension of the City's E-Scooter Pilot Project as described in the staff report titled "E-Scooter Pilot Project Update" dated February 21, 2024 from the Director, Transportation, be endorsed;*
- (2) *That staff advise the Province that the City of Richmond consents to the Electric Kick Scooter Pilot Project taking place within the City, effective April 5, 2024; and*
- (3) *That staff provide a yearly safety and enforcement review.*

**CARRIED**

**ENGINEERING AND PUBLIC WORKS DIVISION**

**2. WATER CONSERVATION RELATED TO SINGLE-PASS COOLING SYSTEMS**

(File Ref. No. 10-6060-01) (REDMS No. 7566529)

It was moved and seconded

*That, as outlined in the staff report titled "Water Conservation Related to Single-Pass Cooling Systems", dated February 27, 2024, from the Director, Engineering, the proposed resident and business engagement strategy for water conservation related to single-pass cooling systems be endorsed.*

**CARRIED**

**Public Works & Transportation Committee**  
**Wednesday, March 20, 2024**

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**3. AWARD OF CONTRACT 8247P – SECURITY GUARD SERVICES**

(File Ref. No. 02-0745-01) (REDMS No. 7521749)

It was moved and seconded

- (1) *That Contract 8247P – Security Guard Services be awarded to The British Columbia Corps of Commissionaires for a three-year term for an estimated value of \$1,351,000.00, excluding taxes, as described in the report titled “Award of Contract 8247P – Security Guard Services,” dated February 12, 2024 from the Director, Facilities and Project Development;*
- (2) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to extend the initial three-year term up to the maximum term of five years, for the additional estimated value of \$971,000.00, excluding taxes;*
- (3) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute the contracts and all related documentation with The British Columbia Corps of Commissionaires; and*
- (4) *That the Consolidated 5 Year Financial Plan (2024-2028) be amended to increase the Engineering and Public Works operating budget by \$272,234.00 funded by the Rate Stabilization Account as detailed in the report titled “Award of Contract 8247P – Security Guard Services,” dated February 12, 2024, from the Director, Facilities and Project Development.*

**CARRIED**

**4. AWARD OF CONTRACT 8274Q – ON-CALL PLUMBING CONTRACTOR SERVICES**

(File Ref. No. 10-6000-01) (REDMS No. 7529360)

It was moved and seconded

- (1) *That Contract 8274Q – On-Call Plumbing Contractor Services be awarded to Baza Ventures Inc. (dba PJB Mechanical), Pacific Mechanical Systems Ltd. (dba Kern BSG Management Ltd.) and Cobing Building Solutions Ltd. (dba C&C Electrical Mechanical) for a three-year term for an aggregate value of \$2,020,000.00, excluding taxes, as described in the report titled "Award of Contract 8274Q – On-Call Plumbing Contractor Services," dated February 14, 2024 from the Director, Facilities and Project Development;*

3.

**Public Works & Transportation Committee**  
**Wednesday, March 20, 2024**

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- (2) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to extend the initial three-year term, up to a maximum of five years, for an additional value of \$1,385,000.00 excluding taxes; and*
- (3) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute the contracts and all related documentation with Baza Ventures Inc. (dba PJB Mechanical), Pacific Mechanical Systems Ltd. (dba Kern BSG Management Ltd.) and Cobing Building Solutions Ltd. (dba C&C Electrical Mechanical) over the five-year term.*

**CARRIED**

5. **SOLID WASTE AND RECYCLING REGULATION BYLAW NO. 6803, AMENDMENT BYLAW NO. 10542**

(File Ref. No. 10-6370-01) (REDMS No. 7566870)

In reply to queries from Committee, staff advised that (i) there is no fee associated with the Business Education and Advisory Pilot Program, (ii) the non-compliant large item collection fee is for residential properties only, and (iii) the City doesn't remove large items from private property noting that the Business Education and Advisory Pilot Program will have a section focused on illegal dumping.

It was moved and seconded

*That Solid Waste and Recycling Regulation Bylaw No. 6803, Amendment Bylaw No. 10542 be introduced and given first, second and third readings.*

**CARRIED**

6. **MANAGER'S REPORT**

(i) ***Steveston Highway Multi-Use Pathway***

Staff advised that (i) construction of the first section between Shell Road and No. 4 Road is nearing completion noting that traffic is open in both lanes. (ii) the multi-use pathway is paved and it is anticipated to open at the end of March 2024, and (iii) construction has started between No. 4 Road to Mortfield Road and is estimated to be completed by early summer 2024.

In reply to queries from Committee, staff advised that (i) trees and grass will be planted along the multi-use pathway, (ii) grass cutting logistics will be determined with the Parks department, and (iii) there has been no notifications of vehicles hitting the curb with the narrowing of the lanes.

4.



**Public Works & Transportation Committee**  
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***(ii) Steveston Interchange Project***

Staff provided an update on the Steveston Interchange Project, noting that construction is on-going and current updates include a loop ramp that changes some of the traffic patterns. Staff added that the Province will continually adjust traffic patterns as the work progresses.

***(iii) Mitchell Elementary School Site***

A brief discussion ensued in regards to the loss of mature trees at the Mitchell Elementary School site and that staff can provide a memorandum to Committee on the tree replacement plan.

**ADJOURNMENT**

It was moved and seconded  
***That the meeting adjourn (4:27 p.m.).***

**CARRIED**

Certified a true and correct copy of the Minutes of the meeting of the Public Works and Transportation Committee of the Council of the City of Richmond held on Wednesday, March 20, 2024.

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Councillor Carol Day  
Chair

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Mizuguchi, Andrea  
Legislative Services Associate



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee      **Date:** March 18, 2024  
**From:** Lloyd Bie, P.Eng.  
 Director, Transportation      **File:** 10-6450-09-01/2024-Vol 01  
**Re:** **Second Avenue Traffic Calming**

### Staff Recommendation

1. That Option 2 to implement two speed humps on Second Avenue as described in the staff report titled "Second Avenue Traffic Calming" dated March 18, 2024, from the Director, Transportation, be endorsed;
2. That Option 3 to reduce the posted speed limit on Second Avenue to 30 km/h as described in the staff titled "Second Avenue Traffic Calming" dated March 18, 2024, from the Director, Transportation, be endorsed; and
3. That Traffic Bylaw No. 5870, Amendment Bylaw No. 10543, to revise the posted speed limit of Second Avenue from Steveston Highway to Chatham Street to 30 km/h, be introduced and given first, second and third reading.

Lloyd Bie, P.Eng.  
 Director, Transportation  
 (604-276-4131)

Att. 2

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Engineering	<input checked="" type="checkbox"/>	
Fire Rescue	<input checked="" type="checkbox"/>	
RCMP	<input checked="" type="checkbox"/>	
Finance	<input checked="" type="checkbox"/>	
Roads	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b> 	<b>APPROVED BY CAO</b> 

## Staff Report

### Origin

In October 2023, staff received a petition from 25 residents of Second Avenue requesting speed humps and a 30 km/h speed limit to address perceived concerns of speeding motorists. This report provides the outcome of staff's review of the request and engagement with the neighbourhood.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

*Community safety and preparedness through effective planning, strategic partnerships and proactive programs.*

*3.2 Leverage strategic partnerships and community-based approaches for comprehensive safety services.*

This report supports Council's Strategic Plan 2022-2026 Focus Area #6 A Vibrant, Resilient and Active Community:

*Vibrant, resilient and active communities supported by a wide variety of opportunities to get involved, build relationships and access resources.*

*6.1 Advance a variety of program, services, and community amenities to support diverse needs and interests and activate the community.*

### Analysis

#### Neighborhood Traffic Calming Program

The City's neighbourhood traffic calming objectives aim to transform local roads into people-first streets by:

- Informing speed interventions with public engagement.
- Redesigning streets to discourage speeding.
- Enhancing the comfort of people walking, biking, or rolling.

The approach to delivering traffic calming on local roads is a community-driven process.

The process includes the following steps:

- Residents request speed management measures on their local street.
- Traffic studies are conducted by staff to measure road safety and operational issues.
- Staff collaborate with residents to develop tailored traffic calming measures based on the speed data results and site conditions to work towards achieving consensus.
- Surveys of affected residents determine the level of support for the proposed traffic calming measures developed during the engagement phase.

Council Policy 7018 (Attachment 1) indicates that the Director of Transportation may implement traffic calming measures, without reference to Council, if the measures have the support of the majority of affected residents and the measures are on a local street or laneway. If any of the conditions are not met Council approval for the implementation of traffic calming measures must be obtained.

Review of Second Avenue Traffic Calming Request

Staff received a petition from residents of Second Avenue between Steveston Highway and Chatham Street requesting traffic calming measures and a lower speed limit. Second Avenue is a local street located in the neighborhood north of Steveston Village (Figure 1). A total of 43 addresses are located on Second Avenue.

The default speed limit on Second Avenue is 50 km/h. There is a 30 km/h posted speed and one speed hump through the school zone. Second Avenue forms part of the Crabapple Ridge on-street neighbourhood bikeway connecting the Terra Nova neighbourhood to Steveston Village. The road also has a relatively narrow pavement width and no pedestrian facilities.



Figure 1: Second Avenue between Steveston Highway and Chatham Street

*Speed Study and Crash History*

Further to the request by residents for speed management, staff conducted a traffic study to assess the site conditions and quantify any operational and safety related concerns including:

- **Traffic Speed Study:** Counts were conducted from October 17 to October 24, 2023 on Second Avenue in the 50 km/h speed zone. The results indicated an average speed of 37 km/h with 85 percent of the traffic travelling at or below 46 km/h.
- **Collision History:** The most recent five-year ICBC data (2018-2022) recorded two vehicle incidents. No incidents were speed-related nor did any involve a pedestrian or cyclist.

Engagement with Residents

*Stakeholder Meeting*

Staff held a meeting with residents on December 6, 2023 at the Steveston Community Centre. The results of staff’s technical assessment along with potential traffic calming measures were presented for feedback (Table 1).

Table 1: Summary of Stakeholder Meeting

Date	Attendees	Purpose	Feedback/Outcome
December 6, 2023	13	<ul style="list-style-type: none"> <li>Present staff’s technical assessment</li> <li>Discuss options for traffic calming measures</li> </ul>	<ul style="list-style-type: none"> <li>Majority of attendees indicated:                             <ul style="list-style-type: none"> <li>Interest in lower 30 km/h speed limit to support pedestrians and nearby school</li> </ul> </li> <li>Interest expressed for:                             <ul style="list-style-type: none"> <li>Speed humps</li> </ul> </li> </ul>

Stakeholder feedback at the meeting indicated support for both a 30 km/h speed limit and installation of speed humps on Second Avenue between Steveston Highway and Chatham Street.

*Resident Survey*

From January 12 to February 5, 2024, residents were surveyed to determine the level of support for the proposed speed humps and 30 km/h posted speed limit options determined through the engagement phase. A total of 43 surveys were mailed to each discrete address; 23 responses were received for a 53 percent response rate.

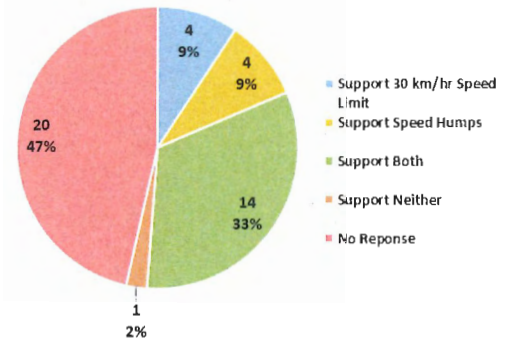


Figure 2: Second Avenue Traffic Calming – Survey Results

Figure 2 provides a breakdown of the survey results. The percent support for each option is calculated based on the number of responses for that option divided by the 43 dwelling units. The results indicate there is combined support (96 percent of respondents or 51 percent of total households) for measures to reduce vehicle speeds on Second Avenue. Support by residents for any single proposed option was 78 percent of respondents or 42 percent of total households for either speed humps or a 30 km/h speed limit.

Proposed Traffic Calming Measures

*Option 1: Status Quo*

The traffic study and accident data support no operational changes on Second Avenue. As there is a demonstrated desire of a simple majority (51 percent) of households for interventions to reduce vehicle speeds on Second Avenue, staff do not recommend this option.

*Option 2: Speed Humps (Recommended)*

This option proposes installation of two asphalt speed humps on Second Avenue (Attachment 2). The two new speed humps would complement the existing speed hump located within the school zone on Second Avenue. A lower profile speed hump of 7 cm is proposed. These have been successful at addressing vibration and noise emission. This physical measure is effective at achieving speed reduction on streets with lower speed limits.

As the proposed speed humps did not have the majority support by all residents on Second Avenue (78 percent of respondents or 42 percent of total households), Council approval for the implementation of this traffic calming measure is required.

*Option 3: 30 km/h Speed Limit (Recommended)*

This option responds to residents' interest in a lower speed limit by installing regulatory 30 km/h speed limit signage.

Second Avenue is designated as a local on-street bikeway and lacks pedestrian facilities. Slower vehicle speeds reduce the likelihood of a collision with people walking and cycling as well as the severity and fatality risk in the event of a collision. Based on these combined factors and public feedback (78 percent of respondents or 42 percent of total households in favour), staff recommend a 30 km/h posted speed limit on Second Avenue. Establishing an enforceable 30 km/h speed limit requires Council approval to amend Traffic Bylaw No. 5870.

*Next Steps*

Staff recommend construction of two asphalt speed humps and installation of 30 km/h speed limit signs in summer 2024 before the start of the school year in September.

**Financial Impact**

The total estimated capital cost to implement the two speed humps and speed limit signage is \$28,000. Funding is available within the Council-approved 2024 Traffic Calming Program capital project.

**Conclusion**

A petition for speed humps and lowering the speed limit was received from 25 residents of Second Avenue. Results of a resident survey has demonstrated a simple majority (51 percent) of all households in favour of measures to reduce vehicle speeds on Second Avenue.

The option of speed humps and a lower posted speed limit of 30 km/h each received support by 78 percent of respondents or 42 percent of total households. Staff recommend an amendment to Traffic Bylaw No. 5870 to establish a 30 km/h speed limit for this street. Second Avenue is designated as a local on-street bikeway and a 30 km/h speed limit will improve the comfort of people walking and cycling to encourage active travel. The installation of speed humps are also recommended to complement the lower speed limit.

March 18, 2024

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Vehicle speeds will be monitored post-installation and ongoing communication with residents will take place during the next year to measure the success of the traffic calming improvements on Second Avenue.



Sonali Hingorani, P. Eng.  
Manager, Transportation Planning and New Mobility  
(604-276-4049)

SH:ck

Att. 1: Policy Manual 7018  
2: Second Avenue - Proposed Speed Hump Locations



Page 1 of 1	<b>Traffic Calming Related Measures – Approval Process for the Implementation of</b>	<b>Policy 7018</b>
Adopted by Council: October 15, 2002		

**POLICY 7018:**

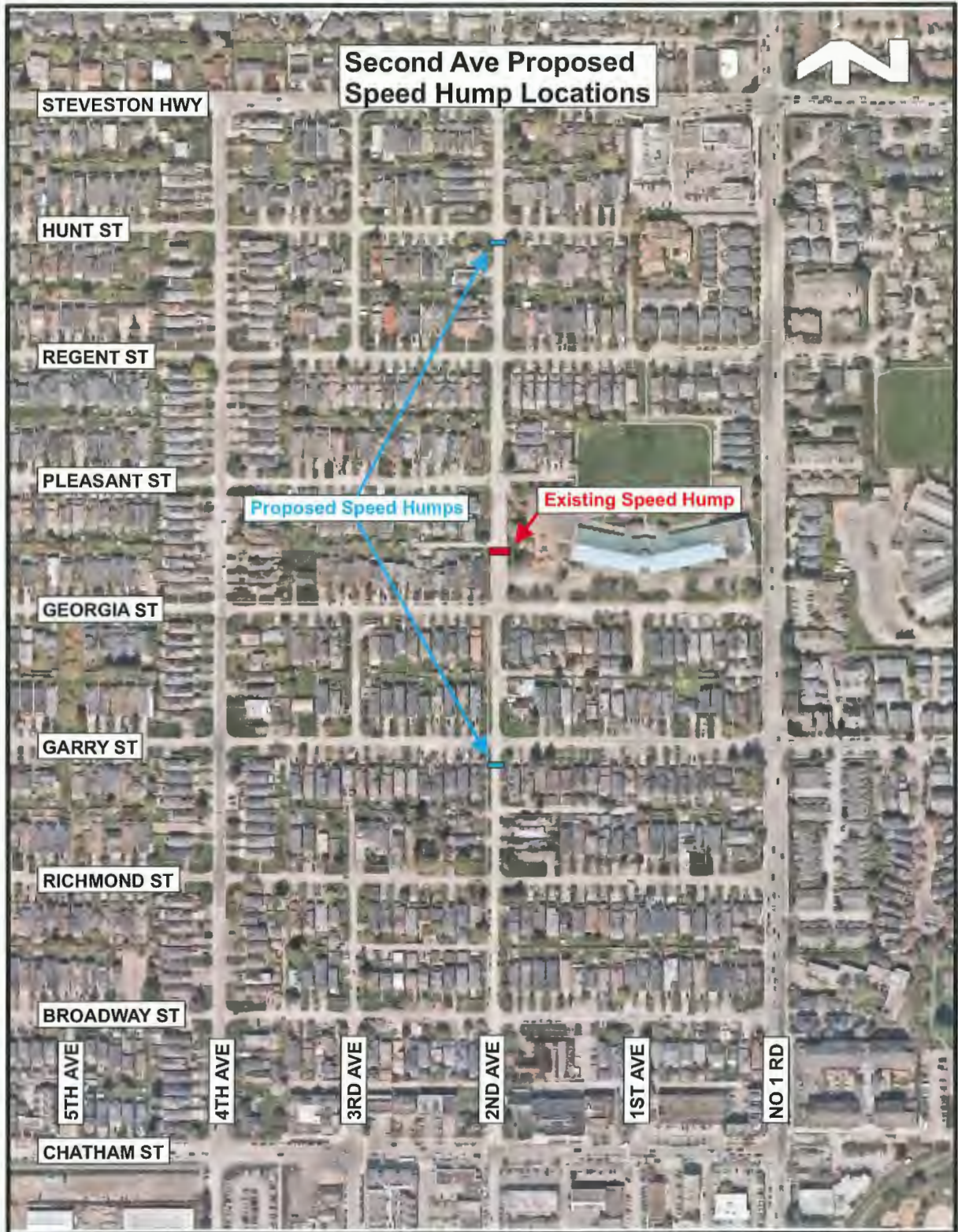
It is Council policy that:

1. The Director, Transportation may implement traffic calming measures, without reference to Council, where the proposed project meets all of the following conditions:
  - a) has the support of the majority of residents affected by the project; and
  - b) will be implemented on a local street or laneway (regardless of whether or not the project involves physical changes to the lane).
2. Where all of the above conditions are not met, or where any of the following conditions apply, Council approval for the implementation of traffic calming measures must be obtained if such project:
  - a) is controversial within the neighborhood affected; or
  - b) requires additional funding beyond the program or project budget for the current year.

5375308



Second Avenue - Proposed Speed Hump Locations





Traffic Bylaw No. 5870
Amendment Bylaw No. 10543

The Council of the City of Richmond enacts as follows:

- 1. Traffic Bylaw No. 5870, as amended, is further amended by adding the following to Schedule B to Traffic Bylaw No. 5870:

"13. Second Avenue from Steveston Highway to Chatham Street."

This Bylaw is cited as, "Traffic Bylaw No. 5870, Amendment Bylaw No. 10543."

FIRST READING

SECOND READING

THIRD READING

ADOPTED

Four horizontal lines for signature or date entry.

APPROVED for content by originating dept. [Signature]
APPROVED for legality by Solicitor
LB

MAYOR

CORPORATE OFFICER



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee      **Date:** March 18, 2024  
**From:** Lloyd Bie, P. Eng.  
 Director, Transportation      **File:** 10-6450-15-01/2024-Vol 01  
**Re:** **Proposed Amendments to Traffic Bylaw No. 5870 for Speed Limit Reductions in Hamilton**

### Staff Recommendation

That the Traffic Bylaw No. 5870, Amendment Bylaw No. 10554 be given first, second and third readings.

Lloyd Bie P. Eng.  
 Director, Transportation  
 (604-246-4131)

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Law	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b>	<b>APPROVED BY CAO</b>

## Staff Report

### Origin

At the February 26, 2024 Council meeting, the following motion was endorsed by Council.

1. *That speed limits on local roads in Hamilton be reduced from 50 km/h to 30 km/h as described in the staff report titled “Hamilton Area Traffic Calming”, dated January 12, 2024 from the Director, Transportation.*
2. *That staff bring forward amendments to Traffic Bylaw No. 5870 to reflect speed limit reductions for local roads in Hamilton.*

This report responds to this referral.

This report supports Council’s Strategic Plan 2022-2026 Focus Area #1 Proactive in Stakeholder and Civic Engagement:

*Proactive stakeholder and civic engagement to foster understanding and involvement and advance Richmond’s interests.*

This report supports Council’s Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

*Community safety and preparedness through effective planning, strategic partnerships and proactive programs.*

### Analysis

In May 2023, the Public Works and Transportation Committee directed staff to investigate reducing speed limits in the Hamilton neighbourhood in response to resident concerns regarding speeding. Staff completed speed studies, reviewed crash history data and conducted a public engagement process to receive feedback from the neighbourhood. While speed studies did not indicate speeding issues on local roads, 62 percent of respondents to the public engagement survey supported a speed limit reduction on local roads from 50 km/h to 30 km/h. The majority of respondents (79 percent) did not support speed limit reductions on Westminster Highway and were instead supportive of physical traffic calming measures fronting the Cranberry Children’s Centre where speeding issues were identified.

Through the report titled “Hamilton Area Traffic Calming” dated January 12, 2024 from the Director, Transportation, staff recommended reducing the speed limit on local roads in Hamilton from 50 km/h to 30 km/h, in alignment with the feedback received and consistent with recommendations of Vision Zero and Transport 2050. Council endorsed this recommendation.

The proposed Amendment Bylaw No. 10554 establishes a 30 km/h speed limit to local roads within the Hamilton neighbourhood consistent with this endorsed recommendation. Figure 1 identifies the roads that will be impacted by this change. Westminster Highway is excluded from this amendment and will maintain a speed limit of 50 km/h.



Figure 1 - Local Roads within Hamilton proposed for Speed Limit Reduction

Staff will re-assess traffic speeds and resident feedback within the Hamilton neighbourhood after a six to twelve month period through further speed studies and engagement. Findings of this assessment will be presented to Council for further consideration.

**Financial Impact**

None. Costs associated with signage installation is approximately \$8000 and will be accommodated within the Council approved 2023 Traffic Calming Program.

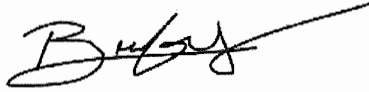
**Conclusion**

Amendment Bylaw No. 10554 to the Traffic Bylaw establishes 30 km/h speed limits to local roads within the Hamilton neighbourhood.

March 18, 2024

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This change reflects majority feedback from residents in the Hamilton neighbourhood and is in alignment with Vision Zero and Transport 2050 in improving road safety.

A handwritten signature in black ink, appearing to read 'Beata Ng', with a long horizontal stroke extending to the right.

Beata Ng, P. Eng.  
Manager, Transportation Development and Design  
(604-247-4627)

BN:ck



**Traffic Bylaw No. 5870  
Amendment Bylaw No. 10554**

The Council of the City of Richmond enacts as follows:

1. **Traffic Bylaw No. 5870**, as amended, is further amended by adding the following to Schedule B to Traffic Bylaw No. 5870:

“14. All roads within the Hamilton area, including:

a. Roads bound by and including Oliver Drive to the west, River Road to the north and Highway 91A to the south and east, excluding River Road, Highway 91A and Westminster Highway.

b. Westminster Highway between Oliver Drive and Westminster Highway approximately 75 m south of Windsor Court.

c. Roads bounded by and including Thompson Road to the west, Thompson Gate to the north, Boundary Road to the east and bound by but excluding Highway 91A to the south.

d. Boundary Road between Tanaka Court and Dyke Road, Dyke Road between Boundary Road and Fraserwood Way, Fraserwood Way north of Dyke Road, and Hamilton Road.”

This Bylaw is cited as “**Traffic Bylaw No. 5870, Amendment Bylaw No. 10554**”.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CITY OF RICHMOND
APPROVED for content by originating dept. <i>US</i>
APPROVED for legality by Solicitor LB

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CORPORATE OFFICER



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee      **Date:** March 5, 2024  
**From:** Suzanne Bycraft  
 Director, Public Works Operations      **File:** 10-6000-01/2023-Vol 01  
**Re:** **Clothing and Textile Waste**

### Staff Recommendations

1. That Option 3, as outlined in the staff report titled “Clothing and Textile Waste”, dated March 5, 2024, be endorsed;
2. That a letter be written to the Honourable George Heyman, Minister of Environment and Climate Change Strategy, to request the establishment of an extended producer responsibility program for post-consumer textile waste in British Columbia; and
3. That one-time funding of \$60,000 from the General Waste and Recycling Provision for the Clothing and Textile Waste expenditures be approved and that the Consolidated 5 Year Financial Plan (2024-2028) be amended accordingly.

Suzanne Bycraft  
 Director, Public Works Operations  
 (604-233-3338)

Att. 2

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Recreation & Sport Services	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
Finance	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	INITIALS: 	<b>APPROVED BY CAO</b> 



## Staff Report

### Origin

This report responds to the following referral from the June 6, 2022 General Purposes Committee meeting:

*“That staff be directed to conduct research and develop options for a recycling program to divert clothing and other textiles from going to landfills.”*

This report supports Council’s Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

*Leadership in environmental sustainability through innovative, sustainable and proactive solutions that mitigate climate change and other environmental impacts.*

*5.1 Continue to demonstrate leadership in proactive climate action and environmental sustainability.*

*5.3 Encourage waste reduction and sustainable choices in the City and community.*

This report presents research concerning the recycling and waste management infrastructure for clothing and waste textiles, and proposes a multifaceted approach incorporating drop-off service, education and advocacy.

### Analysis

#### Textile Waste Overview

Textile waste includes residential and commercial fabrics such as clothing, linens, blankets, stuffed toys, drop cloths, filter fabric and artificial turf. Pre-consumer textile waste includes materials from the processing or manufacturing of textiles such as scrap wastage, damaged or defective materials and excess inventory. Post-consumer waste, which is the focus of this report, includes end-use of products, recalled inventory, returned items and those disposed by the consumer.

In Metro Vancouver, the 2022 Full-Scale Waste Composition Study identified that an estimated 15.7 kilograms per capita of textile waste is disposed of each year, or approximately 6% of the region’s total municipal solid waste. This is equal to approximately 44,000 tonnes being disposed in the region. From this, clothing represents more than 60% of textiles and based on Metro Vancouver data, staff estimate Richmond clothing waste to be approximately 1,800 tonnes per year.

‘Fast fashion’ capitalizes on quick changing trends to fuel the manufacturing of low-quality textiles with quick production times, decreased durability and lower prices. This has contributed to the average consumer now purchasing three times more clothing than they did in the 1980’s, keeping each item for half as long. This quick turnover of unwanted clothing is typically handled through secondary markets driven principally through charitable organizations, thrift stores and bulk collectors. Attachment 1 depicts the typical life cycle of donated clothing and

textiles, which notes that 20-25% is reused through second hand stores, swap meets and consignment. The remaining 75-80% go to sorter-graders. Half of this amount is sold to global reuse markets primarily in Europe, Asia, Central America and Africa; 20% is turned into wiper rags; 20% is made into non-woven products such as building/automotive insulation or emergency blankets; and 10% is disposed.

The export of used clothing and textiles to secondary global reuse markets has received negative media attention and criticism due to the lack of transparency and verifiable data on the end fate of these materials.

The environmental impacts of exporting used textiles to developing countries has prompted some nations to implement import bans and increase tariffs on textiles. Import has created further environmental challenges in these regions including open burning, disposal at sea and land dumping issues. Attachment 2 further summarizes the environmental impacts of textiles production and consumption.

Recycling clothing poses significant challenges due to the complex nature of textile materials. Clothing often comprises a blend of different fibers, making it difficult to separate and process them for recycling. Natural fibers like cotton and wool can be mechanically recycled, but this process shortens the fibers, leading to lower quality yarn and fabric. Synthetic fibers, such as polyester, are more difficult to recycle because they are commonly mixed with other materials, creating a labor-intensive process of separating out the polyester. For this reason, recycled polyester is usually sourced from non-clothing items, such as plastic bottles. The fast fashion trend has also contributed to a decrease in the quality of material being used, further complicating the ability to reuse or recycle the items. These factors, combined with the lack of specialized recycling infrastructure and the manual, time-consuming nature of sorting and disassembling garments, makes clothing recycling a particularly complex and inefficient process.

#### Current Approach and Opportunities for Residents

There are a number of options currently available for residents to donate reusable clothing and textiles in Richmond. These include:

- Donation bins at various locations including various fire halls on City property where residents can drop-off clothing and other household items. The City currently has 12 active donation bins licensed under the *Donation Bin Regulation Bylaw No. 9502*.
- Residents can drop-off clothing in donation bins situated on private property. Bins on private property are not regulated under the *Donation Bin Regulation Bylaw No. 9502*.
- Residents can contact various charities to schedule home pick-up service.
- Residents can deliver reusable clothing and household items to various thrift store locations (e.g. three RAPS locations, Richmond Hospital Auxiliary Thrift Shop, SOS Children's Village Thrift Store Foundation, etc.).

To promote the reuse and reduction of clothing and textile waste, the City undertakes a number of activities and public outreach initiatives annually, which are outlined below:

- **Repair Fairs:** A series of repair events are offered to help residents extend the life of bikes, lawnmowers and clothing by maintaining and repairing them instead of buying brand new. In 2023, the City hosted nine repair events and helped residents repair 232 pieces of clothing.
- **Rethink Waste Think Tank and Community Ideas Hub:** This award-winning campaign raises awareness and encourages the community to think differently about purchases, avoid unnecessary waste and find ways to reuse, repair, repurpose and recycle materials to support a circular economy. Over 330 ideas were generated and ideas specific to reducing, repairing or repurposing textiles are shared on the City's Community Ideas Hub webpage.
- **Education & Outreach:** The City supports Metro Vancouver's Think Thrice About Your Clothes behaviour change campaign by sharing information with residents through social media and at outreach events.
- **Street Banner Program:** This civic beautification initiative engages community members to submit creative and visually appealing designs taken from around Richmond. Banner designs are selected through an annual contest and winning banners are displayed on city streets. Past banners are sold for reuse and some banners are upcycled to reusable shopping bags which can be purchased through the Parks Department.
- **Clothing Drive/Swap Initiatives:** City facilities organize various initiatives to collect used clothing and share previously-loved items back to the community. For example, in 2023, the Youth Clothing Shop event collected approximately 2,000 clothing items and redistributed 641 items to 122 youth.

#### Options for Recycling/Diversion

As noted above, staff estimate there are 1,800 tonnes of clothing disposed of annually, representing 4% of Richmond's residential waste stream that could be recycled or diverted from landfill. This does not include estimates for amounts currently already donated by residents. Options to address this component of the waste stream range from an enhanced focus on waste reduction through education and advocacy, and/or collection options as outlined below.

*Option 1: Status Quo (not recommended):* Under this option, clothing repair events would continue to be offered to encourage reuse, and the City's current practice of supporting Metro Vancouver's Think Thrice campaign through regular media channels and outreach would be continued. This includes encouraging residents to donate used clothing and to reduce their consumption habits through the City's targeted education efforts. This option appropriately focuses on waste reduction and responsible practices, however, does not represent an increased service level for residents.

*Option 2: Collection Program Pilot (not recommended).* Under this option, the City could offer a model similar to the Large Item Pick-Up Program, where residents would have the ability to contact the City’s current waste and recycling service provider to arrange for collection of used clothing and textiles from the curb. This cost would be included in the annual residential utility fees, similar to the Large Item Pick-Up Program fee.

A limit of two collections per eligible residential unit (estimated at 43,700 households) could be established under a one year pilot program as part of assessing quantities and overall collection effort required. The annual cost of this option is estimated at \$165,000. The pilot would be evaluated as it evolves to determine demand, quantities, collection effort and cost.

As residents are able to schedule front door pick-up through charitable organizations at no additional cost, offering this service through the City for an annual fee as detailed above is not recommended.

*Option 3: Depot Drop-Off, Enhanced Education, and Advocacy (recommended).* This option includes a multifaceted approach to increase collection opportunities, enhance education and outreach, address internal processes and advocate for a provincially regulated program to manage post-consumer textiles. This option includes:

- 1) Add Textiles at the Recycling Depot:
  - a. Utilize the City’s competitive bid process to procure a collector to install dedicated post-consumer textile collection receptacles to collect materials as outlined in Table 1 below.
  - b. Leverage the *Circular Procurement Policy* as part of the evaluation process to encourage bids that prioritize repair and reuse opportunities in the community.

**Table 1: Clothing and Textile Waste Items**

Accepted				Not Accepted
- Active wear	- Beddings	- Backpacks	- Athletic shoes	- Wet and moldy items
- Bathing suits	- Blankets	- Belts	- Cleats	- Scrap (sewing) cuttings
- Coats	- Comforters	- Gloves	- Dress shoes	- Used rags
- Dresses	- Curtains	- Handbags	- High heels	- Uniforms and corporate textile waste
- Jackets	- Pillows	- Hats	- Loafers	- Suitcases
- Pants	- Sheets	- Ties	- Slippers	
- Shorts	- Towels	- Toques	- Sneakers	
- Skirts				
- Sweaters				
- T-shirts				
- Undergarments				

- 2) Enhance the Rethink Waste Campaign:
  - a. Increase the emphasis and delivery of outreach-based programs focusing on textile waste awareness and reduction strategies.
  - b. Customize messaging for Richmond residents to foster community behaviour change and support an emerging culture of circularity over waste.

- 3) Update the Richmond Sustainable Event Toolkit and 7 Step Quick Guide:
  - a. Enhance the toolkit and guide to provide tips and resources to reduce single-use textiles at community and City sponsored events.
  - b. Develop a recognition initiative to encourage and promote re-wear of event T-shirts (e.g. stamping the t-shirt with new event year to recognize event staff for their commitment to sustainability).
  - c. Review and assess the use of single-use textile items at City sponsored events to encourage reduction and efficiencies.
- 4) Expand Repair Fair Events:
  - a. Expand events targeted at reuse and repair of clothing/textiles to include sewing machine tune-up stations, educational opportunities, sewing circles and development of a resource guide.
  - b. Partner with educational institutions and professional subject matter experts to encourage innovation and local circular business models in textile repair and reuse.
- 5) Advocate for Extended Producer Responsibility (EPR) Programs:

Write a letter to the Minister of Environment and Climate Change strategy urging the provincial government to establish EPR programs for post-consumer textile waste in BC to make industry accountable for collection and recycling infrastructure of textiles.
- 6) Join the Canadian Circular Textiles Consortium (CCTC):

That staff join the CCTC to foster collective actions with multi-stakeholder groups across Canada and internationally to accelerate efforts to developing circular textile solutions through piloting innovative projects and sharing key learnings, resources, and research; thereby reducing duplication of government and industry efforts.

This is the recommended approach as it focuses on service enhancement and waste reduction through behaviour change campaigns, as well as alignment with the City's Richmond Circular City Strategy and the Community Energy and Emissions Plan to increase reuse and repair initiatives available to the Richmond community. Initial costs for this option are estimated at \$60,000 inclusive of additional outreach, subscription fees, repair events and development of promotional communications materials. Ongoing annual costs are estimated at \$40,000, and can be considered as part of future budget deliberations. Additionally, staff will continue to look for future opportunities to further encourage and support textile reuse and repair in the community and surrounding educational institutions.

### **Financial Impact**

The initial one-time cost to develop the proposed approach outlined under Option 3 is estimated at \$60,000. This cost includes communications support for developing and implementing additional communications tactics, as well as staffing resources to support the expanded Repair Fair events. If approved by Council, the initial one-time cost can be funded from the General Solid Waste and Recycling Provision and the Consolidated 5 Year Financial Plan (2024 – 2028) amended accordingly. Ongoing annual costs estimated at \$40,000 will be considered in the 2025 budget process.

## Conclusion

There is currently a lack of sound infrastructure both locally and globally for managing clothing and textile waste at end-of-life. While good opportunities exist to promote reuse through donation practices and Repair Fair events, these do not adequately address overall life cycle issues, including the negative environmental impacts. Further, the rise of 'fast fashion' for clothing and textiles has created a significant rise in the amount of new clothing being produced and disposed annually. Expanding Recycling Depot collection, implementing Richmond focused behavior change initiatives, and collaborating with multi-stakeholder groups to accelerate efforts to develop national circular textile solutions represents a balanced approach to increase textile waste diversion. Additionally, advocating for an extended producer responsibility program would appropriately place accountability on industry to manage their products at end-of-life.



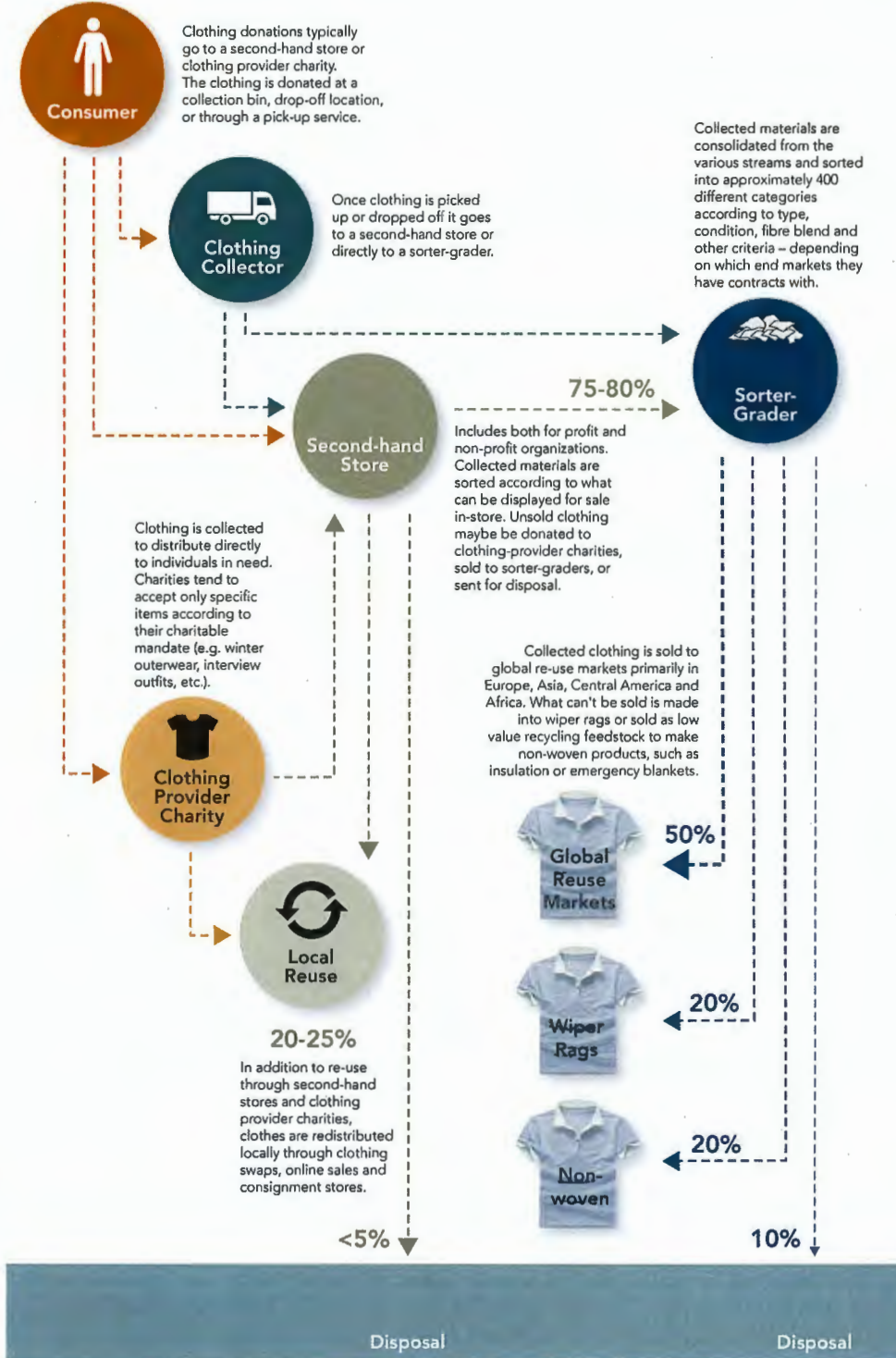
Kristina Nishi  
Manager, Recycling and Waste Recovery  
(604-244-1280)

KN:

- Att. 1: Life Cycle of Unwanted Clothing
- 2: Textile Waste Research Summary

# Life Cycle of Donated Clothing

Produced by Metro Vancouver



## Textile Waste Research Summary

### Environmental Impacts of Clothing Production and Consumption

Clothing has become one of the fastest growing waste streams due in large part to the rise of ‘fast fashion’. ‘Fast fashion’ capitalizes on quick changing trends to fuel the manufacturing of low-quality textiles with quick production times, decreased durability and even lower prices. The quantity of clothing introduced to the global market has expanded over the last few decades with 150 billion new clothing items produced annually.<sup>1</sup> The Ellen MacArthur Foundation estimates that the average consumer purchases 60% more pieces of clothing than 15 years ago and keeps each item for half as long with some estimated to be disposed of after just seven to ten wears. Additionally, clothing made from natural fibres such as cotton and wool produces methane when disposed in landfills and clothing made with synthetic fibres such as polyester, nylon, or acrylic shed approximately 500,000 kg of plastic microfibres in the ocean annually through machine washing.<sup>2</sup> Microplastics can take up to 450 years to disintegrate, persisting in the environment and food chains.<sup>3</sup>

### National, International and Local Commitments/Actions

The negative environmental impacts of post-consumer textile waste has prompted a range of commitments and actions by governments and private industry across the globe. Policy instruments and initiatives such as extended producer responsibility (EPR) programs, disposal bans, post-consumer content mandates, mandatory sustainable labelling, and behaviour change campaigns and import bans, etc. are being introduced to tackle the issues of post-consumer textile waste from overproduction and overconsumption.<sup>4</sup> While many major brands and organizations are taking steps through collaboration and strategic partnerships to transition toward circularity and sustainability, consumers have a role to play in shifting to circular systems by reducing consumption, extending the life of products and minimizing waste through repair, reuse, repurpose, etc. Responsible post-consumer textile waste management is crucial to divert waste from landfills and support the transition to a circular economy and a multifaceted approach is required to mitigate textile waste problems.

A summary of key policies and initiatives taken by various levels government and industry are highlighted in Table 2 below.

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<sup>1</sup> “Fashion’s Waste Crisis and How to Solve it”, prepared for Eileen Fisher Foundation by Pentatonic

<sup>2</sup> Ellen MacArthur Foundation, A new textiles economy: *Redesigning fashion’s future*, (2017, <http://www.ellenmacarthurfoundation.org/publications>).

<sup>3</sup> Ellen MacArthur Foundation, A new textiles economy: *Redesigning fashion’s future*, (2017, <http://www.ellenmacarthurfoundation.org/publications>).

<sup>4</sup> “Characterizing Reuse, Recycling and Disposal of Textiles in Canada” by Cheminfo, prepared for Environment and Climate Change Canada



**Table 2: Summary of Key Policies and Initiatives**

Date	Description
<b>Government of Canada</b>	
2023	<ul style="list-style-type: none"><li>- Provided financial support to Fashion Takes Action to launch the Canadian Circular Textile Consortium.</li><li>- Commissioned the Canadian Textile Industry Association to investigate textile recycling and sustainability programs in other countries and how to apply successes and lessons learned into a Canadian Context – report expected by March 31, 2024.</li><li>- Engaged with the National Association for Charitable Textile Recycling (NACTR) to investigate how digital tax receipting system could be used by the apparel sector and study the successes of reuse programs run by neighbourhood associations with the intent of scaling up and expanding these programs throughout Canada – report expected by March 31, 2024.</li><li>- Ocean Diagnostics, with collaboration from the Raincoast Conservation Foundation, is developing a holistic report on microfiber pollution in Canada, in order to develop up-to-date knowledge and recommendations for the Environment and Climate Change Canada (ECCC) on microfiber pollution mitigation actions – report expected by March 31, 2024.</li></ul>
July 2022	<ul style="list-style-type: none"><li>- In the consultation paper titled “A Proposed Federal Plastics Registry for Producers of Plastic Products”, textiles were included as a product category that would be subject to reporting requirements with an estimated effective commencement date of June 1, 2026.</li><li>- Recycling and management of textile waste is not included in this initiative at this time.</li></ul> <hr/> <ul style="list-style-type: none"><li>- Commissioned the following research:<ul style="list-style-type: none"><li>o “A Feasibility Study of Textile Recycling in Canada” by Fashion Takes Action.</li><li>o “Characterizing Reuse, Recycling and Disposal of Textiles in Canada” by Cheminfo Services Inc.</li><li>o “Economic Study of the Canadian Plastic Industry, Markets and Waste”.</li><li>o “Canada-wide action plan for extended producer responsibility” – Canadian Council of Ministers of the Environment (CCME).</li></ul></li></ul>
March 2022	<ul style="list-style-type: none"><li>- Introduced Canada’s 2030 Emissions Reduction Plan, which provides a roadmap for the Canadian economy to achieve 40-45% emissions reduction below 2005 levels by 2030.</li><li>- Robust textile waste management presents an opportunity to reduce Canada’s GHG emissions as textiles made from natural fibres (e.g. cotton or wool), along with food waste and yard and garden trimmings, produce methane when disposed in landfills, representing approximately 3.7% of Canada’s total GHG production, and about 27% of Canada’s total methane generation.</li></ul>

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**Provincial Government of BC**

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- September 2021 - Announced the Extended Producer Responsibility (EPR) Program Five-Year Action Plan that outlines priority actions that are important and immediate for BC to take to advance as a leader in EPR and waste prevention. The plan expands the categories of products managed under EPR, but textiles and carpet were not identified.
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**Metro Vancouver**

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- 2017 - Launched the Think Thrice About Your Clothes behaviour change campaign to reduce textile waste and encourage residents to reduce consumption, buy for quality versus quantity, provide tips/tactics to repair/care for clothing, reuse and swap clothing, etc.
- 2016 - Conducted research on the best way to address textile waste in the region.
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**Municipal Actions**

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- April 2017 - City of Markham, ON implemented a municipal disposal ban for textile waste from the garbage.
- April 2017 - North Bay, ON implemented a municipal disposal ban for textile waste from the garbage.
- May 2016 - Colchester County, NS implemented curbside collection of textiles, including clothing, linens, shoes and stuffed animals.  
- Textiles can be placed in blue Recycling Bags along with paper and cardboard.
- April 2016 - Colchester County, NS implemented a municipal disposal ban for textile waste from the garbage.
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**Others**

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- May 2023 - Sweden's Government Office published a memorandum containing a proposal to amend the Waste Ordinance, SFS 2020:614, to require circular handling of textiles and textile waste.  
- The proposal suggests that anyone who generates textile waste (waste from textile apparel, bags, accessories, home textiles and interior textiles) should be required to sort and store it separately from other waste.  
- Municipalities will be responsible for designing and providing a separate textile collection system and providing information on the best ways to reuse textiles.  
- If enacted, the proposed amendment becomes effective on January 1, 2025.
- April 2023 - Netherlands approved the Decree on extended producer responsibility for textiles and sets the target for textile reuse and recycling from 50% in 2025 to 75% in 2030.  
- Effective on July 1, 2023.
- 2023 - California State Senator drafted Senate Bill (SB) 707, the Responsible Textile Recovery Act, to establish an Extended Producer Responsibility program for textiles under the regulatory authority of the California Department of Resources Recycling and Recovery (CalRecycle).
-

July 2022	<ul style="list-style-type: none"> <li>- Bulgarian Council of Ministers published a Draft Regulation on Management of Footwear and Textile Waste. The draft Regulation aims to increase the amount of recycled household waste and reduce the amount of landfilled household waste by implementing the EU's Directive (EU) 2018/850 and Directive (EU) 2018/851.</li> </ul>
April 2022	<ul style="list-style-type: none"> <li>- China published its objectives for textile sector: a recycling rate of 25% by 2025, 30% by 2030, and a target to increase its production of recycled textiles by two metric tonnes in 2025.</li> <li>- The government also indicates in the plan that it intends to promote recycling, apply eco-design standards, and establish labels to improve sorting and encourage social responsible management systems.</li> </ul>
March 2022	<ul style="list-style-type: none"> <li>- European Commission published a strategy for sustainable and circular textiles as part of the European Green Deal to define its approach to life cycle, eco-design and EPR.</li> <li>- The 2030 target of the European Green Deal is to increase the lifespan of textile products, the recycling rate and to reinforce standards on toxic substances.</li> </ul>
February 2019	<ul style="list-style-type: none"> <li>- BC Return-It partnered with Salvation Army to accept old or unused clothing and textiles for reuse or recycling from BC residents at 55 locations.</li> <li>- Items accepted included accessories and bags, all types of clothing, curtains, general household textiles (towels, blankets, sheets, etc.), shoes and boots, and sleeping bags.</li> <li>- Program was suspended in June, 2022 because they could no longer afford to run the program after its partner, The Salvation Army, ended the relationship because it had "sufficient supplies of used textiles from other sources."</li> </ul>
December 2018	<ul style="list-style-type: none"> <li>- UN Fashion Industry Charter for Climate Action contains the vision to achieve net-zero emissions by 2050 with the mission "to drive the fashion industry to net-zero Greenhouse Gas emissions no later than 2050 in line with keeping global warming below 1.5°C."</li> </ul>
2016	<ul style="list-style-type: none"> <li>- Product Stewardship Institute, a policy advocate and consulting non-profit group, formed a Textiles Coalition Workgroup and established the first standards for collection of used textiles in New York State, called Re-Clothe NY.</li> </ul>
January 2008	<ul style="list-style-type: none"> <li>- France implemented extended producer responsibility.</li> <li>- France's textile collection rates increased from 15% in 2007 to 39% in 2020. Nearly 58% of the clothing, linens and footwear collected are reused and less than 1% is sent to the landfill. Noting the increase of 'fast fashion' and the reduction in overall quality, France's EPR program has observed a reduction in the percentage of reusable textile waste by 6% since 2014.</li> </ul>



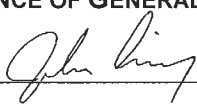

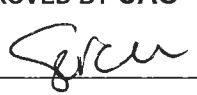
**To:** Public Works & Transportation Committee      **Date:** March 11, 2024  
**From:** Suzanne Bycraft      **File:** 10-6370-01/2024-Vol  
Director, Public Works Operations      01  
**Re:** **Recycling and Solid Waste Management – Report 2023: Back to Basics**

**Staff Recommendations**

1. That the report titled, “Recycling and Solid Waste Management – Report 2023: Back to Basics”, dated March 11, 2024, from the Director, Public Works Operations, be endorsed.
2. That the “Recycling and Solid Waste Management – Report 2023: Back to Basics” be made available to the community on the City’s website and through various communication tools including social media channels and as part of community outreach initiatives.

Suzanne Bycraft  
Director, Public Works Operations  
(604-233-3338)

Att. 1

<b>REPORT CONCURRENCE</b>	
<b>CONCURRENCE OF GENERAL MANAGER</b>  	
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b>  
<b>APPROVED BY CAO</b>  	

## Staff Report

### Origin

This report presents the City's annual progress in recycling and sustainable waste management practices, highlights results achieved in 2023 and provides insights into upcoming key planned initiatives as outlined in the attached "Recycling and Solid Waste Management – Report 2023: Back to Basics".

This report supports Council's Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

*Leadership in environmental sustainability through innovative, sustainable and proactive solutions that mitigate climate change and other environmental impacts.*

*5.1 Continue to demonstrate leadership in proactive climate action and environmental sustainability.*

*5.3 Encourage waste reduction and sustainable choices in the City and community.*

### Analysis

With Council's leadership and commitment to achieving circularity through the Richmond Circular City Strategy and the Community Energy and Emissions Plan, the City continues to provide a comprehensive range of reduction, recycling and waste management services to help achieve this vision. The City also implements robust communication and community outreach initiatives to raise awareness about the services available, how to recycle correctly and encourage behaviour change.

"Recycling and Solid Waste Management – Report 2023: Back to Basics" ("Report") presents the City's annual progress update for 2023 (Attachment 1). The Report also includes detailed program information, insights into upcoming initiatives and a comprehensive tips and resources section.

### 2023 Highlights

In 2023, the City focused on getting back to basics for sustainable waste management by emphasizing reduce, reuse, repair and recycle. As part of this initiative, the City introduced the Back to Recycling School behavioural change campaign to educate the community on how to recycle glass and hazardous materials correctly. Over the past year, the City remained focused on supporting a circular economy by piloting new innovative ideas, encouraging community members to rethink their waste, and make it easier for residents to get household items repaired for free by hosting Repair Fairs.

Residents in single-family homes continue to recycle close to 80% of their household waste by leveraging a number of recycling and waste reduction opportunities. The Blue Box and Blue Cart programs recycled 7,070 tonnes of packaging, containers and paper, while the Green Cart program diverted 21,031 tonnes of food scraps and yard trimmings from the landfill to be composted into nutrient-rich soil. In 2023, 271,381 vehicle visits occurred at the Recycling

Depot, equating to an average of 744 visits per day. During their visits, customers dropped-off more than 7,962 tonnes of recyclable materials. Richmond residents also leveraged the Large Item Pick Up program to have 16,699 items collected curbside to divert 558 tonnes from the landfill.

Through community outreach and customer service, staff supported 15,465 customer service calls and delivered 60 outreach activities on various topics through a mix of in-person and virtual engagements. A total of 3,040 students took part in supporting recycling and waste management events and training activities throughout the City. This included 144 Green Ambassadors accumulating 1,606 volunteer hours.

The Richmond Recycling App and Recycling Wizard tool continue to provide enhanced service for residents, with 22,273 active collection day reminders and 60,474 annual Recycling Wizard searches. The Recycling Wizard serves as an excellent point of reference for residents to search how to recycle specific items. Moreover, in City public spaces garbage and recycling bins were inspected 13,478 times per month and serviced 19,554 times per month, for a combined 397,630 bin visits per year to help keep our community clean.

### Report 2023 Overview

The Report contains four sections – the first two sections provide an overview of the past year, including highlights for 2023, details and statistics on the City’s waste management and recycling services, and key planned initiatives for 2024. The Report’s next two sections provide details on the many programs and services the City offers, and a comprehensive tips and resources guide that provides more information on where to recycle, dispose or donate various household items.

The following is a summary overview of each section:

#### *Section 1: Annual Outlook provides an overview of the achievements in 2023 including:*

- Completed phase 2 of the Commercial Recycling Services Review and received approval to develop a Business Education and Advisory Program.
- Won two national IABC Silver Leaf Awards for merit for the “Rethink Waste: Think Tank & Ideas Hub” and “Richmond’s Single-Use Plastic Ban” community engagement.
- Completed an innovative Pilot Paving Project using asphalt that contains recycled plastic at the Richmond Recycling Depot, making Richmond the first city in Canada to use this product.
- Completed a two month audit at the Recycling Depot to measure commercial volumes for glass, flexible plastic and Styrofoam.
- Secured a funding agreement with Metro Vancouver to recover partial costs for Richmond Repair Fair events, including funding for three events completed in 2023.
- Launched the Recycling Champion Program and registered 84 Champions in multi-family buildings, who were provided with tools and support to increase recycling in their buildings.
- Developed and implemented two Back to Recycling School campaigns focused on glass bottles and jars, and hazardous materials recycling.

- Installed and operationalized an innovative trash skimming device at Steveston Harbour and completed a waste audit with Ocean Wise to identify items captured in the unit.
- Updated the Commercial and Multi-Family Developments Waste Management Design Guidelines to simplify collection truck requirements and provide a refreshed look.

*Section 2: Tracking Our Progress* provides statistics and data on the broad range of programs and services the City offers residents to responsibly manage their household waste.

*Section 3: Programs and Services* describes the City’s comprehensive recycling and waste reduction programs, tips on how to recycle correctly with each service, and highlights how recycling and reducing waste can support the City’s overarching goal of circularity. Information on the City’s robust litter collection, public spaces recycling, event recycling, and community and school engagement programs are also detailed.

*Section 4: Tips and Resources* highlights community resources and partnerships that support sustainable waste management, and provides a recycling and disposal directory for details on where to recycle banned, hazardous and other materials.

### Moving Forward

The City will continue to support the transition to a circular economy by exploring new technologies and implementing new initiatives to increase Richmond’s waste diversion rate. Key focus areas in 2024 will include:

- Evaluate opportunities to formalize and expand the Green Ambassador program, including engagement with the school district or other agencies.
- Implement a Bike Reuse program and continue to explore other reuse and sharing opportunities to advance circularity.
- Evaluate opportunities to educate, reduce textile waste and increase recycling options for residents.
- Conduct a detailed review of current in-house recycling at City facilities and refresh the WeRecycle program.
- Continue engagement with participants in the Grease Collection Pilot to increase program uptake.
- Explore camera technologies to reduce illegal dumping in public spaces.
- Develop and implement the Richmond Business Recycling Resource Program to work with businesses to help increase their recycling efforts.
- Continue engagement efforts to encourage residents to recycle correctly, rethink waste and shift to a circular economy where materials we use stay in circulation.

### Proposed Communication

Subject to Council’s direction, the annual “Recycling and Solid Waste Management – Report 2023: Back to Basics” will be made available on the City’s website and through various communication tools including social media channels as part of community outreach initiatives.

### **Financial Impact**

None.

March 11, 2024

- 5 -

## **Conclusion**

The City is providing residents with an annual progress report through the “Recycling and Solid Waste Management – Report 2023: Back to Basics”. This Report demonstrates Council’s leadership and commitment to sustainable and circular waste management initiatives, as well as responsive services, responsible government and accessible information and communication.



Kristina Nishi  
Manager, Recycling and Waste Recovery  
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KN:lh

Att. 1: Recycling and Solid Waste Management – Report 2023: Back to Basics



City of Richmond Recycling  
and Solid Waste Management

# REPORT 2023

## BACK TO BASICS



Environmental Programs is responsible for residential garbage and recycling services, including collection, drop-off services at the Richmond Recycling Depot, public spaces recycling and litter collection services.

With Council's leadership and commitment to strategic planning and policy, we strive to help create more sustainable waste management through our programs and services to support a circular economy. We believe that it is our responsibility to support our community and preserve our planet for future generations.

Through outreach and engagement, working with our residents and local businesses, and partnering with local agencies, we also strive to meet and exceed all regional waste diversion goals by continuously expanding our programs and service offerings.

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# Going Back to Basics

As Richmond continues to focus on its transition to a circular economy, the City is emphasizing the three Rs – Reduce, Reuse and Recycle.

These fundamentals for sustainable waste management involve recycling correctly and applying multiple methods to reduce and reuse, including rethinking buying decisions and repurposing and repairing items. This supports a circular economy, as the materials we buy are being used, reused, repurposed and recycled multiple times into new products to reduce reliance on raw materials and help conserve natural resources.

Other key strategies in the City's *Community Energy and Emissions Plan 2050* and *Richmond Circular City Strategy* include maximizing the value of resources and reducing carbon emissions as well as encouraging responsible consumption and minimizing waste. These actions are part of the global effort to be more sustainable and reduce environmental impacts.

Towards this goal, the City provides multiple programs and services to support recycling, and is implementing measures to reduce waste overall, including its ban on single-use plastic, and its outreach and education programs that promote ideas to rethink, repurpose, reuse and repair items.

Working together with the community, Richmond aims to be a fully circular city by 2050.



**LET'S  
REDUCE  
REUSE  
RECYCLE**

# 1.0

## Annual Outlook

In 2023, the City of Richmond focused on getting back to basics for sustainable waste management by delivering programs, services and new initiatives to help the community reduce, reuse and recycle.

These sustainable waste management practices are integral to supporting a circular economy, where materials are used, reused, repurposed and recycled multiple times into new products to reduce reliance on raw materials and help conserve natural resources.

Several initiatives over the past year focused on increasing and improving recycling in the community. Richmond residents with curbside collection continue to recycle close to 80% of their household waste – an impressive accomplishment that helps to divert waste from the landfill as well as supporting a more sustainable approach to waste management. As well, Richmond received the Leader in Sustainability Award from Call2Recycle to recognize the City for its exceptional environmental commitment and outstanding battery collection results at the Recycling Depot.

However, while recycling is critical, it's increasingly important to recycle correctly to ensure recyclables will be accepted by processing facilities and to avoid fines and other penalties that may apply when recycling is contaminated.

To help improve the quality of recycling, the City launched its Back to Recycling School campaign to highlight how to recycle glass and hazardous materials correctly. These items were selected as they continue to top the list of materials most frequently recycled incorrectly. This educational campaign also linked to a series of animated educational videos featuring Richmond Green Ambassadors demonstrating the proper steps to recycle these materials.

*Continued >*

## Over the past year, Richmond remained focused on supporting a circular economy by encouraging community members to rethink waste.

The City is working with community members to help increase and improve recycling in multi-family complexes through its Recycling Champion program. Recycling Champions are individual residents who share the City's goals for supporting a circular economy through recycling and are interested in helping others in their building recycle correctly and consistently. Data from audits and other reports note that multi-family complexes with centralized collection areas consistently have higher levels of contamination. Examples include items being recycled in the wrong bin, hazardous items found in bins and recyclable materials found in the garbage. The City provides the Recycling Champions with training and resource materials, and the Recycling Champions take the lead in their building to help their neighbours.

Richmond is supporting increased residential recycling through its Multi-Family Grease Collection Pilot program, which was launched in 2022 and continues to provide a convenient option to recycle used cooking oil and grease. The City is collecting data on usage in the pilot project and will focus on increasing participation levels in the upcoming year as part of continued refinements to the program. Residents can drop off used cooking oil and grease at the Richmond Recycling Depot.

While residential recycling is well established in Richmond, commercial recycling levels are significantly lower. In response, the City initiated a comprehensive Commercial Recycling Services Review, which was completed in 2023 and resulted in a final report being presented to Council in October. The primary recommendation involved concluding the Commercial Garbage and Recycling Collection Pilot Program and shifting to focus on providing hands-on support for businesses. This was based on feedback received from businesses, industry and other interested and affected organizations who shared that the most appropriate approach for the City to support commercial recycling is to educate and raise awareness about existing options on the market for commercial garbage and recycling services. In response, Council directed staff to implement a Richmond Business Recycling Resource Program as a pilot project in 2024, including the development of a Business Education Resources Toolkit.

In addition to recycling, the City is implementing new programs to support reducing waste. Over the past year, Richmond remained focused on supporting a circular economy by encouraging community members to rethink their waste. This included promoting the Rethink Waste Community Ideas Hub, which highlights ideas to reduce food waste, holiday waste and single-use items, and tips to repurpose materials into new products and community-based options that promote reuse by sharing and donating household items. These initiatives and related communication campaigns stemmed in large part from Richmond's Single-Use Plastic Ban campaign and its Rethink Waste Think Tank and Community Ideas Hub community engagement, which both received national Silver Leaf awards of merit from the International Association of Business Communicators.

Building on the ideas shared and the benefits of repairing items to extend their usability, Richmond is making it easier for residents to get household items repaired for free by hosting a series of highly popular Repair Fairs. The City works with volunteers who repair clothing and other textiles, as well as other household items such as bikes and lawnmowers. In addition, the City's hosted free workshops, worked with the Green Ambassadors to promote recycling and sustainable waste management in schools and in the community, provided tours of the Recycling Depot and provided event recycling support.

As a part of the 2024 utility budget, Council approved a Bike Reuse pilot project to support reuse and divert bikes from being recycled at the Richmond Recycling Depot. Based on staff assessment, 10 to 15 bikes are dropped off each week on average for recycling. Staff have identified an opportunity to work with a partner organization to divert suitable bikes from recycling so they can be repaired and redistributed in the community. The new pilot project is scheduled for implementation in 2024.

**With the continued success of the City's broad range of programs to support increased recycling and leverage opportunities to reduce waste, Richmond is on track to transition to a circular economy with sustainable waste management practices.**



## LET'S RETHINK WASTE

Changing our habits to think differently about purchases, avoiding unnecessary waste and finding ways to reuse and recycle products contributes directly to positive outcomes like reducing reliance on raw materials.

Ultimately, it's about shifting to a circular economy, where the materials we use stay in circulation to be used, reused or repaired, and recycled multiple times into new products.

### TOP TIPS TO REDUCE WASTE:

- Avoid single-use items – choose reusable instead
- Choose products with minimal packaging
- Buy, sell, trade or donate household items
- Choose products with recycled content
- Repair products when possible
- Rethink – take a moment to assess:
  - Do I need this item?
  - Will it create unnecessary waste?
  - How can it be reused or recycled?

Together we can change habits and make better choices that support a circular economy.



# 1.1

## 2023 Top Accomplishments

This report showcases some of the key achievements in 2023 and looks back on the City's top accomplishments over the past 30-plus years.

### RECYCLING MILESTONES

Launched Blue Box program

**1990**

Launched backyard compost bin distribution program

**1992**

Launched Blue Cart program

**1995**

Launched Green Can program

**2010**

Launched Green Cart program for multi-family complexes

**2015**

**1991**

Opened parking lot recycling depot at 5599 Lynas Lane

**1993**

Opened Richmond Recycling Depot at 5555 Lynas Lane

**1996**

Launched weekly curbside yard trimmings collection

**2013**

Launched Green Cart program for single-family homes and townhomes

Launched Large Item Pick Up program



- 1 COMPLETED THE COMMERCIAL RECYCLING SERVICES REVIEW**  
 Received approval to develop a Richmond Business Recycling Resource Program.
- 2 WON TWO NATIONAL IABC SILVER LEAF AWARDS**  
 Recognized by International Association of Business Communicators with awards of merit for the “Rethink Waste: Think Tank & Ideas Hub” and “Richmond’s Single-Use Plastic Ban” community engagement.
- 3 COMPLETED PILOT PAVING PROJECT**  
 Used asphalt that contains recycled plastic at the Richmond Recycling Depot – the first city in Canada to use this product.
- 4 COMPLETED RECYCLING DEPOT AUDIT**  
 Monitored quantities of glass, flexible plastic and polystyrene (Styrofoam™) to determine commercial usage at the Recycling Depot.
- 5 SECURED A FUNDING AGREEMENT WITH METRO VANCOUVER**  
 Funding will cover partial costs for Richmond Repair Fair events, including funding for three events completed in 2023.
- 6 LAUNCHED THE RECYCLING CHAMPION PROGRAM**  
 Registered 84 Champions in multi-family buildings, who were provided with tools and support to encourage recycling in their buildings.
- 7 LAUNCHED BACK TO RECYCLING SCHOOL CAMPAIGN**  
 Developed and implemented two Back to Recycling School campaigns focused on glass bottles and jars and hazardous materials recycling.
- 8 INSTALLED TRASH-SKIMMING DEVICE**  
 Installed and operationalized a trash skimming device at Steveston Harbour and completed a waste audit with Ocean Wise to identify items captured in the unit.
- 9 UPDATED THE COMMERCIAL MULTI-FAMILY DEVELOPMENT WASTE MANAGEMENT DESIGN GUIDELINES**  
 Simplified collection truck requirements and refreshed look.

Introduced *Single-Use Plastic and Other Items Bylaw No. 10000*

Expanded Large Item Pick Up Program

Expanded hours and items accepted at Richmond Recycling Depot

**2019**

Adopted *Single-Use Plastic and Other Items Bylaw No. 10000*

Extended Recycling Depot operations to 7 days a week and expanded items accepted

**2021**

Earned national awards for the Rethink Waste and Single-Use Plastic Ban engagement campaigns

**2023**

**2016**

Launched biweekly Garbage Cart program

**2020**

Renovated Recycling Depot and expanded items accepted

**2022**

Implemented *Single-Use Plastic and Other Items Bylaw No. 10000*  
 Expanded items accepted at Recycling Depot

# 1.2

## Setting Goals

Richmond's long-term goal is to support a circular economy through sustainable waste management, and the annual goals listed here are designed to help achieve this target.

### 1 EXPAND GREEN AMBASSADOR PROGRAM

Evaluate opportunities to formalize and expand the Green Ambassador program.

### 2 PROMOTE REUSE AND SHARING

Implement a Bike Reuse program and continue to explore other reuse and sharing opportunities.

### 3 ADDRESS TEXTILE WASTE

Evaluate opportunities to educate, reduce textile waste and increase recycling options for residents.

### 4 REVIEW IN-HOUSE RECYCLING

Conduct a detailed review of current in-house recycling at City facilities and refresh the WeRecycle program.

### 5 INCREASE GREASE COLLECTION

Continue engagement with participants in the Grease Collection Pilot to increase program uptake.

### 6 REDUCE ILLEGAL DUMPING

Explore camera technologies to reduce illegal dumping in public spaces.

### 7 INCREASE BUSINESS RECYCLING

Develop and implement the Richmond Business Recycling Resource Program to work with businesses to help increase their recycling efforts.

### 8 CONTINUE COMMUNITY ENGAGEMENT

Continue engagement efforts to encourage residents to recycle correctly, rethink waste and shift to a circular economy where materials we use stay in circulation.



# 1.3

## Richmond Repair Fairs: Fix it. Don't toss it.

A commitment to reducing waste is not only good for the environment, it can also be good for your wallet.

By choosing to repair damaged goods, rather than simply throwing them out, you can divert unnecessary waste from the landfill and save money by avoiding new purchases in a time of rapidly rising costs. This is particularly important for items like textiles, which have become one of the fastest growing waste streams. The Ellen MacArthur Foundation estimates that the average consumer purchases 60% more pieces of clothing than 15 years ago and keeps each item for half as long. In Richmond, it is estimated that 1,800 tonnes of clothing waste are being sent to the landfill each year.

In response, the City of Richmond is encouraging residents to repair items as part of the classic eco-friendly trio of reduce, reuse and recycle.

The City hosted nine Repair Fairs last year, working with a team of volunteer experts to fix a variety of items, including 232 clothing items, 30 bikes and three lawnmowers. These items are now enjoying a new life instead of being recycled or tossed in the garbage and added to the landfill.

The success of these events is due in large part to the partnership approach involving community members who volunteer their time to share their skills repairing items. As an added bonus, these events are now being partly funded by a contribution from Metro Vancouver.

The Textile Arts Guild of Richmond (TAGOR) proved a perfect fit for the Repair Fairs partnership. TAGOR, a registered non-profit formed in 1975, "is dedicated to advancing and encouraging all facets of artistic and practical textile arts, including creative mending and repurposing." Many of its members participated in the Repair Fairs, hand-stitching or using portable sewing machines from the Richmond Arts Centre, says TAGOR president Vickie McLeod, who has been with the guild for more than 30 years.



She says with a refreshed focus on sustainable practices, TAGOR members were eager to use their skills to help the City and thrilled to see both what residents brought to the events and how they reacted after.

Among the 232 pieces of clothing repaired were many ripped seams, torn pants and holey pockets as well as other signs of general wear and tear, McLeod says.

"It's very much like improv sewing," she says. "You've got to have a lot of tools with you but, fortunately, we're getting to know what to expect. We can do quite an effective mend on almost any kind of fabric."

For instance, one woman brought in her husband's pure wool sweater that had a large hole in the elbow. McLeod used needle felting techniques — taking wool roving (wool that hasn't been spun into yarn), blending colours to match, then locking the new fibres to the sweater with a barbed needle punch — to make it almost as good as new, and undoubtedly saving the owner the cost of replacement.

"It's amazing what you can do by hand, with just a needle and thread and some of those simple tools from the past," she says, noting TAGOR volunteers explain repairs as they do them.

"If it's possible to make a repair, we explain how we do it so they realize it can be done with mostly all garments that need to be fixed instead of putting them in the garbage," says Elena Sambuev, a sewist who has worked in fashion production for more than 45 years and signed up to volunteer at the Repair Fairs after hearing about them from a customer.

She noted that one of her greatest challenges was repairing an antique cloth child's doll, requiring intricate hand stitching to make the seams invisible.

McLeod has seen beloved items, too, repairing a child's blanket that was to be passed down to the fourth generation of a family.

Regardless of the fabric, the item or its value to the owner, the goal is the same for both McLeod and Sambuev: reducing the amount of waste.

"We have to do something," Sambuev says. "We cannot just live today and not think about tomorrow."

Adds McLeod: "Even taking one thing out of the landfill, I know it's not a lot, but we have to start the process and start people thinking about it."

# GETTING BACK TO BASICS

# 2.0

## Tracking Our Progress

As part of tracking its progress, the City of Richmond collects data across a broad spectrum of programs, services and activities. This data shows how residents have improved their recycling and waste diversion over the years, and how new programs are contributing to a circular economy.

The mix of data reported reflects the amount of recycling handled through residential collection programs, the usage and types of materials dropped off at the Richmond Recycling Depot and a breakdown of the different types of recyclable materials that are being diverted from the landfill through multiple recycling programs.

As well, the City has a number of outreach initiatives that are aimed at increasing awareness and understanding about how to recycle correctly and consistently, and how to reduce waste overall.



# 2.1 Diversion Statistics

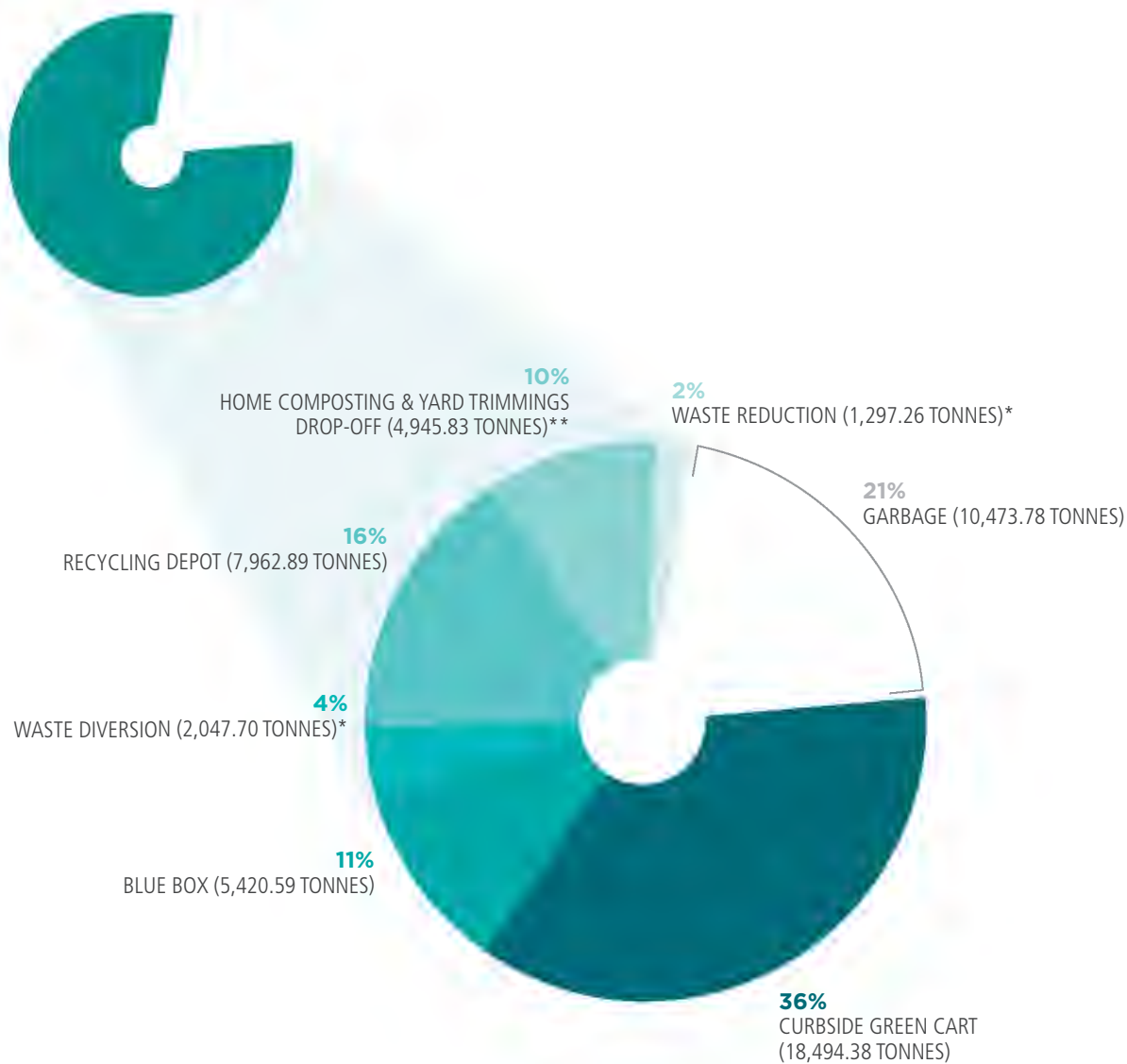
Richmond residents in single-family homes diverted 79.3% of their waste from the landfill in 2023.



## SINGLE-FAMILY RECYCLING IN 2023

Residents took advantage of a variety of programs to divert **79.3% of their waste** from the landfill in 2023.

Residents were able to achieve this waste diversion through a number of recycling and waste reduction opportunities, including curbside and Richmond Recycling Depot collection as well as composting programs.



\* Estimated

\*\* Includes estimates for home composting, tree chipping and leaf drop-off programs.

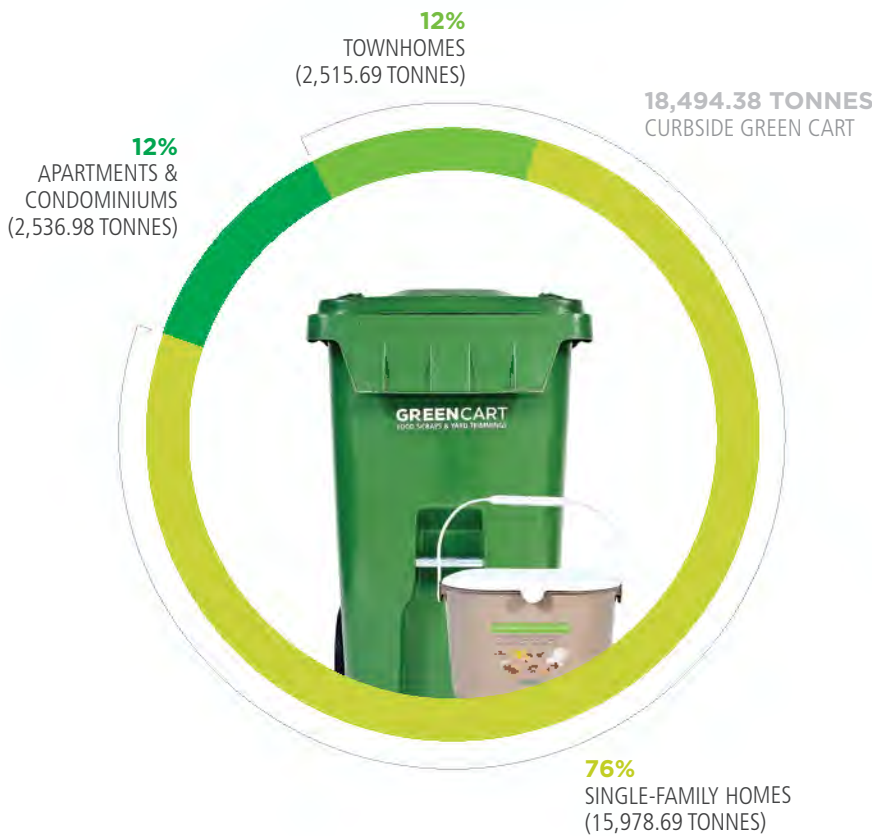
# BLUE BOX AND BLUE CART PROGRAMS RECYCLING MIX IN 2023

Through the Blue Box and Blue Cart programs, residents recycled a total of **7,070.84 tonnes** of recyclable materials.





## RESIDENTIAL GREEN CART RECYCLING IN 2023

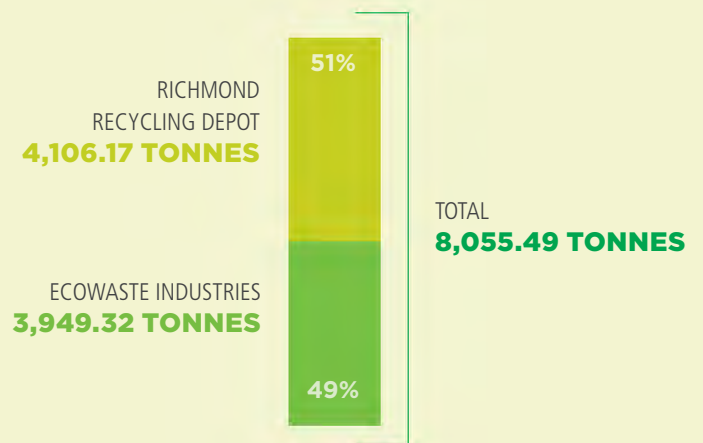


Residents diverted **21,031.36 tonnes** of food scraps and yard trimmings from landfill in 2023 to be composted into new resources.

Richmond's Green Cart program is for residents in single-family homes, townhomes, apartments and condominiums.

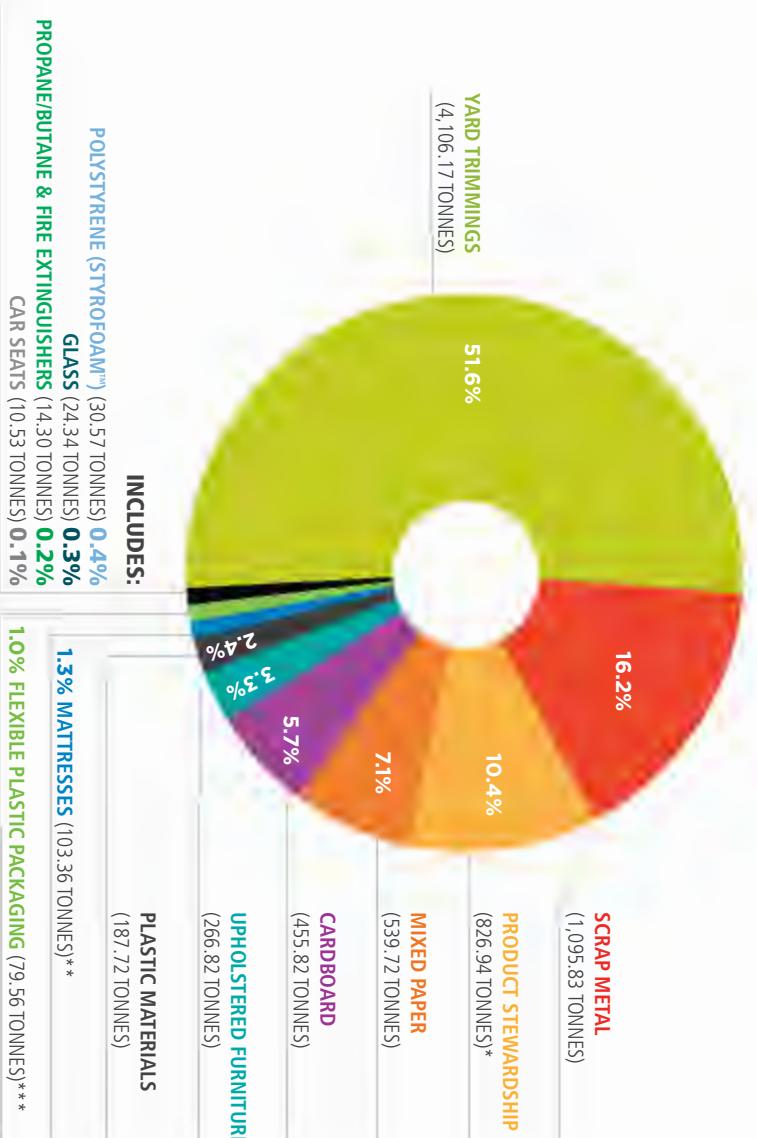
**75,376** residential units received weekly collection in 2023.

In 2023, **8,055.49 tonnes** of yard trimmings were collected at the Richmond Recycling Depot and through the Ecowaste residential and commercial drop-off service.



## MATERIALS COLLECTED AT THE RICHMOND RECYCLING DEPOT

In 2023, **7,962.89 tonnes** of recyclable materials were collected at the Recycling Depot.



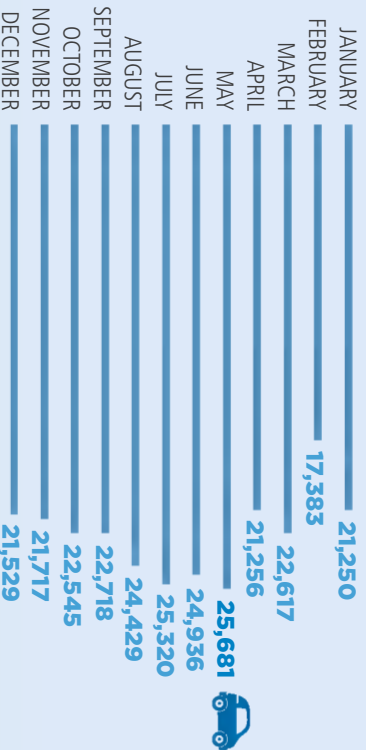
\* Includes tires, electronics, paints, solvents, pesticides, lights, small appliances, batteries, cellphones, smoke and carbon monoxide alarms, cooking oil, motor oil, antifreeze, lead acid batteries and thermostats.

\*\* Collected via the Large Item Pick Up Program, not at the Recycling Depot.

\*\*\* Includes plastic bags

**PWT - 58**

## MONTHLY VEHICLE VISITS TO THE RICHMOND RECYCLING DEPOT



In 2023, there were **271,381** vehicle visits to the Richmond Recycling Depot, an average of **744** visits per day.

## RECYCLE MORE AT THE RICHMOND RECYCLING DEPOT

Open seven days a week, the Recycling Depot provides a convenient one-stop recycling service. The City continues to increase the list of accepted items, and total tonnage of recycled materials increases each year.



**PAINT**  
256,176  
EQUIVALENT  
LITRES



**AEROSOLS**  
8,800 EQUIVALENT  
LITRES



**SOLVENTS & PESTICIDES**  
18,208 EQUIVALENT  
LITRES



**CFLS**  
822 BOXES



**FLUORESCENT TUBES**  
4' – 613 BOXES  
8' – 75 BOXES



**COOKING OIL**  
13.48 TONNES



**SMALL APPLIANCES**  
188.88 TONNES



**BATTERIES & CELLPHONES**  
38.13 TONNES



**LEAD ACID BATTERIES**  
24.48 TONNES



**ELECTRONICS**  
300.43 TONNES



**SMOKE & CO ALARMS**  
0.52 TONNES



**MOTOR OIL & ANTIFREEZE**  
63.06 TONNES



**TIRES**  
44.65 TONNES



**THERMOSTATS**  
0.07 TONNES



## LARGE ITEM PICK UP IN 2023

**43,666 residential units** received the service through their curbside programs.



**4,041**  
MATTRESSES &  
BOXSPRINGS



**390**  
WASHERS & DRYERS



**240**  
TELEVISIONS



**581**  
FRIDGES & FREEZERS



**325**  
BARBECUES



**221**  
DISHWASHERS



**3,013**  
UPHOLSTERED URNITURE



**290**  
STOVES &  
MICROWAVES



**2,105**  
OTHER RECYCLABLE  
ITEMS

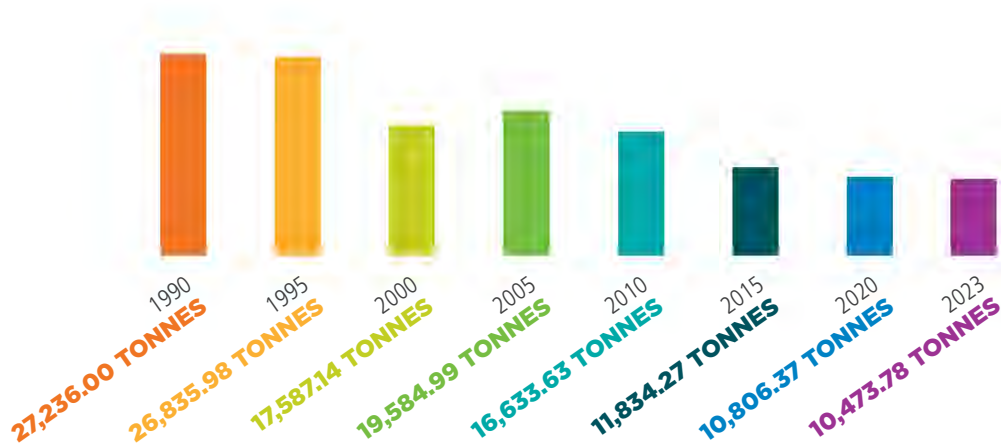
**5,493**  
NON-RECYCLABLE  
HOUSEHOLD ITEMS  
COLLECTED FOR SAFE  
HANDLING AND DISPOSAL

**PWT - 60**

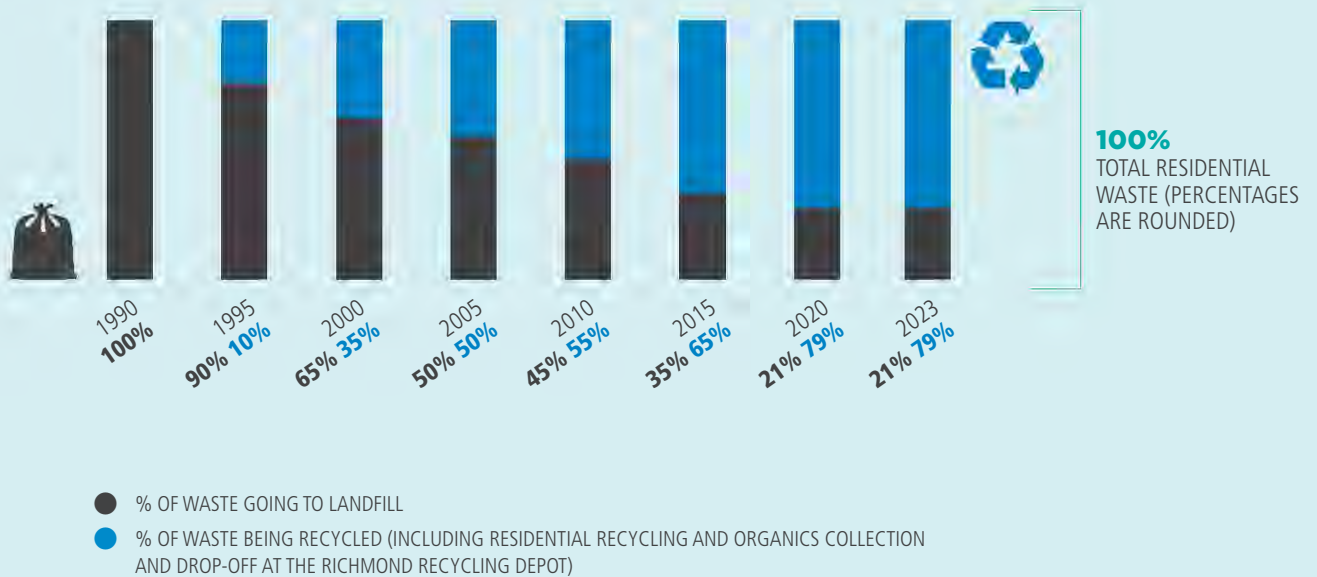
## FROM GARBAGE DISPOSAL TO DIVERSION

**34,918** residential units received Garbage Cart service in 2023.

### SINGLE-FAMILY HOMES GARBAGE COLLECTION OVER 20-PLUS YEARS:



### SINGLE-FAMILY HOMES DIVERSION OVER TIME:





# 2.2

## Outreach and Customer Service

Statistics in this section are related to our successful outreach and customer service programs, which are designed to turn education and information into action.

### CUSTOMER SERVICE AND OUTREACH

Richmond's Environmental Programs staff share information, tips and resources by phone as well as through outreach events and on the website.

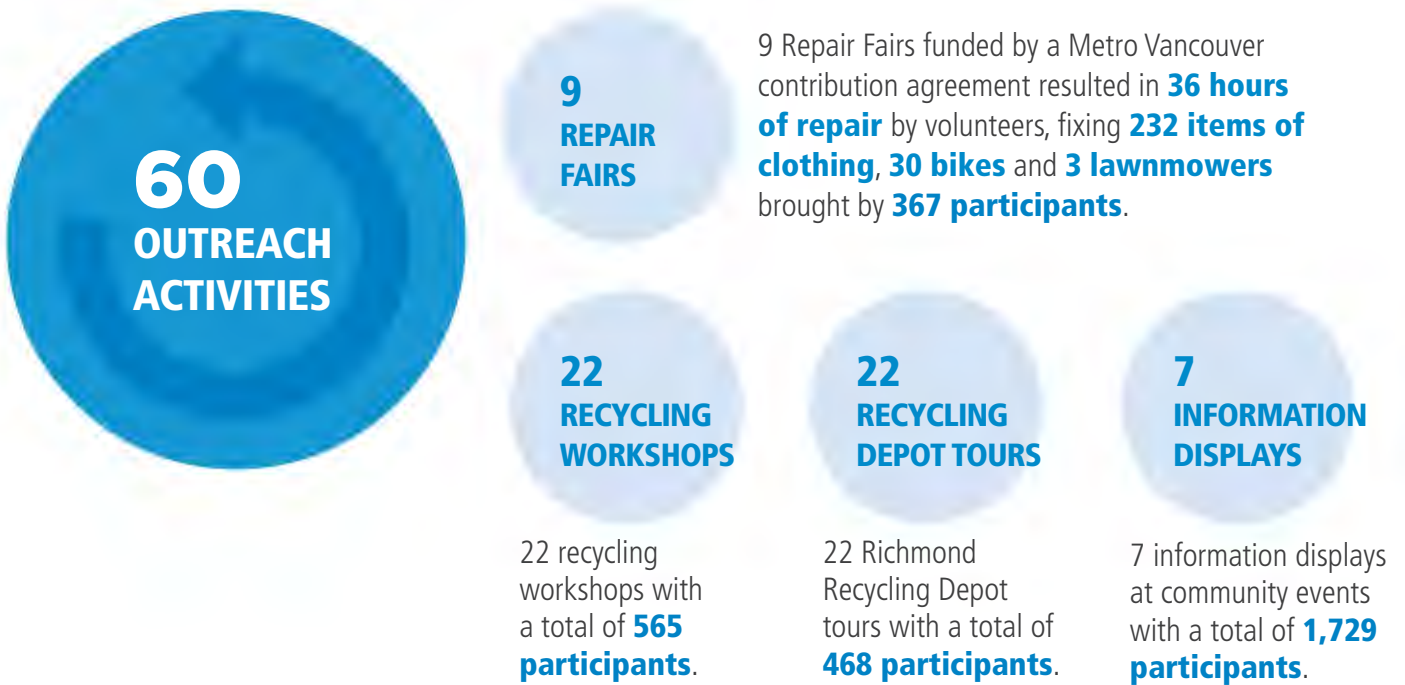


**3,169 attendees** for **60 outreach activities** on various topics.



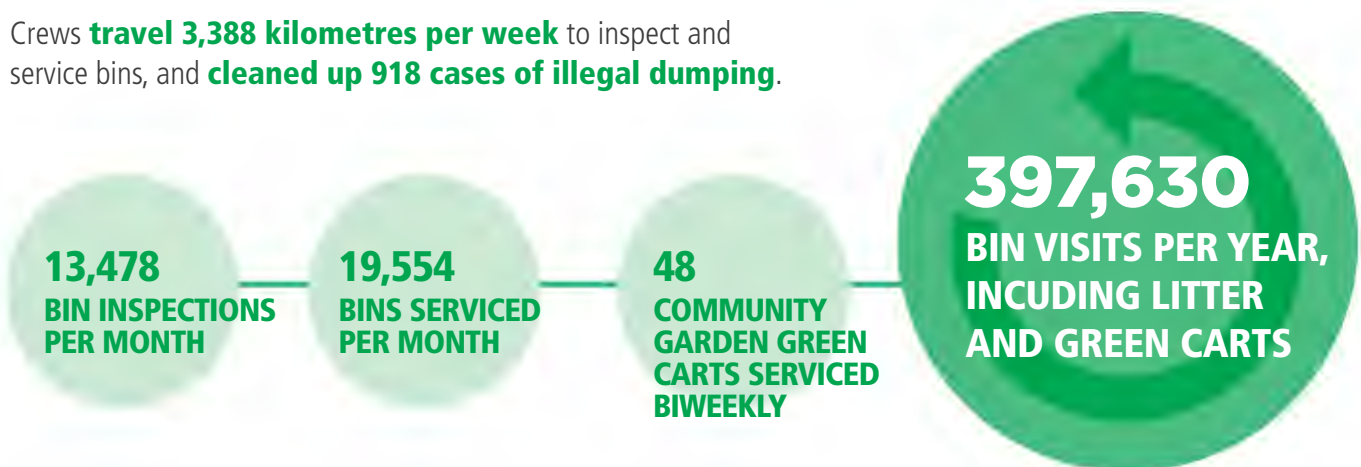
**1,606 participant hours** of youth volunteering and training.

## COMMUNITY OUTREACH



## GARBAGE, LITTER AND COMMUNITY GARDEN COLLECTION

Crews **travel 3,388 kilometres per week** to inspect and service bins, and **cleaned up 918 cases of illegal dumping**.



## COMPOST BINS, GARBAGE TAGS AND VOUCHERS



## STUDENT OUTREACH

In 2023, **3,040 students** participated in recycling and waste management events and training activities.



### GREEN AMBASSADOR (GA) YOUTH PROGRAM

**12 special events** were supported by GAs, for a total of 1,062 hours.

**1,062 HOURS**

**4 GA team-led meetings and planning sessions** were held, for a total of 62 hours.

**62 HOURS**

**10 GA sessions for training and networking** were held, for a total of 482 training hours.

**482 HOURS**

**144 GREEN AMBASSADORS WITH 1,606 HOURS OF VOLUNTEERING & TRAINING**

### STUDENT OUTREACH

**10 ZERO HEROES SHOWS**

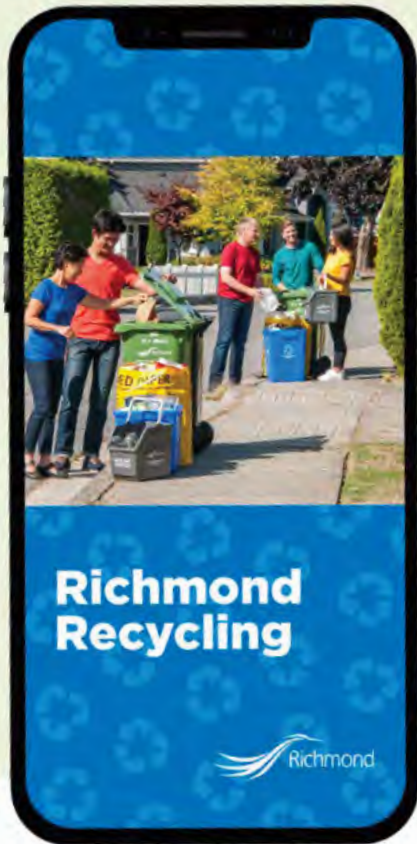
**10 Zero Heroes school shows** were presented to 2,536 Kindergarten to Grade 7 students and 127 teachers.

**360 STUDENTS**

**360 students participated in a Recycling Fair** to learn how to recycle correctly and reduce waste.



## ONLINE SEARCH AND TIPS TOOLS



The Richmond Recycling app has been installed **13,724 times** to date, and used a total of **96,476 times**.

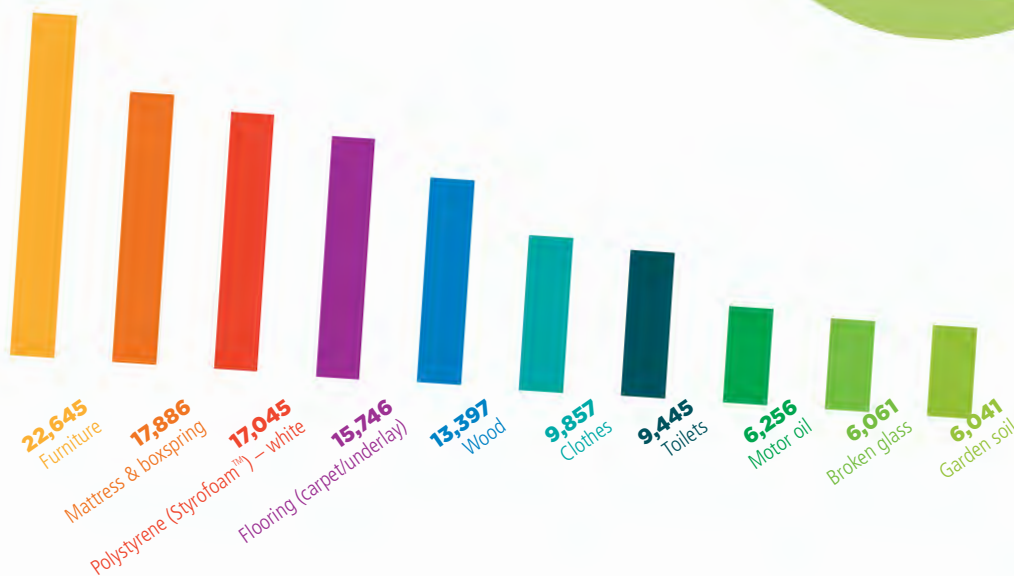
**22,273**  
REMINDERS

**17,439**  
PDF CALENDAR  
DOWNLOADS

**8,772**  
RECYCLING  
GAMES PLAYED

**60,474**  
ANNUAL RECYCLING  
WIZARD SEARCHES

### TOP MATERIALS SEARCHED ON THE RECYCLING WIZARD - ALL TIME



## AWARD-WINNING COMMUNITY ENGAGEMENT

Richmond earned **two national awards** in 2023 for its engagement campaigns.



Richmond Mayor Malcolm Brodie (left) and Director, Public Works Operations Suzanne Bycraft with IABC Silver Leaf Awards.

The City of Richmond received two national Silver Leaf Awards of Merit from the International Association of Business Communicators (IABC) for its communication and community engagement to increase awareness and compliance with the Single-Use Plastic Ban, and for its Rethink Waste Think Tank engagement campaign to generate ideas for reducing waste.

Silver Leaf is Canada's premiere professional awards program celebrating excellence in business communication. Winning a Silver Leaf places the City of Richmond in a league with some of the best communicators in the field from across the country.

### RETHINK WASTE THINK TANK & COMMUNITY IDEAS HUB

Richmond implemented a multi-year communication and engagement campaign to support the City's goals to reduce waste and support a circular economy. Residents were encouraged to share their waste reduction ideas as part of a "Think Tank" and viable ideas were used to create a Community Ideas Hub. The campaign far exceeded expectations, generating more than 300 ideas with practical tips and resources to support sustainable waste management.

### SINGLE-USE PLASTIC BAN

Richmond implemented a multi-year communication and engagement campaign as part of introducing a new bylaw banning single-use plastic items to support businesses in the transition, increase awareness about the new bylaw and promote reusable options in the community, with a goal to reduce unnecessary waste and pollution. The successful campaign resulted in an informed and engaged business community, broad awareness about the new ban and the benefits of choosing reusable options, and a high compliance rate when the bylaw was implemented. This has resulted in reduced use of single-use plastic items and reduced waste going to the landfill.



## COMMUNITY IDEAS HUB

Part of Richmond’s Rethink Waste campaign, the Community Ideas Hub features tips, resources and other suggestions shared by community members to help change habits and think differently about purchases, avoid unnecessary waste and find ways to reuse and recycle products to support a circular economy and reduce reliance on raw materials.

The Communities Ideas Hub features ideas to:



To view the Community Ideas Hub for tips on how to reduce waste, visit [richmond.ca/rethink](http://richmond.ca/rethink).

## HOW CAN RESIDENTS HELP SUPPORT A CIRCULAR ECONOMY?

**1. Stop:** Rethink what you’re putting in the garbage. Can it be recycled, donated, repurposed or reused?

**2. Reduce:** Reduce waste by choosing reusable options, repairing items and avoiding single-use products such as bottles, film wrap, plastic bags and polystyrene (Styrofoam™) plates and containers.



**3. Reuse:** Donate or sell used items in good condition so they can be reused.

**4. Recycle:** Keep food scraps and food-soiled paper out of the garbage, and recycle other materials through City collection services, the Richmond Recycling Depot and take-back programs.



**LET'S  
RECYCLE  
CORRECTLY**

# 3.0

## Programs and Services

Richmond residents in single-family homes divert most of their waste, and recycling is increasing in townhomes and other multi-family complexes.

To support residents and their commitment to recycling, Richmond continues to expand services to help residents reduce their garbage and create incentives to promote increased recycling. Green Cart and Blue Box/Blue Cart recycling remain core services to help residents recycle. Residents can also use the Large Item Pick Up program or bring a growing list of recyclable items to the Richmond Recycling Depot and other drop-off facilities.

Richmond works with residents, industry partners, product stewardship groups and businesses to achieve its goal to support a circular economy by implementing sustainable waste management. Through partnerships and community engagement, Richmond's commitment to continuous improvement results in enhanced services to benefit residents.

Through its contract with Recycle BC, the City generates revenue to offset recycling costs for residents; however, the City must also adhere to requirements related to the quality of recycling. If banned items are found in the garbage or contamination is found in recycling, the City can be charged fines and other penalties. These requirements are based on the City's *Solid Waste and Recycling Regulation Bylaw No. 6803*, contract requirements with Recycle BC and organics processing facilities, and Metro Vancouver disposal bans for items that must be recycled as they are not permitted in the garbage.

# 3.1

## Program and Service Overview

Richmond delivers a wide range of recycling and waste management services for residents to ensure that all waste is managed safely and efficiently. The following are the key recycling and waste management services offered through the City of Richmond.



### BLUE BOX | PAGE 30

The Blue Box program provides weekly curbside collection for paper, newsprint, glass bottles and glass jars, plastic containers, empty aerosol cans, plastic/paper drink cups, spiral wound containers, and tin and aluminium containers.



### BLUE CART | PAGE 30

The Blue Cart program provides weekly centralized collection for paper, newsprint, glass bottles and glass jars, plastic containers, empty aerosol cans, plastic/paper drink cups, spiral wound containers, and tin and aluminium containers.



### GREEN CART | PAGE 36

The Green Cart program provides weekly collection for foods scraps and yard trimmings. This program is provided to residents in single-family homes, townhomes and multi-family complexes.



### BACKYARD COMPOSTING | PAGE 39

Support for residential composting includes the sale of backyard compost bins and a composting demonstration garden. These services are available to all residents.



### GARBAGE CART | PAGE 40

Biweekly collection of garbage, not including banned items such as hazardous waste and materials that can be recycled, is available to residents in single-family homes and some townhomes. Garbage Tags and Garbage Disposal Vouchers for the Vancouver Landfill provide options to residents for disposal of additional garbage.



### LARGE ITEM PICK UP | PAGE 46

Residents with the City Blue Box and/or City Garbage Cart program can arrange for collection of large household items.



**RICHMOND RECYCLING DEPOT | PAGE 42**

The Recycling Depot accepts products ranging from yard trimmings and household items to hazardous materials and take-back program products. This service is available to all residents and in limited quantities for commercial operators. The Recycling Depot also sells backyard compost bins, rain barrels, Garbage Tags and Garbage Disposal Vouchers for use at the Vancouver Landfill.



**LITTER COLLECTION | PAGE 49**

Litter Attendants are on the road seven days a week to inspect or service garbage and recycling bins more than 8,258 times each week throughout the city, collecting additional litter along the way.



**PUBLIC SPACES AND EVENT RECYCLING | PAGE 48**

Recycling bins in the community make it easy to recycle on the go, such as in parks, at community centres, in the Steveston business district and at the Canada Line stations and Richmond central bus stops. Richmond supports community events by loaning garbage and recycling bins for local events at no charge.



**COMMUNITY AND SCHOOL ENGAGEMENT | PAGE 50**

Through partnerships with students, teachers and the School District, Richmond delivers educational workshops, awareness programs and volunteer opportunities to increase understanding of recycling and the benefits of reducing waste.



# 3.2

## Blue Box and Blue Cart Programs

Richmond's Blue Box and Blue Cart recycling programs provide convenient collection of a wide variety of materials, including mixed paper, plastic containers, paper and plastic drink cups, empty aerosol cans and spiral wound cans like frozen juice concentrate containers as well as glass bottles and glass jars.

Richmond's Blue Box program for door-to-door curbside collection includes a Blue Box for containers, yellow Mixed Paper Recycling Bag for paper and small, flattened cardboard items and a grey Glass Recycling Bin for glass bottles/jars. The Blue Cart program for centralized collection has separately labeled carts for containers, mixed paper and glass.

It is important to ensure materials are sorted correctly into the proper recycling receptacles. For example, recyclables must be placed individually in bins – not stacked, nestled or in plastic bags. Glass bottles/jars must be placed in the Glass Recycling Bin/Cart – not the Blue Box or Containers Recycling Cart.

Also, some items are not accepted in the Blue Cart/Blue Box program, such as non-packaging plastics like toys and laundry baskets, hazardous items like butane cylinders, propane tanks and batteries, and non-packaging metal items like scissors and pans. These items are accepted at the Richmond Recycling Depot.



## CONTAINER RECYCLING: BLUE BOX/CONTAINERS RECYCLING CART



### ✓ ACCEPTED

#### Metals

- ✓ Aerosol cans (empty) & caps (food items, air fresheners, shaving cream, deodorant, hairspray)
- ✓ Aluminium cans & lids
- ✓ Aluminium foil & foil containers (foil wrap, pie plates, food trays)
- ✓ Metal storage containers (such as for candy)
- ✓ Tin cans & lids

#### Paper

- ✓ Paper food containers & cartons
- ✓ Paper cups & lids, plates & bowls
- ✓ Paper garden pots & trays
- ✓ Spiral wound paper cans & lids (frozen juice, potato chips, cookie dough, coffee, nuts, baby formula)

#### Plastic

- ✓ Plastic bottles & caps (food items, condiments such as ketchup & mustard, dish soap, mouthwash, shampoos, conditioners)
- ✓ Plastic containers, trays & caps (bakery & deli foods)
- ✓ Plastic cups & lids
- ✓ Plastic food storage containers
- ✓ Plastic garden pots & trays
- ✓ Plastic hangers
- ✓ Plastic jars & lids
- ✓ Plastic microwavable bowls, cups & lids
- ✓ Plastic plates & bowls
- ✓ Plastic straws, utensils and stirsticks
- ✓ Plastic tubs & lids (margarine, spreads, dairy products such as yogurt, cottage cheese, sour cream, ice cream)

### ✗ NOT ACCEPTED

#### Take to Richmond Recycling Depot

- ✗ Aerosol cans with hazardous materials (spray paint)
- ✗ Butane cylinders
- ✗ Containers for motor oil, vehicle lubricant or wax products
- ✗ Plastic bags & overwrap
- ✗ Polystyrene (Styrofoam™) packaging
- ✗ Propane tanks

#### Repurpose, Sell, Share or Put in Garbage

- ✗ Ceramic plant pots
- ✗ Compostable/biodegradable plastic bags & containers
- ✗ Foil-lined cardboard lids from take-out containers
- ✗ Garden hoses
- ✗ Plastic string or rope

### TIPS TO RECYCLE CORRECTLY



Place materials separately in the bins – don't put recyclables into plastic bags. Bagged items will go in the garbage.



Avoid stacking or nestling items together, instead place them separately in the bins. For example, don't nestle an aluminium can inside a plastic container.



Empty, rinse and flatten containers. Food or other materials in the containers contaminate the recycling. Remove lids and recycle separately.



Separate glass jars and glass bottles and recycle in the grey Glass Recycling Bin or Glass Recycling Cart. Their metal or plastic lids go in the Blue Box/Containers Cart.



## PAPER PRODUCTS: MIXED PAPER RECYCLING BAG/CART



### ✓ ACCEPTED

#### Boxboard and Cardboard

- ✓ Cardboard boxes (flattened)
- ✓ Cereal boxes
- ✓ Corrugated cardboard (small pieces)
- ✓ Moving and storage boxes
- ✓ Paper egg cartons
- ✓ Paper gift boxes
- ✓ Paper takeout containers (including those with a shiny coating)
- ✓ Pizza boxes (clean)

#### Paper

- ✓ Catalogues, magazines & telephone books
- ✓ Envelopes (with or without window)
- ✓ Flyers & junk mail
- ✓ Miscellaneous paper (notepads, loose leaf paper, white or coloured paper, printed paper, copier/printer paper)
- ✓ Newspapers
- ✓ Paper bags (lunch, groceries)
- ✓ Paper gift bags
- ✓ Paper gift wrap & greeting cards
- ✓ Paper party hats and decorations
- ✓ Shredded paper (inside a paper bag to avoid scattering)

### ✗ NOT ACCEPTED

#### Take to Richmond Recycling Depot

- ✗ Foil/metallic wrapping paper
- ✗ Plastic bags used to cover newspapers/flyers
- ✗ Plastic or foil candy wrappers

#### Repurpose, Sell, Share or Put in Garbage

- ✗ Cardboard boxes with wax coating
- ✗ Greeting cards with non-paper items (glitter, plastic attachments, music devices, batteries)
- ✗ Padded envelopes
- ✗ Ribbons or bows

## TIPS TO RECYCLE CORRECTLY



Remove plastic liners/covers and/or any food residue.



Cut cardboard into small pieces and flatten boxes to take up less space in the Mixed Paper Recycling Bag/Cart and in the collection truck.



Put shredded paper in a paper bag before placing in the Mixed Paper Recycling Bag/Cart to avoid scattering.



Oversized/excessive amounts of cardboard can be dropped off at the Richmond Recycling Depot.



## GLASS JARS & GLASS BOTTLES: GLASS RECYCLING BIN/CART



### ✓ ACCEPTED

- ✓ Clear or coloured glass bottles and glass jars (pickle jars, jam jars, spaghetti sauce jars, soy sauce bottles)

### ✗ NOT ACCEPTED

#### Repurpose, Sell, Share or Put in Garbage

- ✗ Broken glass (wrap and put in garbage)
- ✗ Ceramic products
- ✗ Drinking glasses, glass dishes and cookware
- ✗ Lids and caps (remove from the glass bottle/jar and place in Blue Box/Containers Recycling Cart)
- ✗ Mirrors and window glass

## TIPS TO RECYCLE CORRECTLY



Remove plastic and metal lids and recycle separately in the Blue Box/Containers Recycling Cart.



Empty and rinse jars and bottles. Make sure no food is left inside because it contaminates the recycling.



### Set Out Time

Before 7:30 a.m. every week on collection day.

Note: For centralized Blue Cart service, the collection details are arranged between the City and the Strata Council or Property Manager. Residents do not have to set the Blue Carts out for collection.



### Report a Missed Collection

Call 604-276-4010 or email [garbageandrecycling@richmond.ca](mailto:garbageandrecycling@richmond.ca).



### How to Get More Free Recycling Supplies

Supplies include:

- Blue Boxes
- Glass Recycling Bins
- Indoor Collection Bags
- Mixed Paper Recycling Bags

Four ways to order supplies:

1. Pick up at Richmond Recycling Depot
2. Call 604-276-4010
3. Order at [richmond.ca/recyclesearch](http://richmond.ca/recyclesearch)
4. Order in the Richmond Recycling app, free at Apple and Android app stores.



### Richmond Recycling Depot

5555 Lynas Lane  
Open 7 days a week  
(Closed on statutory holidays)  
9:00 a.m. to 6:15 p.m.

# How to Recycle Correctly

## SIMPLE STEPS FOR BETTER RECYCLING



### ✘ COMMON MISTAKES

### ✔ HOW TO RECYCLE CORRECTLY



Glass bottles and glass jars are placed incorrectly in the Blue Box or Containers Recycling Cart

Recycle in grey Glass Recycling Bin or Glass Recycling Cart.



Plastic straws, utensils and stir sticks are placed in the garbage

Place them in the Blue Box or Containers Recycling Cart.



Containers with food residue are not rinsed before recycling

Remove food and rinse before placing in Blue Box or Containers Recycling Cart.



Recyclable items that are not accepted in residential collection are placed incorrectly in the Blue Box / Blue Cart, such as:

- Batteries and cellphones
- Electronics
- Paints and solvents
- Plastic bags
- Polystyrene (Styrofoam™) packaging
- Propane tanks and butane containers
- Non-packaging plastics like toys

Drop off at Richmond Recycling Depot – 5555 Lynas Lane.

# Not sure where to recycle an item?



Use the Recycling Wizard at [richmond.ca/recyclesearch](https://richmond.ca/recyclesearch) or in the free Richmond Recycling app, available at Apple and Android app stores.



With the Richmond Recycling app, you can:

- Find drop-off locations for recyclables
- Learn how to recycle a variety of household items
- Schedule weekly collection day reminders
- Order supplies
- Play the Recycling Challenge game, and more!



# 3.3 Green Cart Program

Food scraps are banned from the garbage, which means they must be recycled or composted, and the City can be charged fines and other penalties when organics are found in the garbage. With the Green Cart program, all Richmond residents have access to food scraps recycling and when recycling with a Green Cart, residents are helping turn food scraps and yard trimmings into compost for nutrient-rich soil.

Richmond also encourages organics recycling by providing Green Cart service at no charge at the City-sponsored community gardens.

It is important to ensure that only food scraps, food soiled paper, and yard and garden trimmings go in the Green Cart. When items like plastic bags, polystyrene (Styrofoam™) or biodegradable/compostable plastic bags are found in the Green Cart, the load is considered contaminated as these materials are not accepted at processing facilities because they compromise the quality of the compost.

Residents can also create their own compost at home to keep these organic materials out of landfills. Residents can purchase a backyard compost bin at the Richmond Recycling Depot.



## GREEN CART FOR FOOD SCRAPS & YARD TRIMMINGS



### ✓ ACCEPTED

#### Food Scraps & Food Soiled Paper

- ✓ Breads, pasta, rice & noodles
- ✓ Coffee grounds & filters
- ✓ Dairy products
- ✓ Fruit
- ✓ Eggshells
- ✓ Meat, poultry, fish, shellfish & bones
- ✓ Paper tea bags
- ✓ Paper towels, napkins & plates
- ✓ Pizza delivery boxes
- ✓ Small amounts of grease/oil absorbed into paper towel
- ✓ Solid grease
- ✓ Table scraps & food scrapings
- ✓ Vegetables

#### Yard Trimmings

- ✓ Flowers
- ✓ Leaves
- ✓ Grass clippings
- ✓ Other organic yard materials
- ✓ Plants (living or dead/dried)
- ✓ Plant trimmings
- ✓ Tree & hedge prunings (branches must be no more than 10 cm (4 in) in diameter and cut short enough to fit in the Green Cart with the lid closed)

### ✗ NOT ACCEPTED

- ✗ Coffee cups
- ✗ Compostable & biodegradable plastic bags
- ✗ Garden hoses or flower pots
- ✗ Liquid grease
- ✗ Lumber
- ✗ Pet feces or kitty litter
- ✗ Plastic bags & plastic overwrap
- ✗ Plastic mesh tea bags
- ✗ Plastic wraps
- ✗ Polystyrene (Styrofoam™) cups, meat trays or takeout containers
- ✗ Prunings over 10 cm (4 in) in diameter
- ✗ Rocks, dirt, sod or soil

#### Why can't I put plastic bags in my green cart?

Plastic bags (including compostable or biodegradable bags) do not break down during the composting process and leave behind flecks of plastic that contaminate the compost.



### TIPS TO RECYCLE CORRECTLY



Collect food scraps in your kitchen container. Wrap food scraps in small amounts of newspaper or used paper towel before adding to kitchen container.



Sprinkle kitchen container with baking soda to reduce odours and consider freezing food scraps until you're ready to empty them into the Green Cart.



Keep kitchen container clean by lining it with a few sheets of newspaper, a paper bag liner or used paper towel.



Empty materials from your kitchen container into your Green Cart.



Place yard trimmings into Green Cart along with your food scraps. Extra yard trimmings can go in large paper bags or additional labelled Green Cans.



## MULTIPLE GREEN CART SIZES AVAILABLE

Richmond provides Green Carts in multiple sizes to meet residents' recycling needs. Residents can exchange their Green Cart for a different size by contacting the Environmental Programs Information Line at 604-276-4010 or email [garbageandrecycling@richmond.ca](mailto:garbageandrecycling@richmond.ca). There is a \$25 fee for cart exchanges.

### SINGLE-FAMILY HOMES CART SIZE SELECTION



**Extra Large**  
360 litres  
D 34.5 x W 25 x  
H 44.5 inches

#### STANDARD

**Large**  
240 litres  
D 27.5 x W 24.5 x  
H 43 inches

**Medium**  
120 litres  
D 21 x W 19 x  
H 37.5 inches

**Small**  
80 litres  
D 21.5 x W 16 x  
H 34.5 inches

### TOWNHOMES CART SIZE SELECTION



**Small**  
80 litres  
D 21.5 x W 16 x  
H 34.5 inches

#### STANDARD

**Compact**  
46.5 litres  
D 12 x W 11 x  
H 27 inches





## BACKYARD COMPOSTING PROGRAMS

**Backyard Compost Bins:** Backyard compost bins are available for sale at the Richmond Recycling Depot for \$25 plus tax.

**Demonstration Garden:** To help residents learn about composting, the City hosts a Compost Demonstration area in the Terra Nova Rural Park at 2631 Westminster Highway just west of No. 1 Road. It is open from dawn to dusk year-round.

**Compost Hotline:** For tips, call 604-736-2250 or email [composthotline@telus.net](mailto:composthotline@telus.net).

## YARD TRIMMINGS DROP-OFF

Richmond residents and commercial landscapers can drop off yard trimmings at the following locations.

**Ecowaste Industries**  
15111 Williams Road

Commercial operators can be pre-approved for dropping off materials at no charge when they are servicing residential properties with Richmond Green Cart service. Visit [ecowaste.com](http://ecowaste.com) or call 604-277-1410 for information.

**City Recycling Depot**  
5555 Lynas Lane  
Open 7 days a week  
(Closed on statutory holidays)  
9:00 a.m. to 6:15 p.m.

There is no charge for dropping off amounts less than one cubic yard (a car, station wagon or minivan load). Large loads are charged a fee of \$25 per cubic yard. Commercial operators will be charged a fee of \$25 per cubic yard at the Richmond Recycling Depot.



### Set Out Time

Before 7:30 a.m. every week on collection day.

Note: For centralized Green Cart service, the collection details are arranged between the City and the Strata Council or Property Manager. Residents do not have to set the carts out for pick up.



### Report a Missed Collection or Damaged Green Cart

Call 604-276-4010 or email [garbageandrecycling@richmond.ca](mailto:garbageandrecycling@richmond.ca).



### How to Exchange your Green Cart

Various cart sizes are on display at the Richmond Recycling Depot. Please note there is a \$25 charge to exchange your cart. To change to an alternative size, please call 604-276-4010.



### New/Replacement Kitchen Containers

Four ways to order supplies:

1. Pick up at Richmond Recycling Depot.
2. Call 604-276-4010.
3. Order at [richmond.ca/recyclesearch](http://richmond.ca/recyclesearch).
4. Order in the Richmond Recycling app, free at Apple and Android app stores.





# 3.4 Garbage Cart Program

Richmond’s curbside Garbage Cart program provides residents with convenient options for waste disposal. Household garbage is collected biweekly. The Garbage Cart program includes City-provided carts with wheels and lids and is designed to lower costs for residents who are reducing their garbage by recycling their household waste.

Most household items are recyclable. Residents are encouraged to think twice before putting items in the garbage to help keep recyclables out of the landfill.

It’s important to secure or wrap loose garbage to prevent materials from being scattered by wind or animals. Garbage must be securely packed in plastic bags. This includes ashes, kitty litter, disposable diapers, vacuum cleaner sweepings, disposable masks and gloves, and other loose household garbage.

All garbage must be placed at curbside before 7:30 a.m. on collection day but no earlier than 8:00 p.m. the day before. Do not place receptacles or other items on the road.

Residents are responsible for cleaning up any loose materials that have been scattered over the ground by animals, wind or vandalism.



## EXTRA ITEM DISPOSAL OPTIONS

### Garbage Disposal Vouchers

Richmond residents may purchase a Garbage Disposal Voucher for \$5 at all City facilities. These vouchers are good for up to \$25 at the Vancouver Landfill, and are valid anytime. They are limited to one per household per year.

### \$2 Garbage Tags

Garbage Tags for curbside collection are available for purchase at all City facilities. One Garbage Tag is good for an additional garbage bag or can.

Visit [richmond.ca/garbage](http://richmond.ca/garbage) for a list of City facilities selling Garbage Tags and Garbage Disposal Vouchers.

## GARBAGE CART SIZE OPTIONS

Residents who select smaller cart sizes are generating less garbage and, as a result, pay less for their annual garbage collection.

Residents can exchange their cart for a different size, and their garbage collection fees will be adjusted according to the size selected. Residents can exchange their Garbage Cart for a different size for \$25 by calling 604-276-4010.



**Extra Large**  
360 litres  
D 34.5 x W 25 x H 44.5 in



**Large**  
240 litres  
D 27.5 x W 24.5 x H 43 in  
**Standard size for single-family homes**



**Medium**  
120 litres  
D 21.5 x W 19 x H 37.5 in  
**Standard size for townhomes**



**Small**  
80 litres  
D 20 x W 16 x H 34.5 in



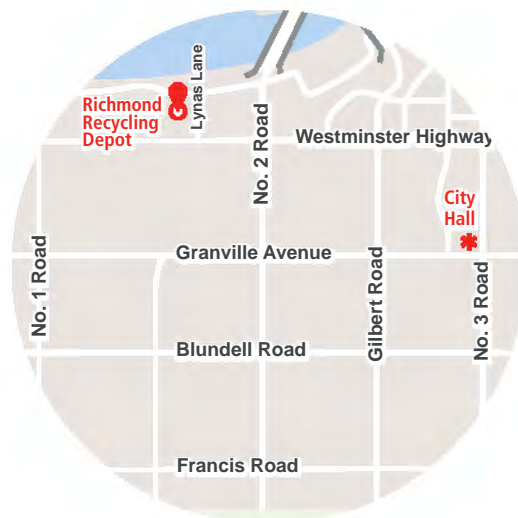
# 3.5 Richmond Recycling Depot

The Richmond Recycling Depot is located at 5555 Lynas Lane and is open from 9:00 a.m. to 6:15 p.m., seven days a week for drop off of a broad range of materials.

The Recycling Depot is owned and operated by the City of Richmond, with both full-time staff and additional staff support as needed to manage increased recycling volumes. Staff on site are available to answer questions and provide assistance with unloading awkward or heavy items.

The City continues to increase the number of items accepted at the Recycling Depot to make it a convenient, one-stop drop-off location for multiple items. Richmond residents can bring a wide range of recyclable materials at no charge.

**Richmond  
Recycling Depot**  
5555 Lynas Lane  
Open 7 days a week  
9:00 a.m. to 6:15 p.m.  
(except statutory holidays)





## RECYCLING DEPOT SERVICES

Residents are encouraged to use their weekly collection bins to recycle household items like glass bottles and glass jars, mixed containers and mixed paper. Businesses are encouraged to set up contracts for on-site collection services if they produce a large quantity of recyclable materials. However, residents and small business operators can also drop off recyclable materials at the Recycling Depot.

This facility accepts a wide range of materials, including cardboard, yard and garden trimmings, mixed paper and newspapers, as well as polystyrene (Styrofoam™),

used books, cellphones, household batteries, plastic bags and metal items (e.g., bike frames, barbecues, lawn mowers). The facility is also a product stewardship (take-back) collection site for large and small appliances, paints, solvents, flammable liquids, pesticides, lights and lighting fixtures, tires, electronics, motor oil, batteries, thermostats, fire extinguishers and smoke and carbon monoxide alarms.



### For Sale at the Recycling Depot

- Compost bins - \$25 each + tax
- Rain barrels - \$30 each + tax
- Extra Garbage Tags - \$2 each
- Garbage Disposal Vouchers - \$5 for Richmond residents and value is up to \$25 at the Vancouver Landfill



### Free Recycling Supplies Available at the Recycling Depot

- Food Scraps Kitchen Containers
- Grey Glass Recycling Bins
- Blue Boxes
- Yellow Mixed Paper Recycling Bags
- Indoor Collection Bags
- Green Can Decals



For a virtual tour, visit  
[richmond.ca/depot](http://richmond.ca/depot)



**Welcome!**

## MATERIALS ACCEPTED

- ✓ Aerosol & spiral wound cans
- ✓ Aluminium materials
- ✓ Appliances
- ✓ Baby car seats/booster seats\*
- ✓ Batteries (lead acid car batteries)
- ✓ Batteries (small household batteries less than 5 kg)
- ✓ Books
- ✓ Butane cylinders
- ✓ Cellphones (including batteries)
- ✓ Cooking oil & animal fat
- ✓ Corrugated cardboard (flattened, clean corrugated boxes)
- ✓ Electronics
- ✓ Exercise & hobby machines
- ✓ Fire extinguishers
- ✓ Flammable aerosols
- ✓ Flammable liquids
- ✓ Flexible plastic packaging, plastic bags & plastic overwrap
- ✓ Flower pots (paper & plastic pots/trays)
- ✓ Gasoline (in approved ULC containers)
- ✓ Glass bottles/jars (clear & coloured)
- ✓ Lights
- ✓ Lighting fixtures
- ✓ Magazines
- ✓ Metal items
- ✓ Mixed paper
- ✓ Motor oil & antifreeze
- ✓ Newspaper
- ✓ Paints (household paints)
- ✓ Paint aerosols
- ✓ Pesticides (domestic pesticides)
- ✓ Plastic containers
- ✓ Plastic recycling bags
- ✓ Polystyrene (Styrofoam™) packaging
- ✓ Power tools
- ✓ Propane tanks
- ✓ Sewing, knitting & textile machines
- ✓ Smoke & carbon monoxide alarms
- ✓ Thermostats
- ✓ Tin & aluminium cans
- ✓ Tires (passenger & light-duty trucks only)
- ✓ Upholstered furniture\*
- ✓ Yard & garden trimmings

All materials must be sorted into different containers at the Recycling Depot. Please visit [richmond.ca/depot](http://richmond.ca/depot) for more information.

\* Proof of residency required.



# 3.6 Large Item Pick Up Program

Richmond’s Large Item Pick Up program provides a convenient curbside collection service for up to six large household items per year, including mattresses, furniture and appliances. This program is designed to make it more convenient for residents to dispose of large household items and to help reduce illegal dumping. As well, through this program, large household items that can be recycled will be diverted from the landfill.

The Large Item Pick Up program is provided to residents in single-family homes as well as townhomes and multi-family complexes with the City’s Garbage Cart and/or Blue Box program.

This service makes it easier for residents who do not have access to a vehicle to dispose of large items.



## HOW THE PROGRAM WORKS

- 1** To schedule collection of up to six items per year, residents can contact the City's service provider, Sierra Waste Services at 604-270-4722 or schedule online at [richmond.ca/largeitem](http://richmond.ca/largeitem).
- 2** Sierra Waste Services will contact you to provide a pick-up date and confirmation number.
- 3** On your scheduled pick-up date only, place items at the curb, or for multi-family complexes, in the area designated by the strata or property manager, before 7:30 a.m. or no earlier than 8:00 p.m. the night before.

### LARGE ITEM PICK UP PROGRAM



#### ✓ ACCEPTED

- ✓ Appliances (stove, dishwasher, washer and/or dryer, hot water tank, refrigerator, freezer, microwave)
- ✓ Barbecues (remove lava rock briquettes and/or propane tank)
- ✓ Bed frames
- ✓ Electric lawnmowers
- ✓ Exercise equipment (treadmill, elliptical, stationary bike, stair climber, weight set)
- ✓ Furniture (e.g., couch, coffee table, chair, desk, dresser, TV stand, cabinet, table, hutch, crib, high chair, entertainment centre)
- ✓ Headboards
- ✓ Mattresses or boxsprings
- ✓ Outdoor furniture (chair, patio table, patio umbrella)
- ✓ Small household goods, provided they are boxed or bundled and are a reasonable size (one box or bundle is equal to one of the resident's six allotted items)
- ✓ Tires (car and light duty truck)

#### ! PREPARATION REQUIREMENTS

- ! Wrap mattresses in plastic and seal with tape to prevent them from getting wet. Cover boxsprings and upholstered furniture with tarps or plastic to keep them dry. Tarps will be left behind for reuse.
- ! Confirm mattresses, boxsprings and upholstered furniture are free of bedbugs to ensure they are accepted for recycling at the facility.
- ! Remove latch/door from freezers, refrigerators or any other container equipped with a door, latch or locking device.

#### ✗ NOT ACCEPTED

- ✗ Car bodies or parts
- ✗ Carpets
- ✗ Construction and demolition waste (drywall)
- ✗ Gas lawnmowers\*
- ✗ Hazardous waste
- ✗ Home renovation items (sinks, flooring, doors, windows)
- ✗ Lumber
- ✗ Mattresses/boxsprings and upholstered furniture that are wet or infested with bed bugs or vermin
- ✗ Propane tanks\*
- ✗ Tree stumps

\*Take to Richmond Recycling Depot

Not sure where to recycle an item? Use the Recycling Wizard tool on the free Richmond Recycling app to find out where to recycle your item.



# 3.7 Public Spaces Programs

Maintaining a litter-free community and encouraging recycling in parks and other public spaces is an essential part of responsible and sustainable waste management. Not only does this help to keep the City a beautiful place to live and visit, it also helps to reduce the amount of plastic and other garbage going into oceans and other waterways.

The City has three primary services to support recycling and a litter-free community: Public Spaces services, Litter Collection services and Special Event Recycling.

Because building community pride and increasing responsible behaviours involves working together with the community, the City also works with volunteers through the Partners for Beautification program and community clean-up events.

## PUBLIC SPACES SERVICES

The City of Richmond has recycling and garbage bins located throughout the community in public spaces that include parks and business districts. Recycling and garbage bins are serviced or inspected over 8,258 times each week.

The City's bins include instructional bin labels to help inform people about how to sort items correctly. Many of the recycling bins feature images that complement the surrounding scenery, and others feature custom artwork by local artists. To further improve capacity and operational efficiency, the City also has large, in-ground garbage collection bins in high-traffic areas.



## LITTER COLLECTION SERVICES

Maintaining a litter-free city is a key focus area to ensure residents can enjoy clean parks and public spaces. The City of Richmond has made efforts to ensure that there are garbage bins, and in many cases recycling options, in public spaces throughout the city.

In addition, City crews work seven days a week to collect litter from parks, school grounds, roadsides, sidewalks and boulevards.

They inspect or service garbage and recycling from litter and recycling receptacles in the community 33,032 times every month. Crews also assist with removing graffiti from City garbage bins, and they collect illegally-dumped materials found on City property and provide safe disposal and recycling of these items.

The extensive work to maintain public spaces and collect litter may go unnoticed, but City staff work hard seven days a week to maintain a clean and livable community for Richmond residents.

## SPECIAL EVENT RECYCLING

Recycling stations are recommended for special event bookings taking place in Richmond. For some major events, the City hosts recycling stations with assistance from Green Ambassador volunteers. This involves setting up recycling stations and having recycling volunteers at the event to advise people on how to recycle.

The City also supports events by providing organizers with recycling bins and garbage carts at no charge, as well as complimentary collection services. This makes it easy for event organizers to keep the venue clean and recyclables out of the landfill.

In addition, the City participates in community clean-up events each year.





# 3.8

## Outreach and Customer Service

Richmond's successful outreach and customer service programs are designed to help turn information and education into action.

By working with children and youth through school programs and the Green Ambassadors, Richmond creates a learning environment where students gain a better understanding about recycling and sustainable waste management, and then apply their skills as volunteers and through school activities. The City is also offering more virtual outreach opportunities.

Providing outreach, customer support services and information materials also assists residents by increasing their understanding of how to recycle correctly along with new tools and services to promote recycling at home and on the go.

The Environmental Programs Information Line staff assist customers on the phone, via email and at community events to answer questions, assist with requests relating to garbage and recycling, and provide guidance on where to find additional information and resources. Richmond staff also assist customers directly at the Recycling Depot, and through its outreach programs in the community.

At the Recycling Depot, staff provide assistance with where and how to recycle using its drop-off options, answer questions about City programs and services, and sell products such as compost bins and rain barrels as well as Garbage Tags and Garbage Disposal Vouchers. Through outreach, Richmond goes into the community to connect with residents to share information and respond to questions.



Richmond held nine free Repair Fairs in 2023 that encouraged residents to repair usable items rather than sending them to the landfill.

### SEARCH & TIPS TOOLS

Richmond offers the Recycling Wizard to help residents search for where to recycle household items. The Recycling Wizard is available online at [richmond.ca/recyclesearch](http://richmond.ca/recyclesearch) and in the Richmond Recycling app, free from the Apple and Android app stores.

### COMMUNITY WORKSHOPS

Richmond’s free community workshops provide education and tips that support recycling and waste reduction techniques. A summary of workshops is provided below.

For information on the workshops, call the Environmental Programs Information Line at 604-276-4010, email [garbageandrecycling@richmond.ca](mailto:garbageandrecycling@richmond.ca), or visit the Community Outreach section at [richmond.ca/recycle](http://richmond.ca/recycle).

### RICHMOND GREEN AMBASSADORS

Richmond’s Green Ambassadors are dedicated high school students who participate in monthly symposiums to learn about environmental sustainability and apply what they have learned as volunteers at City events and activities. These energetic and environmentally conscious individuals also manage green initiatives in their schools.

### STUDENT OUTREACH

Richmond sponsors programs, contests and other activities for local students to raise awareness about the importance of reducing waste and how to recycle correctly. These activities inspire them to feel that taking care of the planet is fun.

TYPE OF WORKSHOP	DESCRIPTION
Recycling Workshops	Learn how to reduce reliance on single-use items and sort household recyclables properly to reduce contamination. Understand the recycling process and the importance recycling has for the environment, including the impact of marine plastic and other hot topics in solid waste management.
Richmond Recycling Depot Tours	Interactive tour of the Richmond Recycling Depot designed to teach residents about the drop-off options available and materials accepted for recycling.

# 4 TIPS TO RECYCLE AND REDUCE WASTE

# 4.0

## Tips and Resources

In Richmond, we care about our community, and we are working together with residents and local organizations to reduce waste and promote a circular economy. These Tips and Resources highlight the City's community partners, and provide a guide for how to deal with hazardous waste and other items not accepted in curbside and centralized recycling programs.

With the help of community resources and partnerships, Richmond residents have access to easy and convenient drop-off services and programs to support recycling, safe disposal and waste reduction. This section includes contact information and locations for Richmond services and community partners involved in take-back collection through product stewardship programs. Together, these Tips and Resources help to support maximum recycling and reduce the amount waste going to the landfill.



# 4.1

## Community Resources and Partnerships



## ECOWASTE INDUSTRIES

The City offers residents the option to drop off unlimited quantities of yard and garden trimmings for free at Ecowaste Industries. Proof of Richmond residency is required.

**Ecowaste Industries:**  
15111 Williams Road  
604-277-1410  
ecowaste.com

## RECYCLING COUNCIL OF BRITISH COLUMBIA (RCBC)

RCBC provides information and resources to support recycling in the community.

**Recycling Hotline**  
Monday to Friday, 9 a.m. to 4 p.m.  
604-RECYCLE (604-732-9253)  
hotline@rcbc.bc.ca  
rcbc.ca

## COMPOST HOTLINE

The Compost Hotline is a community program operated by City Farmer that provides support and tips for best practices in home composting.

**Compost Hotline:**  
604-736-2250  
composthotline@telus.net

## METRO VANCOUVER RECYCLES

Metro Vancouver Recycles helps you find options for recycling products and get helpful links to online services.

**Metro Vancouver Recycling Directory:**  
metrovancoverrecycles.org or recycling.metrovancouver.org

## CITY OF RICHMOND FOOD RECOVERY NETWORK

Partnering with FoodMesh, this program safely and easily diverts surplus food by bringing together local food businesses with charities and farmers.

**Richmond Food Recovery Network:**  
foodmesh.ca/services-regional/richmond





# 4.2

## Banned and Hazardous Materials

Careless handling of hazardous products can cause serious injury as well as damage to the environment. Hazardous products that are dumped in sewers or green spaces can injure livestock, wildlife and plant life. Careful and often specialized disposal is essential for these materials.

There are certain materials that Metro Vancouver disposal facilities do not accept, either because there are already recycling programs set up for these items or because they are hazardous to waste collection workers, the public and the environment.

At disposal sites, garbage loads are inspected for banned and prohibited materials. Loads that arrive at the disposal sites containing prohibited materials are assessed a \$73 minimum surcharge, plus the cost of removal, clean-up or remediation. Loads containing banned materials are assessed a 50% tipping fee surcharge.

For a list of drop-off locations, use the City's Recycling Wizard available on the Richmond Recycling app and at [richmond.ca/recyclesearch](http://richmond.ca/recyclesearch), or call the RCBC Recycling Hotline at 604-732-9253.




### BANNED HAZARDOUS AND OPERATIONAL IMPACT MATERIALS



- x Agricultural waste
- x Asbestos
- x Automobile bodies and parts
- x Barrels, drums, pails or large (205 litre or greater) liquid containers, full or empty
- x Biomedical waste
- x Dead animals
- x Gypsum
- x Hazardous waste
- x Inert fill material, including soil, sod, gravel, concrete and asphalt exceeding 0.5 cubic metres per load
- x Liquids or sludge
- x Refuse that is on fire, smouldering, flammable or explosive
- x Wire and cable exceeding 1% of load

### BANNED MATERIALS THAT ARE RECYCLABLE WITH CITY SERVICES



- x Beverage containers
- x Containers made of glass, metal or banned recycled plastic 
- x Corrugated cardboard
- x Electronics
- x Expanded polystyrene packaging
- x Food waste
- x Green waste
- x Mattresses
- x Motor oil & antifreeze
- x Propane tanks
- x Recyclable paper
- x Tires (passenger & light-duty truck only)

For a complete list of banned materials, please visit [metrovancover.org/services/solid-waste/recycling-programs/disposal-ban](https://metrovancover.org/services/solid-waste/recycling-programs/disposal-ban)

# 4.3 Recycling and Disposal Directory

Many common hazardous household and automotive products must be recycled or disposed through special depots. Disposal sites and take-back collection options for hazardous, banned and other materials are listed on the following pages.

Please note that this information is provided as a reference for your convenience; however, it is not guaranteed. Please call first to confirm that the site is still open to accept these take-back products and to check hours of operation.



## ANTIFREEZE AND EMPTY CONTAINERS

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Jiffy Lube 10991 No. 4 Road	604-448-0142

List of accepted items: 604-732-9253 or [interchangerecycling.com/find-a-recycling-centre](http://interchangerecycling.com/find-a-recycling-centre).



## APPLIANCES – SMALL

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171

List of accepted items: [electrorecycle.ca](http://electrorecycle.ca) or 604-732-9253.



## BABY CAR SEATS

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
City of Vancouver Landfill 5400 72nd Street, Delta	604-873-7000
Pacific Mobile Depots (third Saturday of every month) Britannia Community Centre 1661 Napier Street, Vancouver	250-893-8383
Lord Byng Secondary School 3939 W 16th Avenue, Vancouver	250-893-3851
Queensborough Landing Return-it Depot Unit A-409 Boyne Road, New Westminster	604-540-4467

Watch for the **blue** listings for items recyclable through the City of Richmond. See Programs and Services starting on page 28 to find out what is accepted through the City's collection and drop-off services.

**Disposal Ban** – Banned from the landfill and recyclable through retailers, stewardship or take-back programs

**Disposal Ban** – Banned from the landfill and recyclable through the City and other services

**Not Banned** – Recyclable through the City and other services

**Not Banned** – Recycling options are available

**A fee is charged**



**BATTERIES – AUTOMOTIVE**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Canadian Tire 11388 Steveston Highway	604-271-6651
Kal Tire 2633 No. 5 Road	604-278-9181
Regional Recycling 13300 Vulcan Way	1-855-701-7171

Note: All retailers accept a used battery for each one purchased. Collection sites: [recyclemybattery.ca](http://recyclemybattery.ca)



**BATTERIES – HOUSEHOLD AND MOBILE PHONES**  
Batteries weighing 5 kg or less

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Best Buy 700-5300 No. 3 Road	604-273-7335
Costco 9151 Bridgeport Road	604-270-3647
Home Depot 2700 Sweden Way	604-303-9882
Kwantlen Student Association 8771 Lansdowne Road	604-599-2865
London Drugs 5971 No. 3 Road 3080-11666 Steveston Highway	604-448-4811 604-448-4852
Pharmasave 105-12420 No. 1 Road 116-10151 No. 3 Road	604-232-0159 604-241-2898
Regional Recycling 13300 Vulcan Way	1-855-701-7171
Rona (batteries only) 7111 Elmbridge Way	604-273-4606
Staples 8171 Ackroyd Road 110-2780 Sweden Way	604-270-9599 604-303-7850
The Source 1113- 6551 No. 3 Road	604-273-1475

Batteries accepted: [call2recycle.ca](http://call2recycle.ca) or 1-888-224-9764.

Mobile phone drop-off sites: [call2recycle.ca/locator](http://call2recycle.ca/locator).

All cellular/mobile phone stores accept used cellular/mobile phones for refurbishing or recycling.



**BUTANE CYLINDERS**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010



**CARBON MONOXIDE (CO), SMOKE AND COMBINATION SMOKE & CO ALARMS**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
London Drugs 5971 No. 3 Road 3080-11666 Steveston Highway	604-448-4811 604-448-4852
Regional Recycling 13300 Vulcan Way	1-855-701-7171
Rona 7111 Elmbridge Way	604-273-4606

Complete list of alarms accepted: [productcare.org](http://productcare.org) or 1-877-592-2972 ext. 401.



**ELECTRONICS: Audio-visual equipment, computers, monitors, televisions, printers, fax machines, scanners, video games and accessories**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Best Buy 700-5300 No. 3 Road	604-273-7335
Blundell Return-It Centre 130-8180 No. 2 Road	
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171
Staples 8171 Ackroyd Road 110-2780 Sweden Way	604-270-9599 604-303-7850

Complete list of materials accepted: [return-it.ca/electronics](http://return-it.ca/electronics) or 604-473-2400.



**EXERCISE AND HOBBY MACHINES**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Regional Recycling 13300 Vulcan Way	1-855-701-7171

Complete list of materials accepted: [return-it.ca/electronics](http://return-it.ca/electronics) or 604-473-2400.



**EYEGLASSES**

**DROP-OFF LOCATION**

Drop off at any local optometrist or eye care professional.



**FIRE EXTINGUISHERS**

**DROP-OFF LOCATION**      **PHONE**

Richmond Recycling Depot  
5555 Lynas Lane

604-276-4010

 Vancouver Fire  
22131 Fraserwood Way

604-232-3473



**FLAMMABLE LIQUIDS, PESTICIDES, SOLVENTS AND GASOLINE**

**DROP-OFF LOCATION**      **PHONE**

Richmond Recycling Depot  
5555 Lynas Lane

604-276-4010

Regional Recycling  
13300 Vulcan Way

1-855-701-7171

Complete list of accepted items: [productcare.org](http://productcare.org) or 1-877-592-2972 ext. 406.

**GENERAL HAZARDOUS MATERIALS**

**DROP-OFF LOCATION**      **PHONE**

 Secure Energy  
160-13511 Vulcan Way

604-214-7000



**GYPSUM DRYWALL**

No other materials attached to or on drywall

**DROP-OFF LOCATION**      **PHONE**

 City of Vancouver Landfill  
5400 72nd Street, Delta

604-873-7000

 New West Gypsum Recycling  
11871 Horseshoe Way

604-247-1664

Vancouver Transfer Station  
(maximum 1/2 sheet with a paid load of garbage)  
377 W. Kent Avenue N., Vancouver

604-873-7000



**HYPODERMIC NEEDLES**

**DROP-OFF LOCATION**

Purchase a "Sharps Container" from a pharmacy and return the container to same pharmacy when full. Complete list of drop-off locations: [healthsteward.ca/returning-medical-sharps](http://healthsteward.ca/returning-medical-sharps).



**LIGHTS AND LIGHTING FIXTURES**

**DROP-OFF LOCATION**      **PHONE**

Richmond Recycling Depot  
5555 Lynas Lane

604-276-4010

Canadian Tire (lights only)  
11288 Steveston Highway

604-271-6651

Ironwood Return-It Depot  
110-11020 Horseshoe Way

604-275-0585

OK Bottle Depot  
7960 River Road

604-244-0008

Regional Recycling  
13300 Vulcan Way

1-855-701-7171

Rona  
7111 Elmbridge Way

604-273-4606

Complete list of accepted items: [productcare.org](http://productcare.org) or 1-877-592-2972 ext. 407.



**LUBRICATING OIL (USED), OIL FILTERS AND PLASTIC OIL CONTAINERS**

**DROP-OFF LOCATION**      **PHONE**

Richmond Recycling Depot  
5555 Lynas Lane

604-276-4010

Accepted items: 604-732-9253 or [interchangerecycling.com/find-a-recycling-centre](http://interchangerecycling.com/find-a-recycling-centre).




**MATTRESSES AND BOXSPRINGS**

**DROP-OFF LOCATION**      **PHONE**

 City of Vancouver Landfill  
5400 72nd Street, Delta

604-873-7000

 Vancouver Transfer Station  
377 W. Kent Avenue N., Vancouver

604-873-7000

Richmond's Large Item Pick Up Program: Contact Sierra Waste at 604-270-4722. Some restrictions apply. Program details: [richmond.ca/largeitem](http://richmond.ca/largeitem).



### MEDICAL DEVICES AND EQUIPMENT

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171



### MUSICAL INSTRUMENTS (ELECTRONIC)

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171



### PAINT AND PAINT AEROSOL CONTAINERS

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
Regional Recycling 13300 Vulcan Way	1-855-701-7171

[Complete list of accepted items: productcare.org](http://productcare.org) or 1-877-592-2972 ext. 405.



### PHARMACEUTICAL

#### DROP-OFF LOCATION

All pharmacies accept leftover or outdated prescription drugs, non-prescription medications, herbal products, mineral supplements, vitamin supplements and throat lozenges for safe disposal.

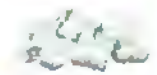
For a list of pharmacies and/or drugs, medications, herbal products and mineral supplements accepted, visit [healthsteward.ca/returning-medications](http://healthsteward.ca/returning-medications) or call 604-732-9253.

*Note: Please do not wash these items down the drain or throw them in the garbage.*



### POLYSTYRENE (STYROFOAM™) - MOLDED PACKAGING & FOOD CONTAINERS

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
London Drugs (only accepts materials purchased in-store) 5971 No. 3 Road 3080-11666 Steveston Highway	604-448-4811 604-448-4852
Queensborough Landing Return-it Depot Unit A-409 Boyne Road, New Westminster	604-540-4467



### POLYSTYRENE (STYROFOAM™) - PEANUTS/CHIPS

DROP-OFF LOCATION	PHONE
Packaging Depot 6360 Kingsway, Burnaby 5524 Cambie Street, Vancouver	604-451-1206 604-325-9966



### PROPANE TANKS: Refillable & Disposable

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
City of Vancouver Landfill 5400 72nd Street, Delta	604-873-7000

*Note: Free drop-off of up to four disposable tanks and two refillable tanks.*



### OUTDOOR POWER EQUIPMENT

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Regional Recycling 13300 Vulcan Way	1-855-701-7171



### SEWING, KNITTING & TEXTILE MACHINES

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171



**TELUS EQUIPMENT (RENTAL OR RETAIL)**

**DROP-OFF LOCATION**

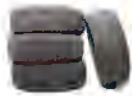
All TELUS rental or retail equipment such as cordless/corded phones, Voice Over IP (VOIP) phones, Global Positioning System (GPS) equipment and video/telephone conference equipment can be returned via Canada Post. Call 604-310-2255 for more information.



**THERMOSTATS**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Andrew Sheret Ltd. 4500 Vanguard Road	604-278-3766
Cape Construction (2001) Ltd. 633-5960 No. 6 Road	604-232-8608
Vancouver Zero Waste Centre (maximum 2) 8588 Yukon Street, Vancouver	604-873-7000

Drop-off locations: [hrai.ca/public-drop-off-locations](http://hrai.ca/public-drop-off-locations) or 1-800-267-2231 ext 224.



**TIRES – VEHICLES  
(OFF-RIM UNLESS NOTED)**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Canadian Tire 3500 No. 3 Road 11388 Steveston Highway	604-273-2939 604-271-6651
Kal Tire (limit of 4) 2633 No. 5 Road	604-278-9181
Metro Tires Ltd. 16160 River Road	604-321-9004
OK Tire (limit of 4 per household) 5831 Minoru Boulevard	604-278-5171
Cee Gees Auto Recycling (limit of 4) 12320 Mitchell Road	604-321-0888
Vancouver Landfill (Passenger/light truck, with/without rims, limit of 10) 5400 72nd Street, Delta	604-873-7000

Richmond's Large Item Pick Up Program: Contact Sierra Waste at 604-270-4722. Some restrictions apply. Program details: [richmond.ca/largeitem](http://richmond.ca/largeitem).

Complete list of locations: [tsbc.ca/recycle-your-tires/](http://tsbc.ca/recycle-your-tires/) or 1-866-759-0488.

All retail locations accept a used tire for a new one purchased.



**TIRES AND TUBES – BICYCLES**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Cap's/Krusty's Bicycles 135-8460 Alexandra Road	604-270-2020
Village Bikes (small amounts) 3891 Moncton Street	604-274-3865

List of locations: [tsbc.ca/bike.php](http://tsbc.ca/bike.php) or 1-866-759-0488.



**TOOLS - POWER (ELECTRONIC & ELECTRICAL)**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171



**TOYS (ELECTRONIC & ELECTRICAL)  
INCLUDING VIDEO GAMING SYSTEMS & ACCESSORIES**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
Best Buy 700-5300 No. 3 Road	604-273-7335
Ironwood Bottle & Return-It Depot 110-11020 Horseshoe Way	604-275-0585
OK Bottle Depot 145-5751 Cedarbridge Way	604-244-0008
Regional Recycling 13300 Vulcan Way	1-855-701-7171



**UPHOLSTERED FURNITURE  
(COUCHES, ARMCHAIRS, ETC)**

DROP-OFF LOCATION	PHONE
Richmond Recycling Depot 5555 Lynas Lane	604-276-4010
City of Vancouver Landfill 5400 72nd Street, Delta	604-873-7000

Richmond's Large Item Pick Up Program: Contact Sierra Waste at 604-270-4722. Some restrictions apply. Program details: [richmond.ca/largeitem](http://richmond.ca/largeitem).




Our thanks go to Richmond residents who have helped us divert the majority of our household waste from the landfill through consistent recycling, as well as their continued efforts to reduce waste.

Together, we are making continuous improvements that support a circular economy and more sustainable waste management.

**CITY OF RICHMOND**

Environmental Programs Information Line:  
604-276-4010

[richmond.ca/recycle](http://richmond.ca/recycle)

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# City of Richmond

## Report to Committee

**To:** Public Works & Transportation Committee

**From:** Peter Russell,  
Director, Sustainability and District Energy  
Suzanne Bycraft,  
Director, Public Works Operations

**Date:** April 17, 2024

**File:** 10-6125-01/2024-Vol 01

**Re: Public Electric Vehicle Charging Network – Use of Proceeds from Low Carbon Fuel Standard (LCFS) Credits**

### Staff Recommendations

That, as described in the report titled “Public Electric Vehicle Charging Network – Use of Proceeds from Low Carbon Fuel Standard (LCFS) Credits”, from the Director, Sustainability and District Energy and Director, Public Works Operations, dated April 17, 2024:

1. Staff be authorized to sell LCFS carbon credits at the highest value to the City;
2. Revenue from the sale of LCFS carbon credits be put into the City’s Carbon Tax Provision account and be reserved for capital and operating costs related to the installation and maintenance of new electric vehicle charging stations;
3. The Chief Administrative Officer and General Manager, Finance and Corporate Services be authorized to enter into an agreement for the sale, aggregation and/or contract to sell LCFS carbon credits; and
4. Staff report back in three years updating Council on use of revenue generated from the sale of LCFS carbon credits to expand the City’s EV charging infrastructure.

Peter Russell,  
Director, Sustainability and District Energy  
(604-276-4130)

Suzanne Bycraft  
Director, Public Works Operations  
(604-233-3338)

Att. 2

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance Department	<input checked="" type="checkbox"/>	
Capital Buildings Project Development	<input checked="" type="checkbox"/>	
Fleet	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	INITIALS: 	<b>APPROVED BY CAO</b> 

## Staff Report

### Origin

This report provides an overview of the provincial Low Carbon Fuel Standard's (LCFS) carbon credit market and requests authorization to conduct a sale of LCFS carbon offset credits that the City accumulated in a four year period, from January 2020 to December 2023. Accumulated credits correspond to the reduction in gasoline and diesel consumption resulting from vehicles charging at the City's public and fleet electric vehicle (EV) charging network. Staff are seeking Council direction on the overall use of the credits, and allocation of revenue from the sale of LCFS credits. This pertains both to credits earned to date and for future credits generated until the scheduled conclusion of the LCFS carbon offset market in 2030.

At the General Purposes meeting on December 18, 2019, Council received a report titled "Parking Stall Fees at City-Owned Electric Vehicle Charging Stations". This report recommended fees for users of the city-owned EV charging network based on a cost-recovery approach. The proposed fees were intended to recover costs for electricity, annual operation and maintenance associated with the public charging network. The fees were not designed to generate revenue for expansion of the network.

At the General Purposes meeting on January 20, 2020, Council received a report titled "Comments on the BC Zero Emission Vehicles (ZEV) Act Regulations Intentions Paper" which contained staff comments urging the Province to reduce the number of credits issued for Zero Emission Vehicles (ZEVs) to be used for compliance with the ZEV Act. The new ZEV sales credits addressed in that report are different from, and not exchangeable with, the EV charging credits for LCFS compliance addressed in this report.

This report supports Council's Strategic Plan 2022-2026 Focus Area #2 Strategic and Sustainable Community Growth:

*Strategic and sustainable growth that supports long-term community needs and a well-planned and prosperous city.*

*2.3 Ensure that both built and natural infrastructure supports sustainable development throughout the city.*

*2.4 Enhance Richmond's robust transportation network by balancing commercial, public, private and active transportation needs.*

This report supports Council's Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

*Leadership in environmental sustainability through innovative, sustainable and proactive solutions that mitigate climate change and other environmental impacts.*

*5.1 Continue to demonstrate leadership in proactive climate action and environmental sustainability.*

This report supports the implementation of Richmond's Community Energy and Emissions Plan (CEEP) 2050, and Official Community Plan emission reduction policies through:

**Strategic Direction 2:** Transition to Zero Emission Vehicles

Action Category:  Build out a network of public EV charging stations at civic facilities to accelerate rate of local EV adoption

This report also supports the Sustainable Green Fleet Policy by maximizing the use of alternative fuels and technologies, and minimizing emissions and fuel consumption where practicable.

**Analysis**

BC Low Carbon Fuel Standard and Carbon Credit Market

The Province of BC has implemented a Low Carbon Fuel Standard (LCFS) to reduce greenhouse gas (GHG) emissions from the transportation sector as part of the larger CleanBC strategy to address climate change. The LCFS is a regulatory framework with the objective of reducing reliance on non-renewable transportation fuels in BC, and spurring the growth of low-carbon fuel alternatives in the transportation sector, such as, light-, medium- and heavy-duty electric vehicles. The LCFS sets increasingly stringent annual carbon intensity limits for gasoline and diesel fuels from 2022 until 2030<sup>1</sup>. Of note, the federal and provincial government have mandated that all new light-duty vehicle sales must be zero emission vehicles (ZEVs) by 2035, increasing the need for EV charging infrastructure.

The LCFS allows regulated fuel suppliers in BC to purchase GHG emission offsets as an alternative to investing in measures that would directly reduce emissions from the production and combustion of gasoline and diesel fuels. Accordingly, a credit trading system has been created within the LCFS that allows fuel suppliers to acquire carbon offsets by purchasing the GHG emission reductions achieved when battery electric and plug-in hybrid vehicles charge with near zero emission electricity at EV charging stations. Suppliers that deploy EV charging systems, including municipalities with public EV charging facilities, earn credits for the clean energy delivered to vehicles using their facilities. These credits can then be sold to LCFS regulated transportation fuel suppliers. Because the LCFS market came into operation in 2020, all electricity provided by the City's EV charging network since this date is eligible for conversion into carbon credits.

Use of City's Public and Fleet EV Charging Network (2018-2023)

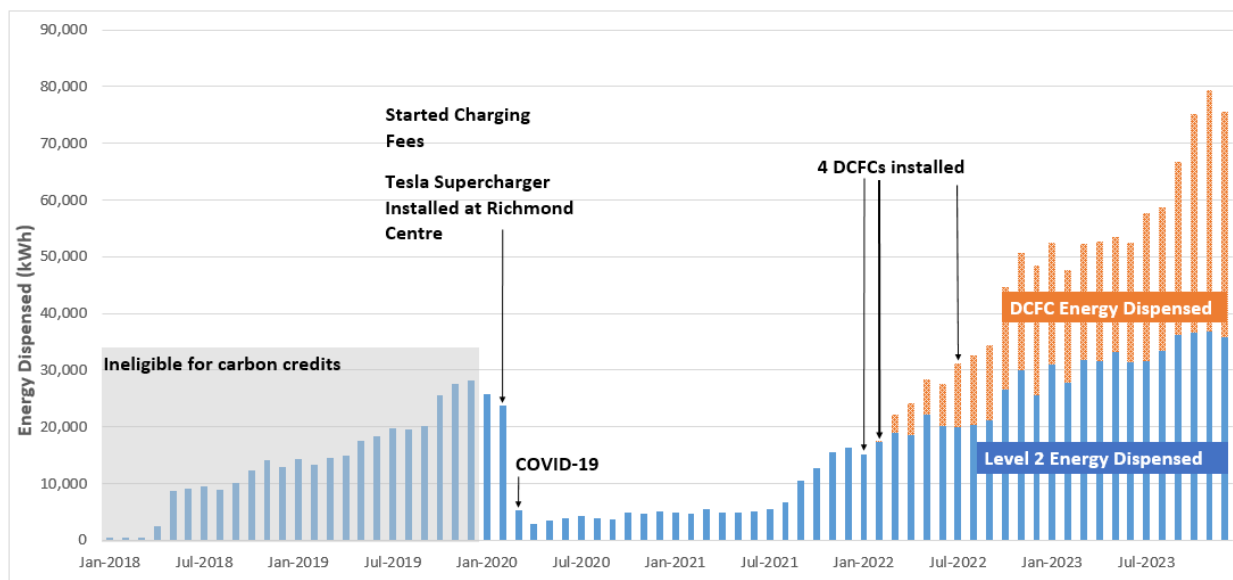
The City's public and fleet EV charging network has grown over the past five years, and currently comprises 114 chargers (see Figure 1 showing monthly utilization levels from January 2018 to December 2023). Starting in 2018, staff observed an accelerating growth in the amount of electricity provided to ZEVs through to March 2020. Shortly after a drop in use of the City's public EV chargers occurred, which persisted until mid-2021. Causal factors for this included onset of the COVID pandemic, introduction of fees for the City's public charging network, and the opening of Tesla's large 'supercharger' facility at Richmond Centre.

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<sup>1</sup> Measured in grams of CO<sub>2</sub>e per mega joule of energy consumed.

However, by the second half of 2021, use of the City’s public charging network rebounded, driven by easing of pandemic restrictions, ongoing increase in the number of electric vehicles within Richmond, and expanding number of City-owned EV charging stations. Overall charging activity on the City’s network had recovered to pre-COVID levels by mid-2022, and has more than doubled again by fall 2023.

**Figure 1: Use of the City’s Public & Fleet EV Charging Network (2018-2023)**



**Monetizing EV Charging Credits through LCFS**

Between January 2020 and the end of 2022, the City of Richmond’s public and fleet EV charging system provided 488 MWh of electricity, generating 434 LCFS offset credits. In 2023 alone, the City’s charging network provided an additional 724 MWh to ZEVs. Using the November 2023 average price per credit of \$490, staff estimate that the 1.21 GWh of electricity provided during the 2020-2023 period would result in 1057 credits with an estimated market credit value of \$517,930.

To monetize the credits generated through the City’s EV charging network, two options are available. The first option involves a direct sale or transfer of credits to a fuel supplier at a mutually agreed-upon amount per credit. This approach is straightforward and allows the City to negotiate directly with purchasers, ensuring a transparent transaction and a predetermined value for the credits. The second option entails contracting an ‘aggregator’ to act on the City’s behalf. In this scenario, the aggregator consolidates credits from various organizations and sells them as a collective batch to purchasers. There is no definitive “best approach” to sell credits as market conditions fluctuate; the most advantageous option for the City may be different each time the City sells credits.

Should Council endorse the recommendations, staff will initiate a procurement process to strategically choose between direct sales to fuel suppliers or utilizing an aggregator, aiming to maximize the value of credits and selecting the most advantageous method for each transaction. The Chief Administration Officer and General Manager, Finance and Community Services will

oversee and approve such transactions ensuring the City receives the highest value. Staff will update Council annually detailing the quantity of credits generated and any sales conducted.

#### Use of Revenue Proceeds from LCFS Carbon Market

Staff recommend that revenue from the sale of credits be reinvested to support ongoing expansion of City's public and fleet charging network. Staff will bring forward opportunities to add EV chargers in the annual capital budget process to support continued expansion of the City's public and fleet EV charging network.

New 'on-the-go' public charging will preferentially be installed in areas of Richmond with relatively high numbers of residents who do not currently have easy access to charging at home. Doing so will maximize the percentage of Richmond households that can easily access charging opportunities, thereby accelerating the pace of EV adoption. Locations will also be based on existing electrical capacity and site constraints.

Staff note that there is currently no dedicated capital funding for the expansion of the EV charging network; all previous expansions were largely achieved through provincial and federal grants. Further expansion of the City's EV charging network is expected to generate additional LCFS offset credits relative to current levels. Reinvestment of this revenue into the City's public and fleet EV charging network could move the City towards a self-financing model through to 2030, when the LCFS program is anticipated to end.

Staff are developing a scope of work for an e-mobility strategy that involves a financial analysis of the current EV charging network and a feasibility study for expansion, incorporating existing EV-ready policies. The aim is to model the required number of chargers, considering the anticipated increase in zero-emission vehicles (ZEVs) within the City.

#### Canada's Clean Fuel Regulation

Similar to the LCFS, the Canadian Clean Fuel Standard (CFS) is a regulatory framework aimed at reducing greenhouse gas emissions associated with the production and use of transportation fuels. The CFS establishes carbon intensity targets for each fuel type requiring suppliers to decrease the carbon intensity of their products over time. Staff are researching the implications and potential benefits of the CFS. The CFS credit market started in June 2022 and the first credit transactions began one year later in June 2023. While credits under CFS cannot be claimed retroactively, preliminary findings suggest potential credit opportunities, particularly from the City's deployment of EV chargers and the utilization of propane for fleet vehicles. It may also be possible to claim credits under both the British Columbia Low Carbon Fuel Standard and the Canadian Clean Fuel Regulation. Staff are in conversation with the City's EV charger provider and staff from the federal government, and staff will update Council once clear opportunities within CFS credit market are determined.

#### **Financial Impact**

The value of LCFS credits is demand-driven and fluctuates. As of November 2023, each credit was valued at \$490. At this estimated market price, the total LCFS carbon offsets generated by the

City's public and fleet EV charging network in 2020-2023 would be \$517,930, of which \$305,270 came from offsets generated in 2023 alone. These proceeds would be allocated to the Carbon Tax Provision account to support ongoing reinvestment of these proceeds in new EV charging stations. These proceeds would reduce the amount of capital and operating costs required from other City budgets.

**Conclusion**

The City's EV charging network serves as a key component of the City's commitment to achieve deep emission reduction targets for transportation for 2030 and 2050 as set out in the CEEP 2050. BC's near zero emission grid electricity provided to ZEVs through the City's chargers generates Low Carbon Fuel Standard (LCFS) credits, since this electricity replaces the use of gasoline and diesel by vehicles.

Staff are recommending that GHG emission reduction credits generated by the City's EV charging network be sold to purchasers seeking to meet their obligations under the Provincial Low Carbon Fuel Standard, and that revenue realized through the sale of LCFS credits be invested in further expansions of the City's public and fleet EV charging network. Staff will update Council annually via memo on total credits generated and any carbon credits sold.



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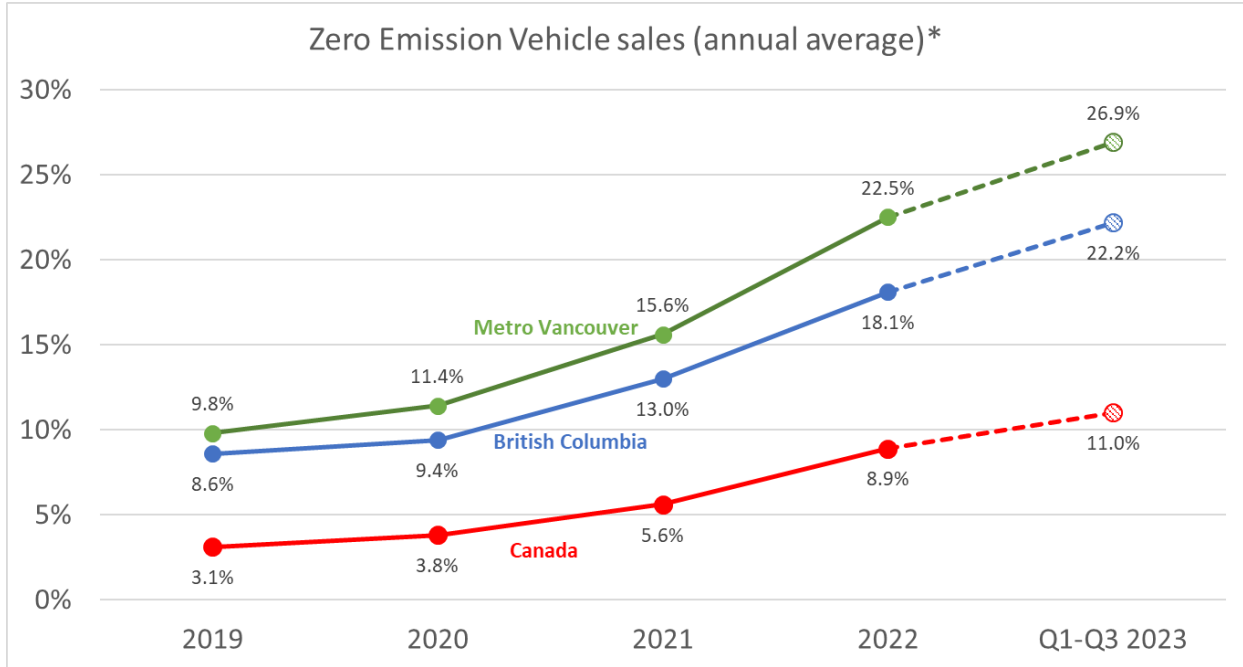


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- Att. 1: Market adoption of Zero Emission Vehicles (ZEVs)
- 2: Value of LCFS Carbon Offset Credits over time



Market adoption of Zero Emission Vehicles (ZEVs)



\* % of light-duty vehicle sales in Canada, British Columbia and Metro Vancouver

Value of LCFS Carbon Offset Credits over time

