



Public Works and Transportation Committee

Anderson Room, City Hall
6911 No. 3 Road

Wednesday, April 20, 2016
4:00 p.m.

Pg. # ITEM

MINUTES

PWT-4

*Motion to adopt the **minutes** of the meeting of the Public Works and Transportation Committee held on March 23, 2016.*



NEXT COMMITTEE MEETING DATE

May 18, 2016, (tentative date) at 4:00 p.m. in the Anderson Room

PLANNING AND DEVELOPMENT DIVISION

1. **MEMORIAL STREET NAME SIGNS IN RICHMOND**

(File Ref. No. 10-6450-06-04) (REDMS No. 4958772 v. 2)

PWT-11

See Page PWT-11 for full report

Designated Speaker: Victor Wei

STAFF RECOMMENDATION

That a proposed program to install memorial street name signs, as described in Option 2 in the staff report titled “Memorial Street Name Signs in Richmond” dated March 24, 2016 from the Director, Transportation, be considered as part of the 2017 Budget process.



ENGINEERING AND PUBLIC WORKS DIVISION

2. **SERVICING AGREEMENT WITH I-FORTUNE**

(File Ref. No. 10-6060-01) (REDMS No. 4971130 v. 2)

PWT-22

See Page PWT-22 for full report

Designated Speaker: John Irving

STAFF RECOMMENDATION

That the Chief Administrative Officer and the General Manager, Engineering & Public Works be authorized to finalize and execute a Servicing Agreement between the City and 1004732 B.C. Ltd. (I-Fortune) to construct a sanitary sewer and temporary sanitary pump station within Anderson Road, based on the material terms and conditions set out in the staff report titled “Proposed Servicing Agreement with I-Fortune” dated April 4, 2016 from the Director, Engineering.



3. **GREEN FLEET ACTION PLAN – 2015 PROGRESS REPORT**

(File Ref. No. 02-0780-00) (REDMS No. 4901421 v. 4)

PWT-26

See Page PWT-26 for full report

Designated Speaker: Suzanne Bycraft

STAFF RECOMMENDATION

That the Future Opportunities and Planned Actions, as outlined in the “Green Fleet Action Plan – 2015 Progress Report” from the Director, Public Works Operations dated March 29, 2016, be endorsed.



4. **REPORT 2015: RECYCLING AND SOLID WASTE MANAGEMENT – APPLYING BEST PRACTICES TO ACHIEVE GOALS**

(File Ref. No. 10-6370-01) (REDMS No. 4966642 v. 2)

PWT-40

See Page PWT-40 for full report

Designated Speaker: Suzanne Bycraft

STAFF RECOMMENDATION

That the annual report titled, “Report 2015: Recycling and Solid Waste Management – Applying Best Practices to Achieve Goals” dated March 30, 2016, from the Director, Public Works Operations, be endorsed and made available to the community through the City’s website and through various communication tools including social media channels and as part of community outreach initiatives.

☐

5. **MANAGER’S REPORT**

(i) *Steveston Bus Exchange*

ADJOURNMENT

☐



Public Works and Transportation Committee

Date: Wednesday, March 23, 2016

Place: Anderson Room
Richmond City Hall

Present: Councillor Chak Au, Chair
Councillor Harold Steves, Vice-Chair
Councillor Derek Dang
Councillor Ken Johnston
Councillor Alexa Loo

Also Present: Councillor Carol Day

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 17, 2016, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

April 20, 2016, (tentative date) at 4:00 p.m. in the Anderson Room

Public Works & Transportation Committee
Wednesday, March 23, 2016

PLANNING AND DEVELOPMENT DIVISION

1. PROVINCIAL 2016/2017 BIKEBC PROGRAM SUBMISSION

(File Ref. No. 01-0150-20-THIG1) (REDMS No. 4925480)

It was moved and seconded

- (1) That the submission for cost-sharing to the Province's 2016/2017 BikeBC Program for the River Drive multi-use pathway, as described in the report, titled "Provincial 2016/2017 BikeBC Program Submission" dated February 23, 2016, from the Director, Transportation, be endorsed; and*
- (2) That, should the above application be successful, the Chief Administrative Officer and the General Manager, Planning and Development, be authorized to execute the funding agreement.*

CARRIED

2. ICBC-CITY OF RICHMOND ROAD IMPROVEMENT PROGRAM – PROPOSED PROJECTS FOR 2016

(File Ref. No. 01-0150-20-PSAF1) (REDMS No. 4930626)

It was moved and seconded

- (1) That the list of proposed road safety improvement projects, as described in Attachment 2 of the staff report titled "ICBC-City of Richmond Road Improvement Program – Proposed Projects for 2016," dated February 25, 2016 from the Director, Transportation be endorsed for submission to the ICBC 2016 Road Improvement Program for consideration of cost sharing funding; and*
- (2) That should the above applications be successful, the Chief Administrative Officer and General Manager, Planning and Development be authorized to negotiate and execute the cost-share agreements, and that the 5-Year Financial Plan (2016-2020) be amended accordingly.*

CARRIED

3. ON-STREET MOTORCYCLE AND MOPED PARKING

(File Ref. No. 10-6455-00) (REDMS No. 4928549)

The Committee expressed support for the proposed amendment to the Traffic Bylaw.

Donna Chan, Manager, Transportation, confirmed that only motorcycles and mopeds that are registered, licensed and insured would fall under the new definition of "Motorcycle" or "Moped" under the amended Traffic Bylaw and not be subject to fines for parking within six metres of an intersection.

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Wednesday, March 23, 2016

It was moved and seconded

- (1) *That on-street motorcycle and moped parking spaces located within six (6.0) metres of the far side of an intersection where on-street parking is allowed be established in the City Centre Parking Management Zone and the Steveston Village core; and*
- (2) *That staff be directed to bring forth an amendment to Traffic Bylaw No. 5870 to enable implementation of on street motorcycle and moped parking spaces as described in the staff report dated January 26, 2016, from the Director Transportation.*

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

4. ANNUAL FLOOD PROTECTION REPORT 2015

(File Ref. No. 10-6060-04-01) (REDMS No. 4903067 v. 3)

In response to queries from the Committee, Lloyd Bie, Manager, Engineering Planning, and John Irving, Director, Engineering, provided the following information:

- The geotechnical survey for investigation into the construction of the dike on Steveston Island will commence in the next few months
- An application to secure the water lot to the east of Steveston Island will be made in the future
- The sea level rise will continue to be monitored

Mr. Bie confirmed that developers are required to pay for the entire dike improvements that are adjacent to the development. New developments are currently being built with the first floor level at or above sea level.

It was moved and seconded

That the staff report titled “Annual Flood Protection Report 2015” (dated March 1, 2016, from the Director, Engineering) be received for information.

CARRIED

5. WATER USE RESTRICTION BYLAW AMENDMENT

(File Ref. No. 10-6650-01) (REDMS No. 4918606 v. 4)

In response to queries from the Committee, Lloyd Bie, Manager, Engineering Planning, provided the following information:

- Water parks with automatic shut-off valves will be permitted to continue to operate during Stage 2 restrictions

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Wednesday, March 23, 2016

- The proposed amendment to the Stage 2 restrictions would allow residential pressure washing
- Staff recommends that the Stage 1 restrictions be activated on May 15, consistent with Metro Vancouver's Water Shortage Response Plan

It was moved and seconded

- (1) *That the Metro Vancouver Water Shortage Response Plan amendments, as outlined in the "Water Use Restriction Bylaw Amendment" report, dated March 10, 2016 from the Director, Engineering, be endorsed; and*
- (2) *That Water Use Restriction Bylaw No. 7784, Amendment Bylaw No. 9530 be introduced and given first, second and third readings.*

CARRIED

6. 2016 CLOTHES WASHER REBATE PROGRAM

(File Ref. No. 10-6060-01) (REDMS No. 4909410)

In response to a query from the Committee regarding the availability of funds for the City to offer rebates throughout the year, Lloyd Bie, Manager, Engineering Planning, advised that he would contact BC Hydro to clarify the rationale for the gaps between the spring and fall campaigns.

It was moved and seconded

- (1) *That the City of Richmond partner with BC Hydro to the end of 2016 to offer rebates of up to \$200, equally cost shared between BC Hydro and the City, for the replacement of inefficient clothes washers with new high efficiency clothes washers;*
- (2) *That the scope of the existing Toilet Rebate Program funding be expanded to include clothes washer rebates; and*
- (3) *That the Chief Administrative Officer and General Manager, Engineering and Public Works, be authorized to execute an agreement with BC Hydro to implement the Clothes Washer Rebate Program.*

CARRIED

7. STEVESTON DREDGING UPDATE

(File Ref. No. 10-6060-01) (REDMS No. 4929465 v. 4)

In response to queries from the Committee, Mike Redpath, Senior Manager, Parks, and Lloyd Bie, Manager, Engineering Planning, noted the need to dredge the adjacent areas of the channel simultaneously with the Steveston Harbour Phase II dredging.

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It was moved and seconded

- (1) *That funding for a 33% share of Steveston Harbour Phase II dredging costs plus \$66,467, for a total of up to \$516,500, be approved;*
- (2) *That funding for a 33% share, up to \$60,000, of No. 1 Road Strip dredging costs, be approved;*
- (3) *That \$400,000 in funding for complimentary dredging from the east edge of the Imperial Landings floats to the east edge of Britannia's Shipyards floats, be approved; and*
- (4) *That the Chief Administrative Officer and General Manager, Engineering and Public Works, be authorized to execute agreements with the appropriate parties to facilitate the dredging work.*

CARRIED

8. PARIS CLIMATE AGREEMENT AND BC CLIMATE LEADERSHIP PLAN UPDATE

(File Ref. No. 10-6125-07-02) (REDMS No. 4934692 v. 3)

The Committee discussed the impact of liquefied natural gas (LNG) projects and the jet fuel project on the ability to meet the BC Climate Leadership Plan goals and the reduction in the consumption of natural gas for heating due to the changing climate and the associated environmental benefits.

The Committee suggested ideas to engage the public in taking ownership of solutions to climate change including:

- Public dissemination of the information contained in the report
- Promoting individual actions to reduce greenhouse gas (GHG) emissions such as walking, cycling and utilizing transit
- Initiating an education/public awareness campaign
- Engaging school-aged children
- Creating awareness of the City's sustainability initiatives
- Using major events as a vehicle to bring the message to residents e.g. Canada's 150th anniversary of confederation event.

Peter Russell, Senior Manager, Sustainability, advised that he would consider the suggested options in the development of a recommendation to Council.

It was moved and seconded

That the staff report titled "Paris Climate Agreement and BC Climate Leadership Plan Update" dated March 4, 2016 from the Director, Engineering be received for information.

CARRIED

Public Works & Transportation Committee
Wednesday, March 23, 2016

9. **MANAGER'S REPORT**

(i) Art on Manhole Covers

Eric Fiss, Public Art Planner, and Romeo Bicego, Manager, Sewerage and Drainage, circulated mock-ups of the art that will be incorporated on manhole covers.

(ii) TransLink Fare Policy Review

Donna Chan, Manager, Transportation, advised that TransLink is undertaking a review of their fare policy and will be engaging the public in consultations. TransLink will provide a report at the end of the two-year review process.

(iii) Bus Shelter at No. 2 Road/Moncton Street

The Committee advised that a resident had requested that a shelter be installed at the No. 2 Road/Moncton Street bus stop.

Donna Chan, Manager, Transportation, advised that this request would be added to the priority list for shelters given the large number of seniors using that particular bus stop. In response to a query from the Committee, Ms. Chan noted that there are internal guidelines for prioritizing requests for bus shelters, which includes criteria such as the number of boardings per day and the characteristics of the users.

(iii) Grease Management

In response to questions from the Committee, Robert Gonzales, General Manager, Engineering and Public Works reported that a number of measures are available to manage the amount of grease entering the sewer system. An analysis is currently being undertaken on the amount of grease found in the sewer system and potential solutions. A report will be provided to the Committee upon completion of the analysis.

There was discussion regarding the enforcement of the City's Drainage, Dyke and Sanitary Sewer System Bylaw with respect to the management of grease and the education of the public to divert grease to the organics stream.

Mr. Gonzales responded to questions regarding the uses for the grease that is collected and options for recycling.

ADJOURNMENT

It was moved and seconded
That the meeting adjourn (4:41 p.m.).

CARRIED

Public Works & Transportation Committee
Wednesday, March 23, 2016

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 23, 2016.

Councillor Chak Au
Chair

Carol Lee
Recording Secretary



City of Richmond

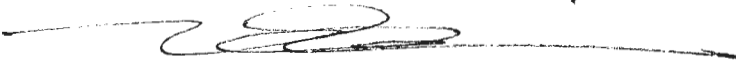
Report to Committee

To: Public Works and Transportation Committee
From: Victor Wei, P. Eng.
Director, Transportation
Re: Memorial Street Name Signs in Richmond

Date: March 24, 2016
File: 10-6450-06-04/2016-
Vol 01

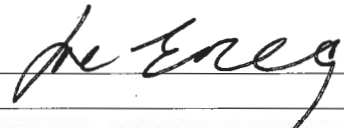
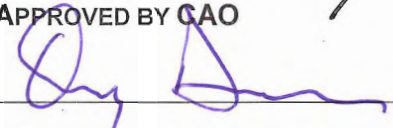
Staff Recommendation

That a proposed program to install memorial street name signs, as described in Option 2 in the staff report titled "Memorial Street Name Signs in Richmond" dated March 24, 2016 from the Director, Transportation, be considered as part of the 2017 Budget process.



Victor Wei, P. Eng.
Director, Transportation
(604-276-4131)

Att. 2

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Roads & Construction	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: DW	APPROVED BY CAO 

Staff Report

Origin

In a letter dated December 14, 2015, the Friends of the Richmond Archives requested City Council to consider adding a poppy emblem to street name signs that are named after Richmond residents who have given their life in military service (Attachment 1). As this request would require a change to the City's standard design for a street name blade, staff are seeking Council direction with respect to the request.

This report supports Council's 2014-2018 Term Goal #2 A Vibrant, Active and Connected City:

Continue the development and implementation of an excellent and accessible system of programs, services, and public spaces that reflect Richmond's demographics, rich heritage, diverse needs, and unique opportunities, and that facilitate active, caring, and connected communities.

Analysis

Request from Friends of the Richmond Archives

As outlined in Attachment 1, the Friends of the Richmond Archives has an annual Remembrance Day exhibit at City Hall. In November 2015, the theme was "Memorial Roads in Our Community," which identified the roads in Richmond that are named after residents who died in military service. Based on the positive feedback from visitors to the exhibit who expressed that they were not aware of the history of the names, the group has requested that the City consider adding a poppy emblem to these street name signs similar to programs in other jurisdictions, both local and international.

Memorial Road Name Signage in Other Jurisdictions

Staff investigated the practices of the City of Toronto and the City of Vancouver; both have programs that allow for this type of application to street name signs.

- City of Toronto: Toronto City Council adopted a Street Naming Policy in June 2015. Part of that policy includes a component for ceremonial street naming that adds a secondary name to a street usually to honour an individual, event or organization that have made a significant positive contribution to the local community, the city or Canada. A ceremonial street name does not replace the legal street name and is symbolic only. The Policy also contains a component to recognize residents who have been killed in military service with the addition of a poppy emblem to the road name sign. Costs for the signage are dealt with on a case by case basis in a report to Council. The City of Toronto has received only positive feedback from area residents when the memorial road name signs are installed.
- City of Vancouver: The City of Vancouver Policy is similar to that of the City of Toronto and includes road name signage to reflect different geographical areas such as Chinatown and Gastown, or to recognize individuals, events or organizations that have made a significant contribution to the community, City of Vancouver, British Columbia or Canada.

The Policy also includes a section to recognize residents who have given their lives in military service (see Attachment 2 for a depiction on the poppy street name sign). These latter signs are permitted in two designated geographical areas: the streets bordering Victory Square and 15 streets within an area bounded by Grandview Highway, Rupert Street, Boundary Road, and East 22nd Avenue where the street is named after a person or a place that has had a role in a Canadian war. Costs for the signage are the responsibility of the applicant. The City of Vancouver has also received only positive feedback from area residents when the memorial road name signs are installed.

Proposed Memorial Road Name Signage Program for Richmond

Staff are supportive of the suggestion from the Friends of the Richmond Archives. Currently, only those residents who take the time to read the names on the Cenotaph, honouring those who have died in military service, make the connection between those names and the names of some of the roads in the city. The Cenotaph is one of only a few public places where people are remembered. As noted above, the Friends of the Richmond Archives annual exhibit in 2015 at City Hall at Remembrance Day received positive public feedback from visitors once they learned the history behind the names of some Richmond roads.

Friends of the Richmond Archives identified 54 existing roads named after residents who have lost their life in military service (see Appendix 2 of Attachment 1). The lengths of the roads identified varies, with some being short with only a few intersecting streets to other longer roads with many intersecting streets requiring a greater number of signs. It is estimated that 275 signs will be required to complete the changeover to Memorial Road Name Signs.

The manufacture of new road name signs to add a poppy decal would have no impact on the City of Richmond Road Naming Criteria as it would apply only to previously named roads.

The Public Works Sign Shop advises it is not possible to attach a poppy decal to existing road name sign blades as it would not adhere to the existing surface. Instead, each road name sign blade would need to be manufactured with the poppy decal on the sign face first layer, similar to the City of Vancouver design, at an estimated cost of \$150.00 per sign. Initial calculations for the manufacture and installation of all requested new road name sign blades are estimated to be \$45,000.

Given the greater than expected cost of replacing a large number of road name signs, staff propose two implementation options.

Option 1: Multi-Year Program

Under Option 1, the installation of the poppy street name signage would be phased over a five-year period beginning in 2017. A number of roads in a given geographic area that would require up to 60 signs in total would be selected each year for installation of the poppy signage with the intent of keeping costs at or near \$9,000 per year. The geographic area would be selected in the spring of each year in consultation with Friends of the Richmond Archives with installation being completed prior to Remembrance Day.

Option 2: One-Year Program (Recommended)

Under Option 2, an additional one-time expenditure request for \$45,000 would be made as part of the 2017 Operating Budget process, which is subject to Council approval, to allow all the replacement signs to be installed at one time in 2017.

Financial Impact

If Option 2 is approved as recommended, the estimated additional one time expenditure request would be \$45,000.00, as part of the 2017 Operating Budget Process, subject to Council approval. There will be no Ongoing Budget Impact as the proposed signs would be replacing road name signs already in place.

Conclusion

The installation of Memorial Road Name signs would be an additional tribute to and legacy for those Richmond residents who have lost their life in military service. These signs would be consistent with Council's goal to reflect the rich history and sacrifice made by Richmond residents.



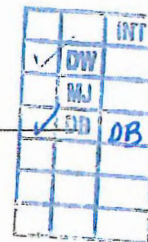
Robert Gilchrist
Traffic Supervisor
(604-247-4697)

RG:rg

- Att. 1: Letter from Friends of the Richmond Archives
2: City of Vancouver Road Name Signage with Poppy

Friends of the Richmond Archives

c/o City of Richmond Archives, 7700 Minoru Gate, Richmond BC V6Y 1R9



10-6360-05-01

December 14, 2015

Mayor and Council
City of Richmond
6911 No. 3 Road
Richmond, BC V6Y 2C1

Dear Mayor Brodie and Members of Council,

RE: Request to Consider Introducing Signage to Memorial Roads in Our Community

The Friends of the Richmond Archives was established in 1987 to support the work of the City of Richmond Archives and to promote the preservation and understanding of Richmond's history. In addition to supporting a unique publishing program for local Richmond history and carrying out a busy community exhibit program, the Friends also contribute funds for specialized archival equipment and projects at the City of Richmond Archives.

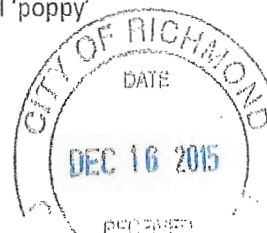
One of the community exhibit programs run by the Friends of the Richmond Archives is our annual Remembrance Day exhibit held at City Hall. This past Remembrance Day, our display was "Memorial Roads in Our Community". The research undertaken to create this display located 54 currently named streets named after fallen servicemen. We also located one name - Edgington - which originally had a street named Edgington Avenue in the Cora Brown subdivision on Sea Island, which is no longer in existence.

Our Remembrance Day exhibit was a great success, with visitors remarking how interesting it was to learn of the City of Richmond's street naming policy and the real history behind these street names. The vast majority of visitors had no idea these streets were named after people, let alone those that gave their lives during World War I and World War II. One of the outcomes of this exhibit is an idea put forward by School Trustee Ken Hamaguchi to commemorate these streets with a specially identified 'poppy' street sign.

Following our conversation with School Trustee Hamaguchi at our Remembrance Day exhibit, we researched the topic of memorial roads in communities with "poppy" signage. We found that cities across Canada, Europe and New Zealand have been instituting policies and programs for street naming and signage since the early 2000s. The City of Vancouver installed 'poppy' street signs around Victory Square for Remembrance Day 2009.

FILE COPY

PWT - 15




Friends of the Richmond Archives

c/o City of Richmond Archives, 7700 Minoru Gate, Richmond BC V6Y 1R9

In Richmond we currently have 54 streets already named after fallen servicemen. We would like to propose that Council consider a project to create and install a specialized 'poppy' sign for these streets. The poppy has become the symbol of remembrance in Canada and around the world. This way, the citizens of Richmond will immediately know these streets are named to honour a specific fallen serviceman, thereby further memorializing those that gave their lives for this country and community.

Yours sincerely,



Barbara Williams, President
Friends of the Richmond Archives

cc School Trustee Ken Hamaguchi

Friends of the Richmond Archives

c/o City of Richmond Archives, 7700 Minoru Gate, Richmond BC V6Y 1R9

Appendix 1 – Photographs

Here is a selection of images of what the signs look like:



(City of Vancouver; source: <http://ow.ly/VLVRh>)



(City of Ottawa; source: <http://ow.ly/VLVbB>)

Friends of the Richmond Archives

c/o City of Richmond Archives, 7700 Minoru Gate, Richmond BC V6Y 1R9



(City of Toronto; source: <http://ow.ly/VLVmG>)



(Town of Richmond Hill; source: <http://ow.ly/VLVYW>)

Friends of the Richmond Archives

c/o City of Richmond Archives, 7700 Minoru Gate, Richmond BC V6Y 1R9

Appendix 2 – List of Street Names

Streets Named After Fallen Servicemen – From the book “We Will Remember Them: The Lives Behind the Richmond Cenotaph” by Mary Keen (published by the City of Richmond Archives, 1998):

1. Allison Court/Street
2. Bowcock Road
3. Carter Court/Drive
4. Chatterton Road
5. Cooper Road
6. Craig Road
7. Davies Court/Place
8. Dayton Road
9. Dixon Avenue
10. Dolphin Avenue
11. Donald Road
12. Edgington Avenue*
13. Fedoruk Road
14. Finlayson Drive
15. Forsyth Crescent
16. Gage Road
17. Gagnon Road
18. Gamba Drive
19. Gates Avenue
20. Gay Road
21. Gibbons Drive
22. Gilmore Crescent
23. Greenland Drive/Place
24. Hall Avenue/Place
25. Kartner Road
26. LeChow Street
27. Mang Road
28. McCutcheon Avenue
29. McKessock Avenue/Place
30. McLennan Avenue
31. McLeod Avenue
32. Moffatt Road
33. Moore Road
34. Myhill Road
35. Myron Drive

Friends of the Richmond Archives

c/o City of Richmond Archives, 7700 Minoru Gate, Richmond BC V6Y 1R9

- 36. Olafsen Avenue
- 37. Sills Avenue
- 38. Tucker Avenue
- 39. Turnill Street
- 40. Wallace Road
- 41. Wheeler Road
- 42. Willett Avenue

Throughout the course of this research we identified another 13 streets named after fallen servicemen:

- 1. Abercrombie Road
- 2. Boyd Court
- 3. Comstock Road
- 4. Foster Road
- 5. Grandy Road
- 6. Hayne Court
- 7. Kitcher Place
- 8. Lemon Avenue
- 9. Leslie Road
- 10. Muir Drive
- 11. Scotchbrook Road
- 12. Shields Avenue
- 13. Smith Crescent

City of Vancouver Poppy Street Name Sign





City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: April 4, 2016

From: John Irving, P.Eng. MPA
Director, Engineering

File: 10-6060-01/2016-Vol
01

Re: Servicing Agreement with I-Fortune

Staff Recommendation

That the Chief Administrative Officer and the General Manager, Engineering & Public Works be authorized to finalize and execute a Servicing Agreement between the City and 1004732 B.C. Ltd. (I-Fortune) to construct a sanitary sewer and temporary sanitary pump station within Anderson Road, based on the material terms and conditions set out in the staff report titled "Proposed Servicing Agreement with I-Fortune" dated April 4, 2016 from the Director, Engineering.

John Irving, P.Eng. MPA
Director, Engineering
(604-276-4140)

Att. 1

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Law	<input checked="" type="checkbox"/>	
Sewerage & Drainage	<input checked="" type="checkbox"/>	
Development Applications	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: DW	APPROVED BY CAO

Staff Report

Origin

1004732 B.C. Ltd. (I-Fortune) has applied to the City of Richmond requesting a servicing agreement to construct a temporary sanitary pump station and a permanent sanitary sewer within Anderson Road, to accommodate flows from the existing sanitary sewer so that the existing sewer may be abandoned. The temporary sanitary pump station will remain in service until the permanent sanitary sewer is constructed.

Analysis

I-Fortune has begun ground densification and preload of their development site, 6840, 6860 No. 3 Road and 8051 Anderson Road. A statutory right of way (SRW) and sanitary sewer prevent I-Fortune from completing their ground improvements. To advance their construction schedule, I-Fortune request to enter into a servicing agreement that will enable them to abandon the existing sanitary sewer. The proposed servicing agreement will require I-Fortune to:

- Construct a temporary sanitary pump station that will temporarily divert flows away from the existing sanitary sewer and allow it to be abandoned.
- Provide security for the City to own, operate, maintain and decommission the temporary sanitary pump station if required.
- If required, grant the City a SRW to enter the development site to ensure the continued operation of the temporary sanitary pump station.
- Provide security for the City to construct 130m of permanent sanitary sewer along Anderson Road to permanently divert sanitary flows away from the existing sanitary sewer.
- Complete the works within a defined schedule.
- Indemnify the City.

The site is the subject of an active rezoning application (RZ 14-678448) to permit a mixed-use development on the site. A second servicing agreement will be required for additional utility and road servicing works as the development proceeds through rezoning. A staff report on the rezoning application will be brought forward for Council consideration at a later date upon completion of the staff review.

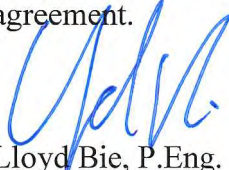
Attachment 1 shows a schematic of the proposed sanitary system works. It is the City's preference to locate utility infrastructure within road dedications. Entering the servicing agreement will benefit the City by advancing the removal of a sanitary sewer from within a SRW located on private property.

Financial Impact

None

Conclusion

I-Fortune have requested a servicing agreement to construct a temporary sanitary pump station and a permanent sanitary sewer within Anderson Road to accommodate flows from the existing sanitary sewer so that the existing sewer may be abandoned. The agreement's terms will protect the City's interests and advance the abandonment of a sanitary sewer within private property. Staff recommend support for the works and seek Council authorization to enter into a servicing agreement.



Lloyd Bie, P.Eng.
Manager, Engineering Planning
(604-276-4075)



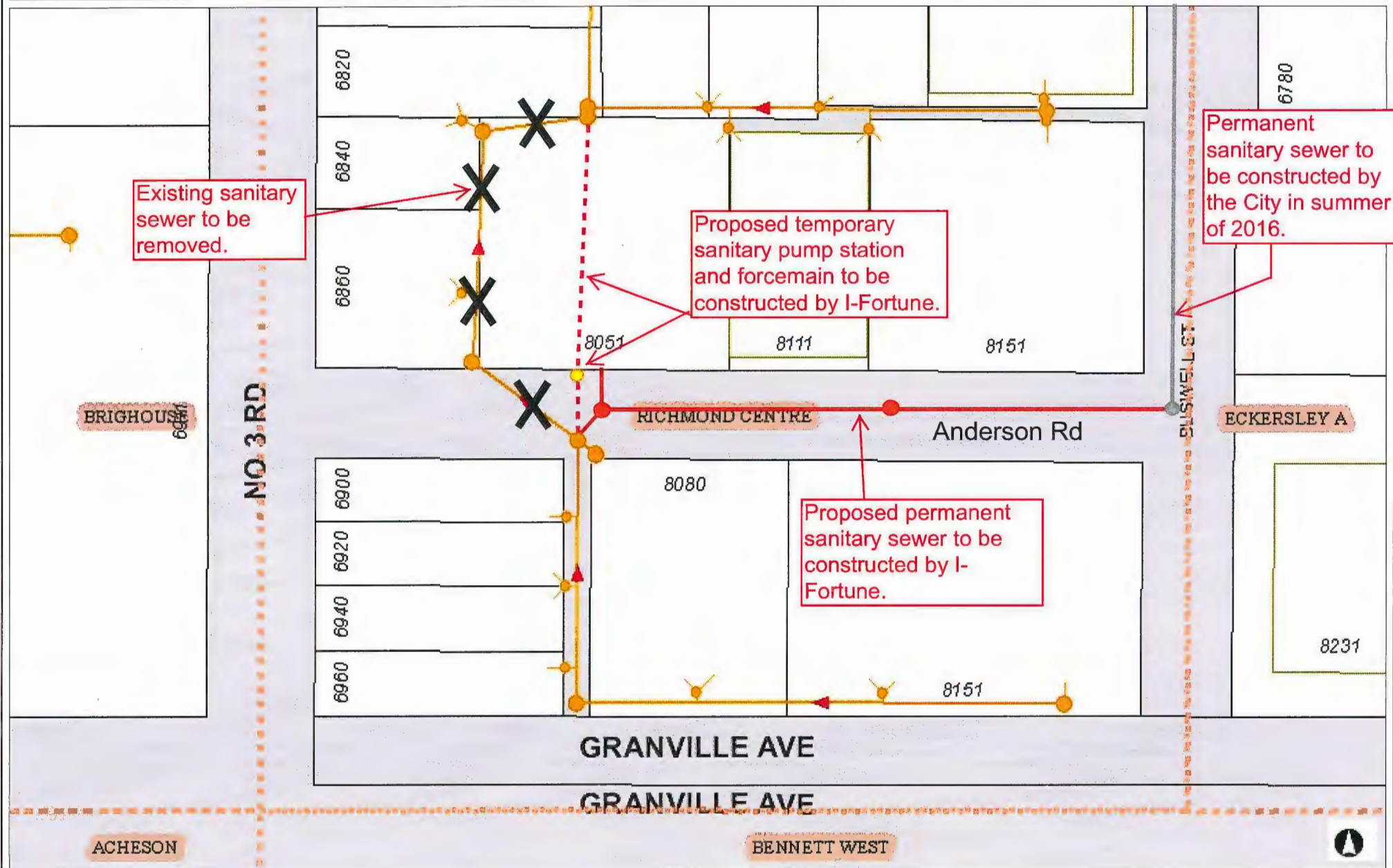
Andy Bell, P.Eng.
Project Engineer
(604-247-4656)

LB:ab

Att. 1: Proposed Sanitary System Works Map

Proposed Sanitary System Works

Attachment 1



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City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Tom Stewart, ASCT.
Director, Public Works Operations
Date: March 29, 2016
File: 02-0780-00/Vol 01
Re: Green Fleet Action Plan – 2015 Progress Report

Staff Recommendation

That the Future Opportunities and Planned Actions, as outlined in the Green Fleet Action Plan – 2015 Progress Report from the Director, Public Works Operations dated March 29, 2016, be endorsed.

Tom Stewart, ASCT.
Director, Public Works Operations
(604-233-3301)

Att. 1

REPORT CONCURRENCE		
ROUTED TO: Sustainability	CONCURRENCE <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: DW	APPROVED BY CAO

Staff Report

Origin

At their October 28, 2013 meeting, Council approved the City's Green Fleet Action Plan. This plan established a target to reduce GHG emissions 20% by 2020 through various strategies as outlined in Figure 1. The reduction target of 20% is based on an annual reduction of 2% per year, starting in 2010.

This report presents a progress report of actions and results to date, as well as outlines current and planned initiatives designed to further reduce GHG emissions from the City's corporate vehicle fleet.

This report supports Council's 2014-2018 Term Goal #4 Leadership in Sustainability:

Continue advancement of the City's sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond's position as a leader in sustainable programs, practices and innovations.

4.1. Continued implementation of the sustainability framework.

Analysis

Background

Corporately, the Green Fleet Action Plan is a component of the Corporate Energy and GHG Reduction Program identified in the City's Sustainability Framework that addresses all greenhouse gas emissions and energy use from City operations. Fleet and building related emissions account for the vast majority of corporate GHG emissions, and the reduction of fossil fuel use aligns with broader City targets relating to greenhouse gas reduction.

Key challenges in reducing corporate fleet emissions result from managing growing service demands due to population/infrastructure growth, and the dynamic nature of the City's fleet. To perform various service level functions, the City's fleet is made up of non-traditional units such as grass cutting equipment, street sweepers, snow plow equipment, excavating equipment, and trucks with specialized outfitting and supplementary power requirements for running auxiliary tools, etc. As detailed in

Figure 1: Richmond's GHG Emissions Reduction Target

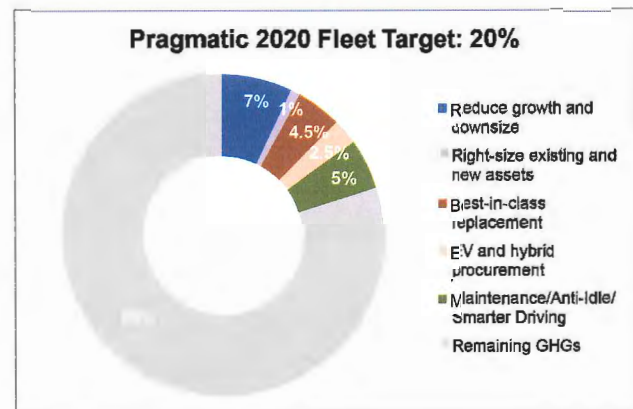


Figure 2: Fleet Assets by Mode

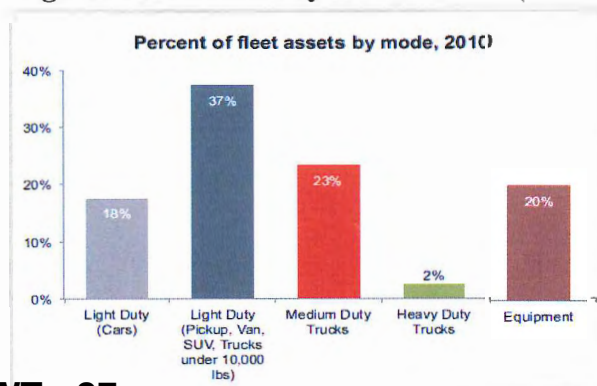


Figure 2, only 18% of the City's fleet are cars, whereas light, medium and heavy duty trucks and equipment make up 82% of the fleet.

Pursuing green technologies can prove challenging due to the dynamic nature of the City's fleet, the operational demands that are placed on the fleet to meet service levels (need for power to operate auxiliary equipment, etc.) and the limitations of green alternatives for service-type vehicles. This means that different approaches are required. These include gathering and analyzing accurate vehicle fuel and mileage data to help guide the decision making process around downsizing; selecting vehicles for replacement that generate greater emissions benefit; incorporating anti-idling education and technologies; training drivers on efficient-driving techniques; incorporating alternative fuels, etc. A summary of the actions identified in the Green Fleet Action Plan is included in Attachment 1.

Actions and Results to Date

The City has had a progressive approach over the years, through its Sustainable Green Fleet Policy (Policy 2020) and Green Fleet Action Plan, to implementing various strategies to reduce fleet emissions. These include best value replacements through our vehicle renewal program; acquisition of alternative fuel (hybrid, electric, etc.) vehicles; upgrading equipment to meet higher emission standards (i.e. Tier 3 or 4); reducing fleet growth (where possible); installation of LED lighting on vehicles with auxiliary batteries which negates the need to idle vehicles while lighting is in use; etc. Significant recent actions include:

1. Fuel Management System

This system is in operation at the City Works Yard and ensures fuel security for units fueled at this location. It was enhanced as of June, 2013 to provide robust fuel data for the City's vehicles to allow accurate monitoring of fuel consumption by vehicle, kilometres driven, and idle time. This data is integral to identifying high mileage and/or high idle times by vehicle in order to target specific improvement opportunities. The data capture system achieved through the City's fuel management system is very advanced when compared with other municipalities.

In total, City vehicles travel about 4 million kilometres per year (2.5 million miles). As part of our aging vehicle replacement strategy to replace vehicles with more fuel efficient units, fuel consumption data shows a 1.9% year-over-year reduction trend in litres of fuel consumed per 100 km driven:

June, 2013 – July, 2014: 25.32 L/100 km

June, 2014 – July, 2015: 24.84 L/100 km

= 1.9% reduction in litres of fuel consumed per 100 km

While it is recognized that there can be some variations in the data collected due to the large volume of fuel dispensed for City use, the data collected by the fuel system is integral to providing specific information from which to base targeted actions for fuel reduction. This downward trending is positive and indicative of the greater fuel efficiency of new/replacement vehicles as part of the vehicle replacement program.

2. *Vehicle Replacement Program*

The City has an active vehicle replacement program which targets aging, high fuel consumption units for replacement with those providing best value and meeting City policies. In addition, vehicles due for replacement are evaluated to determine whether they are suitable for downsizing or right-sizing opportunities. Operational needs and requirements are given priority consideration to ensure departmental service levels are adequately supported by the vehicles/equipment provided. Since 2011 approximately 189 fuel-based units were replaced (not including RFR). Of these, the majority were standard fuel efficiency replacements, a number were electric or alternative fuel, many were right-sized, and a few were new assets.

Table 1: Fuel Based Corporate Units Replaced: 2011 to 2015

Fuel Based Corporate Units Replaced – 2011 – 2015 (Summary of Green Fleet Action Plan Categories)						
	2011	2012	2013	2014	2015	Total
No. of Fuel-Based Units Replaced	18	66	28	49	28	189
Standard Fuel Efficiency	2	26	18	35	18	99
No. EV or Hybrid	4	8	1	1	2	16
No. Right Sized	5	5	3	7	1	21
No. New Assets	1	8	2	2	2	15
No. Downsized	4	0	0	0	4	8
Net New Fuel-Based Assets						7

As noted, overall the City's corporate fuelling fleet has grown slightly, or by 7 units since 2011. Efforts are made to minimize and reduce fleet size where possible, and measures are in place to ensure any growth is warranted to meet service levels. In addition, due to tangible capital assets reporting requirements, any other non-fuel assets over \$5,000 are documented as an asset in the City's fleet management system. The City's corporate fleet (excluding RFR) currently has 477 fuelling assets in its fleet and 118 non-fuelling assets, for a total of 595 units.

Figure 3: Annual Corporate City Fleet Asset Count (Excludes RFR Assets)

3. *Electric/High Fuel Efficient Vehicles*

The City has incorporated hybrid, electric and high fuel-efficiency vehicles into its fleet, including passenger vehicles and electric ice resurfacers at all ice arenas. The number of units has expanded to over 50 units in 2015, including:

- 3 Chevrolet Volts Extended Range Electric
- 3 Chevy Malibu Hybrids
- 26 Honda Hybrids
- 1 Saturn Vue Hybrid
- 9 Smart Cars
- 1 Toyota Camry Hybrid
- 1 Ford Fusion Hybrid
- 2 Toyota Prius Hybrids
- 1 Hybrid Freight Liner 5 Ton Truck
- 5 Olympia Electric Ice Resurfacers
- 1 Fully Electric Nissan Leaf

Photos of Hybrid and Electric Vehicle/Equipment



Nissan LEAF



Hybrid Freightliner Truck



Chevrolet Volt



Olympia Electric Ice Resurfacer

In addition, the City installed electric vehicle charging stations for corporate (Works Yard, City Hall Annex) and community use at City Hall, and at the Steveston, Cambie and Thompson Community Centres. The community/public charging stations were installed and activated on March 31, 2013, and use of these stations has increased nearly threefold in each of the last three years.

Total hours these stations were used grew from under 1,000 hours in 2013, to over 8,300 hours in 2015. A comparison of energy consumed vs. GHG savings based on data provided via the ChargePoint system (used for all City electric vehicle stations) is shown in Figure 4, which shows that GHG emissions savings grew from 1.8 tonnes in 2013 to over 15 tonnes in 2015.

Figure 4: Energy Consumed vs. GHG Emissions Savings

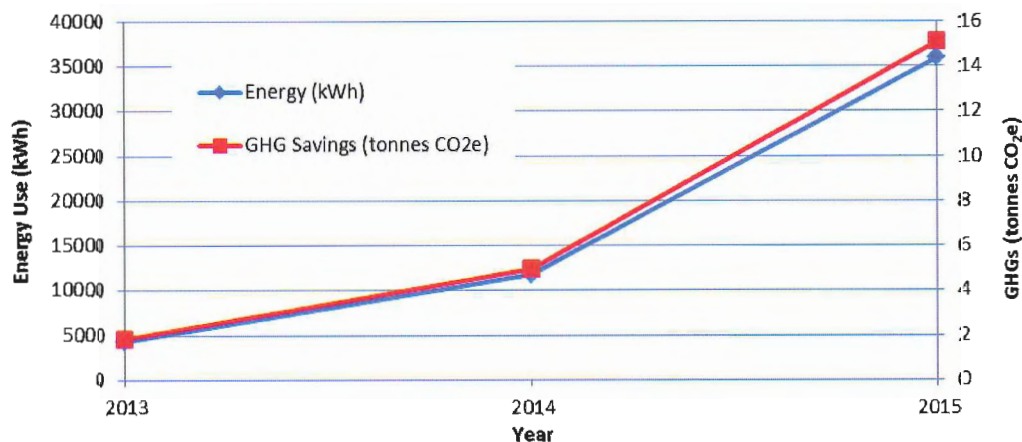


Table 2 shows a summary of station use in each of 2013, 2014 and 2015, and includes energy cost vs. fuel cost savings. For example, in 2015, the energy cost to the City associated with the public charging stations was \$3,590.43; however, the gasoline savings to users of those stations was equal to \$18,419.61.

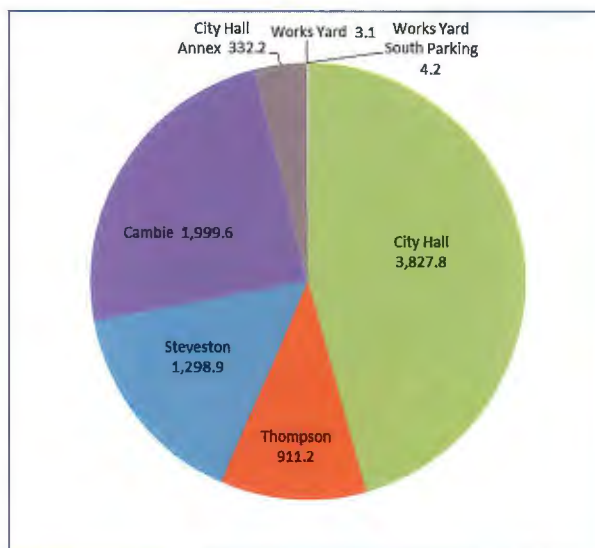
Table 2: Electric Vehicle Station Use – 2013 to 2015

	2013	2014	2015
Times Used (all stations)	776	1974	4599
Charging Time (all stations)	975.3 hours	2,609.4 hours	8,376.9 hours
Energy Used (all stations)	4,345.05 kWh	11,809.75 kWh	35,904.32 kWh
Energy Cost	At \$0.10 Per kWh energy cost was \$434.50	At \$0.10 Per kWh energy cost was \$1,180.97	At \$0.10 Per kWh energy cost was \$3,590.43
GHG Savings (all stations)	1.8 tonnes CO ₂ e	5.0 tonnes CO ₂ e	15.1 tonnes CO ₂ e
Gasoline Savings (all stations)	545.3 U.S. gallons	1,482.1 U.S. gallons	4,506.0 U.S. gallons
	2,064.0 L	5,609.8 L	17,055.2 L
Fuel Cost Savings	At \$1.30 per L, fuel cost savings was \$2,661.97	At \$1.25 per L, fuel cost savings was \$7,180.54	At \$1.08 per L, fuel cost savings was \$18,419.61

Details of Figure 3

The highest used station is City Hall, followed by the Cambie, Steveston, and Thompson community centres, as shown in Figure 5.

Figure 5: 2015 Electric Vehicle ChargePoint Usage
Charging Time by Station (hours)



4. *Implementation of Fleet Management System*

A dedicated fleet management system, FASTER, was installed in 2014 to track vehicle and equipment assets, as well as all related costs including repairs, fuel, insurance, etc. This system not only provides an important repository of vehicle/equipment asset information, but also allows for vehicle predictive preventative maintenance schedules to

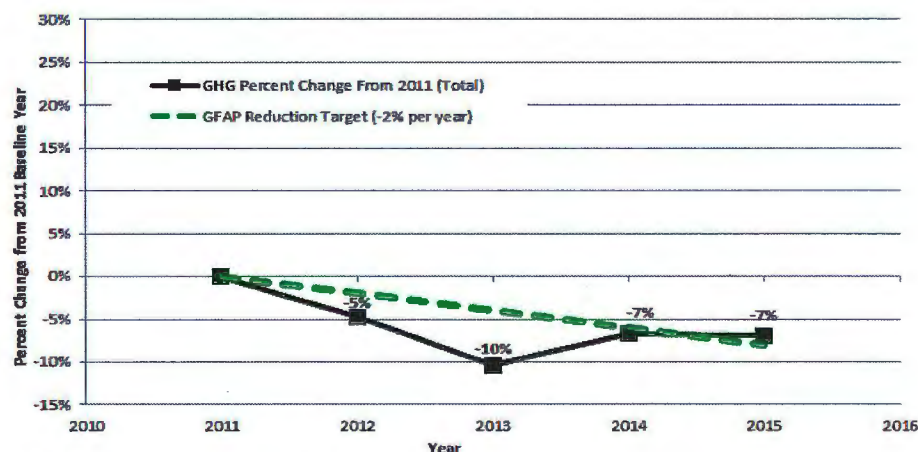
be maintained. This is important since well maintained vehicles run more efficiently and are more fuel efficient compared to when vehicles are repaired due to reactive maintenance (breakdowns). This also benefits operations by reducing downtime due to vehicle or equipment mechanical failures. Moving forward, this information will be able to be applied when purchasing replacements so that in addition to purchase price, maintenance, fuel, and downtime costs associated with vehicles as a whole are also considered. This information allows for more informed purchasing decisions to determine if a particular vehicle is worth the purchase, and not just the purchase price.

Impacts Results to Date

To measure the results of all of the City's actions and the overall impact on GHG emissions reduction, an assessment of performance versus established targets was undertaken, a reporting tool to measure progress moving forward was developed, and a future action plan was formulated. As part of this review, it is recommended that the baseline year be changed to 2011 in light of key structural differences in data gathering methods. In 2010, benchmark data was based on a top-down approach (purchase records) versus 2011 data which allows for more robust bottom-up reporting due to improvements in fuel usage reporting from the fuel management system. This analysis, therefore, compares to 2011 baseline data. Note that the fuel consumption excludes estimated construction-related activities in accordance with provincial reporting requirements.

Overall, the City has reduced emissions by approximately 7%. While positive, particularly in light of challenges in keeping pace with service level demands due to growing population trends, this reduction is slightly below our trend target of 2% per year, or 8% as of the end of 2015. The City's targeted vehicle replacement program has helped the City's corporate fleet reduce emissions by 11%. However, Fire fuel emissions have increased by nearly 27% over the five years due to various reasons (operational changes for equipment allocation to maintain coverage for all halls, increased community outreach activities, increased prevention activities, temporary fire hall relocations resulting in increased travel distances, increased call volumes, etc.).

Figure 6: City of Richmond GHGs Percentage from 2011 Baseline Year



Future Opportunities and Planned Actions

Continued progress and initiatives will be needed to not only advance toward the 20% target reduction by 2020, but also to manage emissions moving forward in light of continued population and greater demand for services. Key planned actions moving forward are listed.

1. Replace high km Vehicles with Hybrid or Electric Vehicles

Using the fuel management system to analyze highly used vehicles, a review of vehicle replacements and/or reallocations within the fleet will be undertaken to incorporate hybrid or electric vehicles. It is expected that by replacing eight to twelve high use vehicles with hybrid or electric units, the City would save 10-15 tonnes of GHG emissions per year.

Table 3 below is provided for information to show the cost of ownership (excluding maintenance) based on a traditional gasoline vehicle (Chevrolet Cruze) vs. a hybrid (Ford Fusion) vs. a fully electric vehicle (Nissan Leaf). This information is based on actual cost of vehicles as bid through a public tender process in the City's fleet and fuel performance. Note that this analysis does not factor in the cost to install the electric vehicle infrastructure for charging purposes.

Table 3: Actual Total Cost of Ownership Comparison: Gasoline, Hybrid and Electric Vehicles

	2011 Chevrolet Cruze Unit 1450	2016 Ford Fusion Hybrid Unit 1775	2012 Nissan LEAF Electric Unit 1621
City of Richmond Purchase price not including tax	\$17,945	\$27,191	\$35,720
Actual Fuel economy L/100KM	10.6 L/100 KM	5.8 L/100 KM	2.1 Le/100 KM
Fuel/Energy Used Per Year based on 15,000 KM Driven	1,590 Litres	870 Litres	2,343 kWh
GHG Emissions/Year	4.83 tonnes CO _{2e}	2.64 tonnes CO _{2e}	0.0225 tonnes CO _{2e}
GHG Emissions For 10 Years	48.3 tonnes CO _{2e}	26.4 tonnes CO _{2e}	0.225 tonnes CO _{2e}
Cost of Fuel/Electricity for 10 Years based on \$1.08/L for gasoline	\$17,172	\$9,396	\$2,343
Total Cost of Ownership Excluding Maintenance for 10 Years	\$35,117	\$36,587	\$38,063

2. Reduce Idling

A number of vehicles with high idling levels have been identified for review. By reducing idle times on these units, it is estimated that GHG emissions could be reduced

by 60-120 tonnes annually. These units will be reviewed directly with the operating departments they support for idle reduction through technology and/or driver education.

In addition, an anti-idling driver incentive program is being undertaken to promote and raise awareness generally about the benefits of reducing idling. This will include a slogan “You hold the key to be idle free” campaign, which will be used on promotional materials such as t-shirts and key chains to help raise awareness among staff. This campaign will also be promoted during the annual Public Works Open House.

3. *Driver Education*

Driver education can help reduce emissions by emphasizing smarter driving techniques and best practices for vehicle/equipment maintenance. It is estimated that 70-75 tonnes of emissions reduction per year could be achieved through smarter driving. A driver education program, which emphasizes the anti-idling message, smart driving strategies and the importance of vehicle care and maintenance, will all be emphasized as part of staff outreach presentations.

4. *GPS*

A pilot program for approximately 60 units will be undertaken in 2016 where GPS tracking is installed in identified City vehicles. The main purpose of the pilot will be to evaluate how routing efficiency can be maximized to help reduce driving times/trip lengths, etc. Depending on the success of this pilot initiative, the program could be expanded to additional units in future years.

5. *E3 Fleet Certification*

The City is currently undergoing a review of its fleet under the Fraser Basin Council’s E3 Fleet certification program. The E3 program rates fleets as bronze, silver, gold or platinum based on green fleet initiatives. This certification program evaluates a number of factors for fleets including policies, training, idling, purchasing practices, fuel data management, operations, maintenance, utilization, fuel efficiency and other related factors.

6. *Alternative Fuel Pilot*

Given the large make up of medium and light duty trucks in the City’s fleet, this represents a key group of vehicles to target for emissions reduction. A pilot is being considered to convert a small number of these trucks to propane fuel. Propane can reduce emissions by 26% when compared to gasoline.

A review of natural gas was undertaken, however, due to the high costs of vehicle conversions and fuelling infrastructure, it was found that the lack of financial return made the emissions reduction benefit not worthwhile for natural gas conversions. The propane pilot appears more promising due to lower conversion costs, and is still in the development stage.

7. *Car Sharing*

An expression of interest (EOI) has been issued to trial car sharing for City vehicles. Under this pilot, a car sharing vendor would be selected to provide a unit to replace a small number of City vehicles on a trial basis to assess the feasibility of downsizing City vehicles. The car share units would be available for City purposes exclusively during the work day, and available for other users/public after hours and on weekends. The EOI is currently being evaluated.

There is an administration component to this initiative due to the need to administer fob's, provide staff training, monitor invoices and assign charges, as well as related tasks. The resource implications for administering this program may require consideration as part of the pilot and for future potential broader scale implementation.

The above actions will form the basis of work over the next two to three years and is expected to help the City continue to advance fuel and GHG emissions reduction. Through these initiatives, it is expected that our target of 20% emissions reduction by 2020 will be met or exceeded.

Financial Impact

None. Vehicle replacements are funded via the Fleet reserve through annual capital budget submissions.

Conclusion

The City has established a Green Fleet Action Plan to guide initiatives designed to reduce GHG emissions as part of the City's broader corporate reduction program. This plan outlines a target to reduce GHG emissions by 2% per year over the next 10 years, or a total of 20% by 2020. As noted in this report, 2011 has been established as the new baseline year as part of improved data collection associated with the City's fuel management system.

Initial actions have resulted in positive emissions reduction to date, or overall 7%, while meeting the service level needs of a growing population. While this is slightly below target levels at this time (should be at 8% emissions reduction), future actions are planned to continue progress in reducing GHG emissions from the City's fleet intended to meet targeted reduction levels.



Suzanne Bycraft
Manager, Fleet & Environmental Programs
(604-233-3338)

Att. 1: Summary of Green Fleet Actions to Achieve 20% GHG Emissions Reduction by 2020

**Summary of Green Fleet Actions to Achieve 20% GHG Emissions Reduction by 2020
(Approved by Council October 28, 2013)**

The following is an overview of tactics identified for reducing GHG emissions and fuel consumption, including priority status and anticipated outcomes.

Actions that Support Slowing Growth of Fleet	Status	Impact Assessments
1. Reduce new growth in assets.	Priority	Eliminating new growth in assets could provide up to 16% reductions in fleet emissions, 2010 to 2020.
2. Consolidate and eliminate trips through information technology and route optimization. Report all route optimization programs in order to share learning.	Priority	Reduces vehicle kilometres travelled (VKT).
3. Increase employee public transit use for off-site meetings, or pay for taxis or use personal staff vehicle (with mileage reimbursement) when a passenger car with low VKT has been downsized out of fleet.	Priority	Support action for downsizing low use passenger vehicles.
4. Extend the Works Yard anti-idling to City Hall	Priority	Support Richmond's community-wide anti-idling initiative, demonstrating leadership.
5. Expand driver training to include anti-idling and smarter driver reminders.	Consider	Up to a 10% reduction in emissions from driving when combined with anti-idling and maintenance.
6. Develop a corporate car share program, e.g. with Modo.	Consider	Reduces the need for passenger cars in fleet, enabling downsizing and freeing resources for other service provisions.
7. Expand Sustainable Commute: offer staff transit passes as an employee benefit.	Consider	Demonstrates leadership, reduces community GHG emissions, and enhances employee satisfaction.

Maintenance and Management Monitoring and Reporting	Status	Impact Assessments
8. Right-size vehicles for best use on an annual basis.	Priority	Fuel cost savings are maximized when higher capital green fleet vehicles are assigned to users with the highest VKT. Passenger car fuel savings of up to 18% may be possible, with a targeted overall GHG reduction of 1%.
9. Systemize preventive vehicle maintenance with the new Faster Asset Management software.	Priority	Regularly schedule vehicle maintenance saves fuel, ensures worker safety and prolongs vehicle life. Use the Faster Asset Management software will ensure reduced vehicle downtime and ensure continued

Maintenance and Management Monitoring and Reporting	Status	Impact Assessments
		service excellence. Targeted GHGH reduction of 5%, including anti-idling and smarter driving.
Monitor and report on: 10. VKT annual 11. Sustainable Green Fleet Actions 12. Joining E3 Fleet Program	Priority	Supports right-sizing and downsizing of existing assets. Mandatory requirement for E3 Fleet review and rating.
13. Provide a monthly fuel use report to all departments using fleet vehicles.	Consider	Support departments in managing their use of fleet assets.
14. Integrate GHG measurement tools with asset management software.	In Progress	Assures monitoring and reporting of Fleet emissions performance.
15. Make fuel costs transparent to departments in their leasing rates.	Consider	Provides an incentive for departments to reduce fuel use.
16. Provide additional human resources to Fleet during current critical renewal period.	Consider	Ensure implementation of sustainable actions during current renewal cycle.

Efficient Resource Use	Status	Impact Assessments
17. Continue best-in-class fuel-efficient vehicle procurement, with a focus on light-duty trucks. Replace older, low-usage passenger cars with best-in-class compact vehicles.	Priority	Targeted overall GHG reduction of 4.5%.
18. Reduce idling through better vehicle technology: continue the replacement of truck, van, and SUV emergency lights with LEDs and auxiliary batteries; use solar panels where possible to run safety lights.	Priority	Support anti-idling program. By 2020, 100% of vehicles that idle to run emergency lights should be outfitted with LED lights and auxiliary batteries. Older trucks that cannot convert to auxiliary batteries will be retired.
19. Add GPS units to vehicles to aid the route optimization, best use of vehicles and data collection.	Priority	GPS units support improved fleet management and demand side management ensuring fuel and GHG reductions from other actions.

Alternative Fuels	Status	Impact Assessments
20. Purchase electric vehicle for high use cars. Procure hybrid light-duty trucks when possible.	Priority	Fully electric vehicles have zero tailpipe emissions. Up to 5% additional modeled reductions in fleet emissions with high rates of electric vehicles and hybrid adoption in light-duty vehicles including trucks. Targeted overall GHG reduction of 2.5%
21. Monitor emerging technologies in plug-in hybrid trucks, and adopt plug-in purchasing	Consider	Aim to have 10% light-duty truck procurements plug-in hybrid or electric vehicles by 2017.

Alternative Fuels	Status	Impact Assessments
<p>policies for light-duty trucks as soon as the technology is market-ready.</p>		
<p>22. Pursue procurement of diesel-electric hybrids for medium and heavy-duty trucks and buses as the technology matures and become market-ready.</p>	Consider	No cost to monitor and assess.
<p>23. Monitor and assess emerging technologies, particularly compressed natural gas vehicles. Depending on trends, pursue a feasibility study for establishing an alternative vehicles program that would shift medium and heavy-duty vehicles to compressed natural gas.</p>	Consider	GHG reductions from natural gas vehicles may be as high as 25%, but depend on vehicle type and driving cycle. Full life cycle emissions are also impacted by upstream production and distribution emissions.
<p>24. Monitor the advances in biodiesel fuels and consider switching to a higher biodiesel blend when full lifecycle emissions reductions are assured.</p>	Consider	The GHG benefit of biodiesel is in the full lifecycle of the fuel, with estimated savings of 18% for biodiesel 20.



City of Richmond

Report to Committee

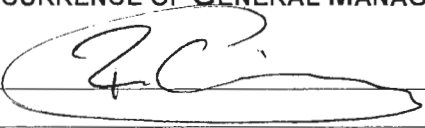

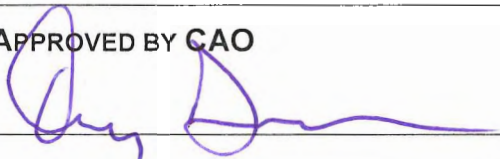
To: Public Works and Transportation Committee **Date:** March 30, 2016
From: Suzanne Bycraft
Manager, Fleet and Environmental Programs **File:** 10-6370-01/2016-Vol 01
Re: **Report 2015: Recycling and Solid Waste Management – Applying Best Practices to Achieve Goals**

Staff Recommendation

That the annual report titled, “Report 2015: Recycling and Solid Waste Management – Applying Best Practices to Achieve Goals” dated March 30, 2016, from the Director, Public Works Operations, be endorsed and made available to the community through the City’s website and through various communication tools including social media channels and as part of community outreach initiatives.

Tom Stewart, AScT.
Director, Public Works Operations
(604-233-3301)

Att. 1

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 
APPROVED BY CAO 	

Staff Report

Origin

The City successfully achieved its goal to divert 70% of waste in 2013, two years ahead of the regional goal identified in the Integrated Solid Waste and Resource Management Plan (ISWRMP). The City is now working toward the next ISWRMP target to reach 80% waste diversion by 2020. As well, the City's vision for sustainability includes a key goal to be a Recycling Smart City.

To achieve its goals, the City continuously strives for ways to improve and expand its waste reduction and recycling programs, and works with residents and community partners. These programs and services are further supported by a range of communication and outreach programs to ensure residents are aware of the services available and understand how to access and use these services effectively. "Report 2015: Recycling and Solid Waste Management – Applying Best Practices to Achieve Goals" (the Report) presents the City's annual progress update (Attachment 1). The Report summarizes Richmond's comprehensive programs, highlights results achieved in 2015, provides insights into upcoming initiatives, and includes tips and resources to support recycling and sustainable waste management.

This report supports Council's Term Goal #8 Sustainability:

8.1: Continued implementation and significant progress towards achieving the City's Sustainability Framework, and associated targets. A key component of the sustainability framework is the Solid Waste Strategic Program within the goal area of Sustainable Resource Use, and

8.3. Communicate to the public the City's Sustainability goals with details on how the City is meeting (or exceeding) these goals and how they support Provincial goals.

Analysis

The Report highlights Richmond's focus on continuous improvement through expanded programs, service enhancements and a commitment to outreach and customer service excellence. Key accomplishments in 2015 include:

- Achieved 74% waste diversion from single-family homes.
- Expanded the Green Cart program to include approximately 27,000 residents in multi-family complexes. In just nine months residents recycled more than 1,360 tonnes of food scraps.
- Received the Gold Quill Award of Excellence from the International Association of Business Communicators for the City's Green Cart communication campaign.
- Approved and initiated the biweekly Garbage Cart program for single-family homes and townhomes to increase recycling and waste diversion.
- Completed a pilot program and consultation with the building industry to develop a proposed bylaw approach to increase recycling of demolition materials.

- Organized DreamRider theatrical shows, including Zero Heroes and Clean Up Your Act at 24 elementary schools.
- Hosted recycling stations at events and achieved more than 80% waste diversion at Ships to Shore, Salmon Fest, World Fest and Maritime Festival. Approximately 150 Green Ambassadors contributed over 3,650 hours at events to help promote recycling.
- Expanded the City's internal recycling program to include food scraps collection and a wider range of plastic packaging materials at City facilities along with a staff education campaign to support increased recycling.
- Enhanced signage and made site improvements at the Recycling Depot to improve awareness of how and where to recycle drop-off materials, and introduced traffic counters to measure public use.
- Made garbage and recycling collection programs available for commercial businesses on a trial basis.
- Assisted with more than 14,000 customer service inquiries from residents concerning garbage and recycling collection services.
- Made centralized garbage service available to multi-family residents on an application basis.
- Serviced approximately 70,000 visits to the Works Yard Recycling Depot from July, 2015 to December, 2015.

Report 2015 Overview

The 2015 Report contains four chapters. The first three chapters summarize outcomes and accomplishments in the past year, provide data to report on progress related to current waste management and recycling services, and highlight the variety of public education/community outreach programs delivered across the city. The final chapter in the Report is a comprehensive tips and resources section. The Report content features information to raise awareness about how recycled materials are used as a new resource, and tips for residents to help them connect with City and product stewardship programs for disposing of a variety of items.

A summary overview of each chapter follows.

Chapter 1: Annual Outlook – Applying Best Practices to Achieve Goals highlights the City's focus on continuous improvement and the application of best practices to expand and enhance services in 2015. The Annual Outlook features the achievements from the past year, including the expansion of the Green Cart program to include all Richmond residents based on the award-winning Green Cart program for curbside collection, which was honoured with an international Gold Quill Award of Excellence in 2015. The City also approved the framework for a new, biweekly Garbage Cart program (to be introduced in 2016), and progressed towards expanded recycling for demolition materials and launched an enhanced staff recycling program at City facilities. This section also provides a brief summary of the new initiatives and service targets for the upcoming year.

Chapter 2: Programs and Services – Expanding Services to Make Recycling Easy and Convenient describes the City's comprehensive recycling and waste reduction initiatives and highlights how each program contributes to overall diversion targets and sustainability goals.

Details on the quantities collected through programs such as Blue Box, Blue Cart, the Recycling Depot, Yard Trimmings Drop Off, Green Cart, the expanded Multi-family Green Cart service and litter collection services are provided. This section also includes details on the City's Large Item Pick Up Program, and the major categories of items collected through this program. The City's Large Item Pick Up program continued to grow with 13,699 items collected in 2015 – compared to 11,679 in 2014, an increase of more than 2,000 items. In addition, this section outlines the measures the City takes to promote recycling space in commercial and multi-family buildings.

Chapter 3: Outreach and Customer Service – Supporting Awareness and Education presents the City's commitment to support waste reduction and reuse by providing residents information and education through workshops and displays, and through programs to support event recycling. Our extensive public education and community outreach initiatives aim to raise awareness and foster sustainable behaviours where recycling and waste reduction practices become a way of life. Free workshops on composting, waste reduction, eco-cleaning, reuse and more are offered throughout the year, as are outreach displays at various events and in local shopping centres. City staff partnered with the Richmond School District to engage approximately 4,440 elementary school students to promote sustainable stewardship behaviours. They learn about how to recycle and reduce litter, and then they practice those skills through school contests. City staff members also mentored approximately 150 high school Green Ambassadors by hosting information-sharing meetings and coordinating these volunteers as they assist with public spaces recycling centres at community events.

Chapter 4: Tips and Resources – Easy Steps to Increase Recycling and Reduce Waste provides a comprehensive guide to recycling. It includes specific information on how and what to recycle in the City's Blue Box, Blue Cart, Large Item Pick Up and Green Cart programs. There is information on how to compost at home, the items accepted for recycling at Richmond's Recycling Depot, and what to do with many household items ranging from medication to recyclable mattresses. In 2015, over 3,600 tonnes of recyclable materials were collected at the Recycling Depot. In addition, traffic counters were installed as of July, 2015. The total traffic count from that time through December, 2015 was 68,474 visits. On average, there are over 500 visits per day made to the Recycling Depot. This is an area of continuous growth based on increasing population, which is leading to the need to review resource funding levels at the Recycling Depot to ensure existing service levels can be maintained.

The resources section also includes information on what to do with special waste items and banned materials, including recycling and disposal options through take-back programs. There is also contact information and locations for Richmond services and community partners involved in stewardship programs.

Moving Forward

As the City continues to grow and expand our services to further advance toward 80% waste diversion for all residents, key focus areas in 2016 will include:

1. Implement a biweekly garbage cart collection program for single-family and townhomes to encourage greater waste diversion.

2. Develop a donation bin location and placement bylaw for City property.
3. Introduce a bylaw to require 70% waste diversion from single-family home demolitions.
4. Expand range of materials for recycling in public spaces to align with residential Blue Box and Blue Cart programs, as well as enhance the container replacement and maintenance program, including updated signage.
5. Increase awareness of the expanded range of materials accepted in the Blue Box and Blue Cart recycling programs, including correct recycling practices under the MMBC partnership, to surpass the existing 74% waste diversion rate.
6. Continue public engagement through workshops, delivering 20 theatrical shows at schools, and supporting the 5th annual REaDY Summit.
7. Introduce a free, Richmond Collection Schedule app available for download at the iPhone and Android app stores, along with a Recycling Wizard widget, which will be available with the app and online at www.richmond.ca/recycle, to help find recycling locations.

Proposed Communication

Subject to Council's approval, the annual "Report 2015: Applying Best Practices to Achieve Goals" will be posted on the City's website and made available through various communication tools including social media channels and as part of community outreach initiatives.

Financial Impact

None. Programs related to solid waste that impact service levels are brought to Council for review and consideration throughout the year.

Conclusion

Through the annual "Report 2015: Recycling and Solid Waste Management – Applying Best Practices to Achieve Goals", the City is providing its residents with a progress report on the many recycling and waste management programs and activities delivered in the community. The Report also serves as a comprehensive resource and guide that supports recycling, reuse and reduction activities throughout the year. By tracking progress towards its goals for waste diversion and reporting this to the community, the City is demonstrating Richmond's commitment to responsive services, responsible government and accessible information and communication.

It is through residents' participation and commitment to recycling that those living in single-family homes have achieved 74% waste diversion in 2015. Future years will see continued efforts to increase recycling by residents in multi-family homes, and to assist residents in recycling in the correct bins to reduce contamination as part of helping all residents work toward achieving the 80% waste diversion target by 2020.

March 30, 2016

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A handwritten signature in black ink, appearing to read 'S. Bycraft', with a long horizontal flourish extending to the right.

Suzanne Bycraft
Manager, Fleet & Environmental Programs
(604-233-3338)

Att. 1 City of Richmond Report 2015: Recycling and Solid Waste Management – Applying Best Practices to Achieve Goals



APPLYING BEST PRACTICES TO ACHIEVE GOALS

Let's trim our waste!



**LET'S
TRIM
OUR
WASTE!**

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2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

ANNUAL OUTLOOK

APPLYING BEST PRACTICES TO ACHIEVE GOALS

With the goal to reduce garbage by 70% by 2015 already surpassed, the City of Richmond is now focused on the next target to divert 80% of waste from the landfill by 2020. Achieving this next 10% will be extremely challenging, and in response, the City has already initiated program changes and service expansions to help increase recycling and reduce waste. The City is basing several of its new initiatives on best practices and proven successes in other programs.

One of the primary new initiatives in 2015 involved the expansion of the City's Green Cart program to include apartments and multi-family complexes with central collection areas. The City's goal was to ensure its residents had access to food scraps recycling before the new regional ban on food scraps in the garbage was enforced. With the expanded Green Cart program in place, all Richmond residents now have access to this convenient organics recycling program. As part of providing Green Cart service for centralized collection, the City hosted 400 information sessions at multi-family housing sites to provide residents with instruction on how to use the Green Cart and other recycling programs, and to emphasize the importance of keeping recyclables out of the garbage. With this new program, 27,000 homes in multi-family housing sites now have convenient access to recycling for organics and food scraps. The communication and outreach program also included information kits and signage to help promote food scraps recycling.

The communication materials used to support the roll out of this expanded Green Cart program were based on the award-winning Green Cart communication campaign, which was recognized with a Gold Quill Award of Excellence from the International Association of Business Communicators (IABC). The international Gold Quill Award is IABC's premier program recognizing and fostering excellence in the field of business communication – the only awards program that honors the dedication, innovation and passion of communicators on a global scale. The City will continue to apply these best practices in communication and service delivery to promote recycling and responsible waste management.

As part of continuous improvement that focuses on encouraging recycling while maintaining a high level of service, Richmond initiated a Biweekly Garbage Cart Pilot Program and used the results of the program to assess options for the City's curbside garbage collection service. A new, biweekly Garbage Cart program was proposed for Council's consideration based on input from residents in the pilot program, such as preferred cart sizes and experiences with weekly and biweekly collection, as well as data related to the amount of garbage and recycling under weekly versus biweekly collection. The most notable improvement in recycling and reduction of garbage was in the biweekly collection group. Biweekly garbage collection had also been implemented with success in other communities in the region. Based on the improved recycling performance and reduced amount of garbage stemming from the pilot program and reports from other communities, City Council approved the new Garbage Cart program to support the City, and the Metro Vancouver regional goals to reduce garbage by 80% by 2020. The new program was announced in June, and residents had the opportunity to reduce their curbside garbage collection fees by selecting their preferred cart size as part of the launch of the new program. The program is being rolled out in early 2016.

With the Garbage Cart program approved and underway, and the expansion of the Green Cart program to centralized collection complexes complete, the City looked to other service improvement opportunities. The Green Cart expansion highlighted opportunities to provide multi-family complexes with City Garbage Cart service as well as cardboard recycling service, and these two programs were developed and are now offered to multi-family complexes on an application basis. The City also updated its signage at the Richmond Recycling Depot to provide clear, consistent signage to assist residents.

The City also identified an opportunity to significantly reduce waste going to the landfill as part of demolition projects by requiring recycling at demolition sites. Demolition, land-clearing and construction (DLC) waste accounts for 30% of total waste disposed in the region, and about 70,000 tonnes of that waste originates in Richmond. As well, it was noted that while larger projects have demolition recycling practices in place, this is not being done for single-family home demolition.

CITY OF RICHMOND

Demonstrating leadership through expanded staff recycling program.

Recycling of demolition materials is an action item in the Integrated Solid Waste and Resource Management Plan (ISWRMP), which is endorsed by the City of Richmond, and Metro Vancouver developed a model for a suggested bylaw approach to help regulate this recycling to support achieving its goal for 80% waste diversion by 2020. Starting in 2014, Richmond used this model bylaw to consult with the Richmond's Small Builders Group, and initiated a pilot project to compare current practices against a varying range of options for increased demolition recycling.

After considering the results of the pilot program and receiving input from the Small Builders Group, Richmond developed its own bylaw as a recommendation for Council. Richmond's approach involves establishing a stretch target of 70% waste diversion, which would be increased to 80% over time as industry practices mature. Builders would pay an upfront, non-refundable fee (to cover additional administration costs) as part of their demolition permit for single-family/duplex home demolitions, plus a fee which is 100% refundable if the 70% waste diversion target is achieved. Council is reviewing this proposed approach in 2016.

From an internal perspective, the City built on its leadership in recycling and sustainable waste management by creating and implementing an expanded staff recycling program. The program provides for food scraps recycling in all City buildings. To support the new program, the City worked with recycling champions in the various departments to create a program that addressed challenges with recycling in the workplace, and involved a communication package to help all staff understand how and where to recycle.

Looking ahead to 2016, the City will be monitoring the success of its new and expanded programs to explore opportunities to continue to improve its programs and services. The goal is to ensure programs remain convenient, while making it easy for residents to recycle and reduce their waste.

THREE EASY STEPS

Richmond can achieve its targets with the help of community commitment to these three easy steps to reduce waste:



2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

OUR TOP ACCOMPLISHMENTS IN 2015

The following are some of the key accomplishments in 2015:

MULTI-FAMILY GREEN CART PROGRAM

Expanded the Green Cart program to include approximately 27,000 units in multi-family complexes. In just nine months, residents recycled over 1,600 tonnes of food scraps, helping these residents comply with regional disposal bans.

EVENT RECYCLING

Hosted recycling stations at events and achieved more than 80% waste diversion at Ships to Shore, Salmon Fest, World Fest and Maritime Festival. Approximately 150 Green Ambassadors contributed over 3,650 hours at events to help promote recycling.

AWARDS OF EXCELLENCE

Received the Gold Quill Award of Excellence from the International Association of Business Communicators for the City's Green Cart communication campaign.

RICHMOND STAFF RECYCLING

Expanded the City's internal recycling program to include food scraps collection at City facilities along with a staff education campaign to support increased recycling.

DEMOLITION & CONSTRUCTION WASTE

Completed a pilot program and consultation with the building industry to develop a proposed bylaw approach to increase recycling of demolition and construction waste.

RICHMOND RECYCLING DEPOT

Enhanced signage and made site improvements at the Richmond Recycling Depot to increase awareness of how and where to recycle drop-off materials, and introduced traffic counters to measure public use.

STUDENT & COMMUNITY ENGAGEMENT

Organized DreamRider theatrical shows, including Zero Heroes and Clean Up Your Act at 24 elementary schools.

COMMERCIAL SERVICES

Made garbage and recycling collection programs available for commercial businesses on a trial basis.

EXPANDED MULTI-FAMILY SERVICES

Made centralized garbage and cardboard recycling service available to multi-family residents on an application basis.

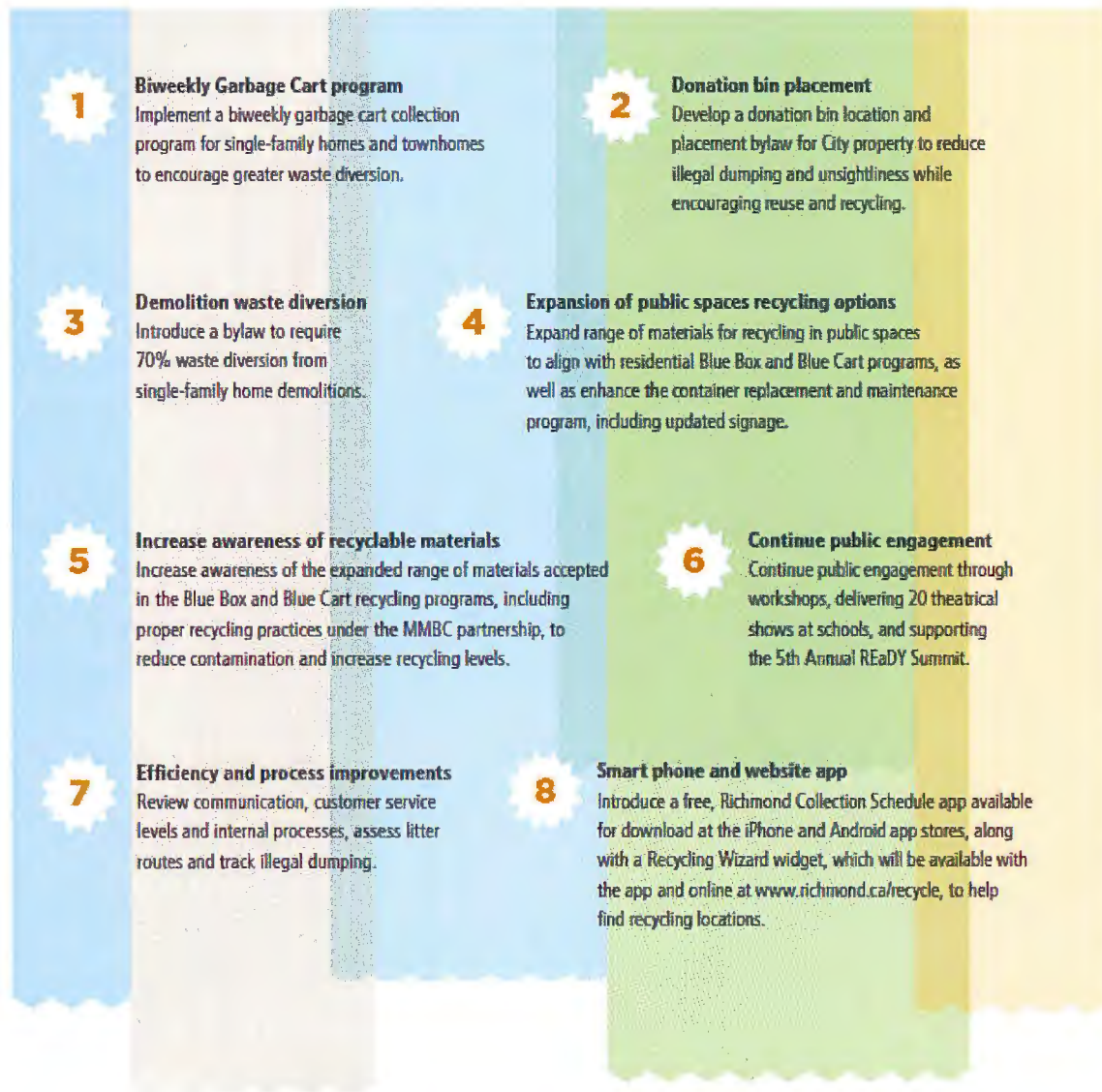
CUSTOMER SERVICE

Assisted with more than 14,000 customer service inquiries from residents concerning garbage and recycling collection services.

CITY OF RICHMOND

OUR GOALS

Richmond has set its long-term goal to be a Recycling Smart City and has established annual goals to help achieve this target. Each goal is designed to provide easy and convenient services for residents, along with creating opportunities for innovation, partnership and continuous improvement.





THANK YOU TO RICHMOND RESIDENTS

In 2015, Richmond residents continued to reduce their waste, recycle consistently and provide the City with important information to help ensure steady progress towards its goals to be a Recycling Smart City. In multi-family complexes with centralized collection, residents participated in information sessions, shared their priorities and concerns about how to recycle effectively and took the initiative to begin using the new Green Cart service provided by the City. Based on input from a group of residents in the Garbage Cart Pilot Program, the City developed a new biweekly Garbage Cart program, which was approved by Council in the spring. In the fall, residents participated in the cart size selection process to help ensure the cart for their home is the right size for their needs, while also benefiting from the opportunity to reduce their curbside garbage collection fees by selecting a smaller cart size.

As well, residents continue to recycle regularly with their Blue Box/Blue Cart program, Green Cart, the City's Large Item Pick Up program and the free drop off services available at the Richmond Recycling Depot.

Many thanks go to all Richmond residents for their efforts to reduce their waste, increase their recycling and leverage the many programs and services available to them in the community. Working together with residents, Richmond will continue to progress towards its new target to reduce garbage by 80% by 2020.

DID YOU KNOW?

Food scraps and other recyclable materials like paper, plastic containers, glass bottles, jars and aluminium cans are banned from the garbage. These materials can all be recycled using the City's convenient recycling programs.

CITY OF RICHMOND

2

**CONVENIENT,
HIGH QUALITY
AND RELIABLE
SERVICES**

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2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

PROGRAMS AND SERVICES

EXPANDING SERVICES TO MAKE RECYCLING EASY AND CONVENIENT

Richmond residents in single-family homes are now diverting 74% 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 opportunities for residents to recycle by creating new and enhanced programs such as Green Cart and Blue Box/Blue Cart for recycling at home, and Richmond's Go!Recycle bins when on the go in the community. Residents can also drop off a growing list of recyclable items at the City's Recycling Depot and other drop-off facilities.

Richmond works with residents, industry partners, product stewardship groups and businesses to achieve its goal to be a Recycling Smart City and implement sustainable waste management. Through partnerships and community engagement, Richmond's commitment to continuous improvement results in enhanced services to benefit residents.



Residents in single-family homes are now diverting 74% of their waste.

CITY OF RICHMOND



RICHMOND RECYCLING AND WASTE MANAGEMENT

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

BLUE BOX

Weekly curbside collection for recycling paper and newsprint, glass, plastic containers, empty aerosol cans, milk cartons, plastic/paper drink cups, spiral wound containers, and tin and aluminium containers. This program is provided to more than 40,300 residential units in single-family homes and townhomes. For details, see page 32.

BLUE CART

Weekly recycling collection for paper and newsprint, glass, plastic containers, aerosol cans, milk cartons, plastic/paper drink cups, spiral wound containers and tin and aluminium containers. This program is provided to more than 31,900 multi-family units. For details, see page 34.

GREEN CART

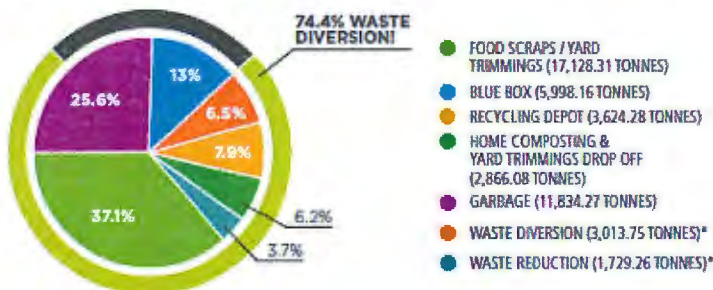
Collection for recycling foods scraps and yard trimmings. This program is provided to residents in single-family homes and townhomes as well as multi-family complexes. For details, see page 36.

RECYCLING DEPOT

Drop-off service for 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 Depot also sells compost bins, rain barrels, Garbage Tags and Garbage Disposal Vouchers for use at the Vancouver Landfill. For details, see page 40.



SINGLE-FAMILY RECYCLING



Residents in single-family homes recycled or reduced 34,359.84 tonnes in 2015 – 74.4% of total estimated waste generated – through a number of recycling and waste reduction opportunities, including curbside and Recycling Depot collection, as well as composting programs.

* Estimated

GO! RECYCLE PUBLIC SPACES AND EVENT RECYCLING

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.

COMPOSTING AT HOME

Support for residential composting includes the sale of compost bins, a composting demonstration garden and related workshops. These services are available to all residents. For details, see page 37.

CURBSIDE GARBAGE COLLECTION

Curbside 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. For details, see page 38.

EXTRA GARBAGE DISPOSAL

Garbage disposal tags and vouchers for the Vancouver Landfill provide options for residents when they need to dispose of additional garbage or large items. For details, see page 38.

LARGE ITEM PICK-UP PROGRAM

Residents in single-family homes, some townhomes and some multi-family complexes can arrange for collection of four large household items per year. For details, see page 39.

COMMUNITY AND SCHOOL ENGAGEMENT

Through partnerships with students, teachers and the School District, Richmond sponsors educational shows, awareness programs and volunteer opportunities to increase understanding of recycling and the benefits of reducing waste. For details see the Outreach and Customer Service section on page 25.

DID YOU KNOW?

Plastic takes one million years to break down in a landfill, whereas recycled plastic can be used to make bottles, clothing, carpet, picnic tables, drainage pipes, bags, trash cans, paneling, flower pots and pallets.



RESIDENTIAL RECYCLING PROGRAMS

With weekly collection services, drop-off programs, public spaces recycling and community take back programs, it's easy and convenient to recycle in Richmond. Richmond offers residents a range of services to support recycling at home and on the go.

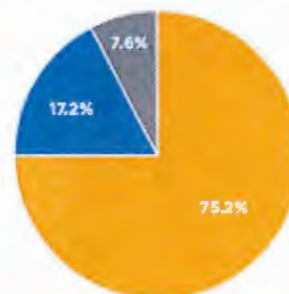
BLUE BOX RECYCLING PROGRAM

The Blue Box Recycling program provides convenient collection services in the community. Residents in single-family homes and some townhome complexes use the City's Blue Box program to recycle newspaper, paper products and cardboard along with tin, aluminium, glass bottles and jars, and plastic containers. More than 40,300 residential units are serviced with weekly collection under this program.

In 2015, more than 6,727 tonnes of materials were recycled in the Blue Box program. Of this, 75.2% was mixed paper, 7.6% was glass jars and bottles and 17.2% was co-mingled containers.

Items that can be recycled through this program are listed in the Tips and Resources section of this publication and at www.richmond.ca/recycle.

2015 BLUE BOX RECYCLING MIX



- MIXED PAPER (5,057 TONNES)
- GLASS (519 TONNES)
- CONTAINERS (1,160 TONNES)

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BLUE CART RECYCLING PROGRAM

People who live in multi-family complexes can recycle the same products as residents who use the Blue Box program through the City's Blue Cart recycling program. The City provides recycling carts for a mini-recycling depot at each complex, which is generally located in the recycling enclosure or other convenient location. This service is currently available to over 31,900 multi-family units, and the City has information tools such as Blue Cart decals, posters and brochures that are offered to stratas and property managers to help raise awareness and increase participation.

In 2015, more than 2,034 tonnes of materials were recycled through the Blue Cart recycling program.

It is important to recycle using the correct carts. For a detailed list of items that can be recycled through the Blue Cart recycling program, see the Tips and Resources section or visit www.richmond.ca/recycle.

**TIP FOR RESIDENTS**

Residents in single-family homes and some townhomes can pick up complimentary Blue Box supplies at the Richmond Recycling Depot and City Hall.

Residents in multi-family complexes with Blue Cart service can pick up an indoor collection bag at Richmond Recycling Depot or phone the Environmental Programs Information Line at 604-276-4010.



2,034.81 TONNES **6,727.11 TONNES**

**= 8,761.92 TONNES
RECYCLED IN 2014**

CITY OF RICHMOND



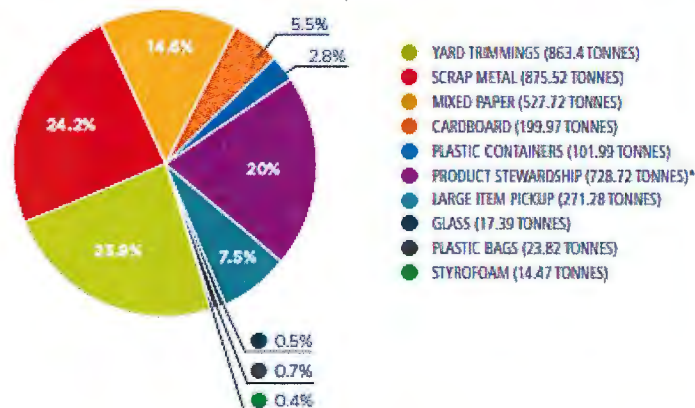
RECYCLING DEPOT PROGRAM

The Richmond Recycling Depot is located at 5555 Lynas Lane and is open from 9:00 a.m. – 6:15 p.m., Wednesday to Sunday for drop off of a broad range of materials. The Depot also sells compost bins, rain barrels, Garbage Tags and Garbage Disposal Vouchers. The Richmond Recycling Depot is a product stewardship (take back) collection site for small appliances, paints, solvents, flammable liquids, pesticides, lights and lighting fixtures.

RECYCLING DEPOT SERVICES

This facility accepts a wide range of materials including cardboard, yard and garden trimmings, mixed paper and newspapers, and now also accepts Styrofoam, used books, cell phones, household batteries and plastic bags. The facility also accepts large appliances (e.g. fridges, stoves, washing machines), metal items (e.g. bike frames, barbecues, lawn mowers), glass bottles, jars, tin and aluminium cans, paints, pesticides and solvents. For a detailed list of items see page 41. The Recycling Depot is owned and operated by the City of Richmond, with two full-time staff and additional staff support in the summer months to manage increased recycling volumes. Staff on site are available to answer questions and provide assistance with unloading awkward or heavy items.

DEPOT RECYCLING: BREAKDOWN OF MATERIALS COLLECTED IN 2015



TOTAL TONNAGE = 3,624.28

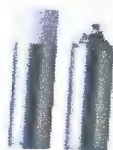
In 2015, 3,624.28 tonnes of recyclable materials were collected at the Recycling Depot. This includes yard trimmings, scrap metal, mixed paper products and rigid plastic containers. For more information on drop-off programs for yard trimmings, see page 17.

* Estimated

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DEPOT RECYCLING: MATERIALS AND AMOUNTS COLLECTED THROUGH TAKE BACK PROGRAMS IN 2015**PAINT**

232,848 EQUIVALENT LITRES

**AEROSOLS**

2,975 EQUIVALENT LITRES

**SOLVENTS & PESTICIDES**

16,416 EQUIVALENT LITRES

**SMALL APPLIANCES**

53.21 TONNES

**CFLS**

277 BOXES

**4' TUBES**

352 BOXES

8' TUBES

47 BOXES

**FOR SALE AT THE RECYCLING DEPOT**

Residents can purchase the following items from the Depot:

- Compost bins - \$25 each
- Rain barrels - \$30 each
- Extra Garbage Tags - \$2 each
- Garbage Disposal Vouchers - \$5 each for Richmond residents and it is worth \$25 at the Vancouver Landfill

RECYCLE AT THE DEPOT

Richmond's free drop-off program includes:

- Styrofoam;
- Batteries (household batteries 5 kg or under);
- Cell phones;
- Used books;
- Plastic bags and plastic overwrap;
- Large and small appliances;
- Scrap metal; and
- Yard and garden trimmings

For a full list of items that can be recycled at the Recycling Depot, see page 41.

Fats, oils and grease should never be disposed down sinks, drains or garburators as the material hardens and builds up on the inside of sewage lines, causing blockages. This can lead to breaks and sewage spills or overflows. Recycle food scraps and grease in your Green Cart, and take used cooking oils and liquid fats in a sealed container to the Richmond Recycling Depot (5555 Lynas Lane, open Wednesday to Sunday from 9:00 a.m. to 6:15 p.m.) for free disposal.

CITY OF RICHMOND



Terra Nova Rural Park



COMPOSTING PROGRAMS

Composting is a simple and organic process that can reduce household waste by up to 40%—significantly reducing the amount of waste that goes to the landfill. Fruit and vegetable peelings, along with grass, leaves and other yard trimmings, can be added to a compost bin. In addition, composted matter produces a very nutrient-rich soil to keep lawns and gardens healthy.

BACKYARD COMPOST BIN DISTRIBUTION PROGRAM

The City of Richmond supports composting by providing free composting workshops from January to November, which include information on backyard and worm composting and how to harvest compost. The City offers compost bins for sale at the Recycling Depot for \$25 each. Backyard composting is the most effective way to dispose of fruit and vegetable peelings, eggshells, coffee grounds, filters, tea bags and yard trimming materials. Since this program started in 1992, 10,676 compost bins have been distributed.

Additional tips and information on composting are provided in the Tips and Resources section and at www.richmond.ca/recycle.

COMPOST DEMONSTRATION GARDEN

To help residents learn about backyard composting, the City offers a Compost Demonstration area in the Terra Nova Rural Park located at 2631 Westminster Highway just west of No.1 Road. It is open from dawn to dusk year-round, and is supplemented by workshops. Residents are encouraged to take a self-guided tour to learn about different types of compost bins and the benefits of composting.



The Compost Hotline at 604-736-2250 offers tips and advice on how to compost and use the nutrient-rich soil produced for home gardens. Compost from yard trimmings drop-off programs and through the Green Cart collection programs are sold for use in the landscaping industry.

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Richmond residents are generating their own compost to enrich their garden soil. With 10,676 bins sold, home composting is an excellent way to help keep recyclable organic materials out of the garbage.

YARD TRIMMINGS DROP-OFF PROGRAMS

ECOWASTE INDUSTRIES

The City offers residents the option to drop off unlimited quantities of yard and garden trimmings for free at Ecowaste Industries located at 15111 Triangle Road. Proof of Richmond residency is required. Commercial landscapers servicing residential properties are also eligible for free drop-off. They must apply for this exemption.

Visit ecowaste.com or call 604-277-1410 for hours of operation and directions.

RICHMOND RECYCLING DEPOT

Residents may drop off limited quantities of yard and garden trimmings (up to 1 cubic yard) at the Richmond Recycling Depot. A fee of \$20 applies for each additional cubic yard. Commercial operators may also use the Recycling Depot to drop off yard trimmings for a fee of \$20 per cubic yard. The Recycling Depot is located at 5555 Lynas Lane and is open from 9:00 a.m. – 6:15 p.m., Wednesday to Sunday.

For a detailed list of all items that can be recycled at the Depot, please refer to the Tips and Resources section on page 41.

DID YOU KNOW?

When food scraps are disposed of in a landfill, the decomposition process creates methane. Methane is a powerful greenhouse gas that contributes to global warming.

DROP OFF TONNAGE IN 2015

In 2015, more than 3,560 tonnes of yard trimmings were collected at the Recycling Depot and through the Ecowaste residential and commercial drop-off service.



CITY OF RICHMOND



GREEN CART PROGRAM

Richmond's Green Cart recycling program is available to all Richmond residents to ensure they have a convenient service to recycle food scraps, yard and garden trimmings, which are banned from the garbage. Green Cart recycling totalled approximately 18,495 tonnes in 2015 – a 13.4% increase over 2014. The majority came from single-family homes followed by townhomes and apartments in multi-family housing sites.

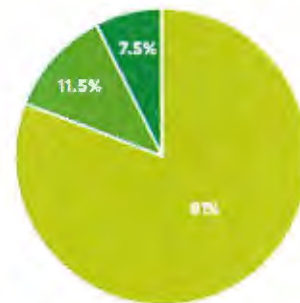
Food scraps and yard trimmings represent about 40% of household waste, and the increase in Green Cart recycling along with Richmond's other recycling services has contributed to residents in single-family homes reducing their garbage by 74% in 2015. The Green Cart program is also an important service to support residents with an easy and convenient recycling option to meet requirements for Metro Vancouver's disposal ban on food scraps.

In 2015, Richmond was honoured with an IABC Gold Quill Award of Excellence in government communication by the International Association of Business Communicators (IABC). The Gold Quill awards program is the only global award for professional communicators. Winning a Gold Quill is a monumental achievement in communication excellence.

RECYCLING WASTE TO REDUCE COSTS

Tipping fees for garbage taken to landfills have increased by about 75% since 2008. As well, there are additional fees, called surcharges, applied to garbage loads that contain more than 5% banned materials such as paper and cardboard, food scraps, containers made of glass, metal or banned recyclable plastic, beverage containers and clean wood. These additional fees can add up to more than 50% more to the tipping fee cost. There are also additional charges at the composting facility when Green Cart recycling loads come contaminated with non-organic materials. The best way to keep these costs down is to recycle materials using the correct receptacles and to reduce waste overall.

2015 RESIDENTIAL GREEN CART RECYCLING



- SINGLE-FAMILY HOMES (15,003.82 TONNES)
- TOWNHOMES (2,124.49 TONNES)
- MULTI-FAMILY HOUSING SITES (1,366.42 TONNES)

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

GREEN CART SIZE OPTIONS AND BENEFITS

Richmond's Green Cart program currently serves approximately 68,000 homes and 489 multi-family housing sites with convenient access to yard trimmings and food scraps recycling. Green Carts are easy to use thanks to wheels and attached lids. As well, Green Carts are available in a range of sizes.

MULTI-FAMILY GREEN CART EXPANSION

Based on the success of the Multi-family Green Cart Pilot Program, and as part of ensuring food scraps recycling is available to all Richmond residents, the City introduced an expanded Green Cart program for multi-family complexes with centralized collection. Under the newly-expanded program, 489 sites with approximately 26,295 units in total received Green Cart recycling service. In its first year, the Green Cart program in multi-family complexes has resulted in approximately 1,650 tonnes of Green Cart recycling.

The program implementation involved working with strata councils, building managers and property managers to ensure that each building had the correct number of carts, as well as to coordinate cart delivery requirements, cart cleaning and whether the building would require weekly or twice weekly collection. Outreach to residents included hosting 400 information sessions, where residents could attend to learn more about how to recycle with the Green Cart, why it is important and the new requirement to keep food scraps out of the garbage as part of the Metro Vancouver disposal ban, which came into effect in 2015. Residents received an information package and a complimentary kitchen recycling container.

The City also communicated with the community through newspaper advertisements, mall displays, website and social media and media relations to raise awareness about the new disposal ban on food scraps and the Green Cart recycling program.

Richmond also offered the Green Cart program to commercial properties and 19 commercial properties have signed up for the service.

CITY OF RICHMOND



GARBAGE COLLECTION SERVICES

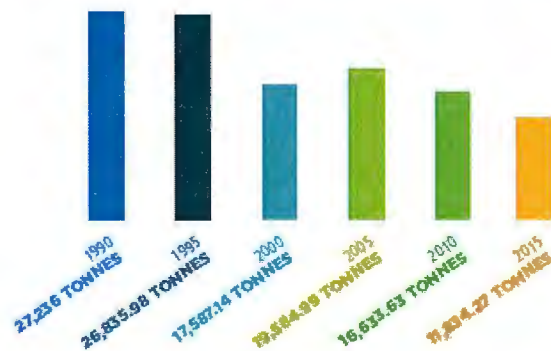
Weekly curbside collection of garbage provides residents with a convenient service for waste disposal. This includes the Large Item Pick Up program to provide curbside collection of up to four large household items each year.

GARBAGE COLLECTION

The City of Richmond provides weekly garbage collection services of two garbage cans for all single-family homes and some townhome developments. Additional garbage cans may be put out, but each extra container or bag must display a tag that can be purchased at City facilities for \$2 each. Certain items, such as hazardous waste materials and those items that can be recycled, are prohibited from garbage bins (see the chart on page 46 for more information on prohibited items).

In 2015, Richmond Council approved a new biweekly Garbage Cart program based on the results of a pilot program conducted in 2014. The new Garbage Cart program provides residents with the opportunity to reduce their curbside garbage collection fees by selecting a smaller cart, which will be provided by the City. The cart size selection process began in the fall and the new program starts in 2016. Under the new program, curbside garbage will be collected every other week, and recycling, including Blue Box and Green Cart services, will continue to be collected weekly.

GARBAGE DISPOSAL OVER THE YEARS



As conscientious recyclers, residents have drastically reduced the amount of garbage disposed since 1990. The City continues to improve and adapt services to support increased recycling and to help reduce garbage.

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**LARGE ITEM PICK UP PROGRAM**

Richmond's Large Item Pick Up program provides curbside collection of up to four large items per year. This program is provided to residents in single-family homes, as well as townhomes and multi-family complexes with the City's garbage collection 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. Residents can contact the City's service provider at 604-270-4722 to arrange for collection of up to four large items per year. All four large items can be picked up at the same time, or in varying bundles for a total of four items annually.

Items accepted in this program include furniture, appliances and small household goods. Restrictions apply to ensure items can be handled safely and mattresses must be covered in plastic to keep them dry. If residents have more than four large items to dispose of, they can purchase a Garbage Disposal Voucher for \$5 from any City facility and use the voucher to dispose of up to \$25 worth of garbage items at the Vancouver Landfill.

For more information on this program, see page 39 or visit www.richmond.ca/recycle.

COMMON MATERIALS RECYCLED THROUGH THE LARGE ITEM PICK UP PROGRAM

2,874
MATTRESSES &
BOXSPRINGS



631
WASHERS & DRYERS



544
TELEVISIONS



533
FRIDGES & FREEZERS



407
BARBECUES



219
DISHWASHERS



223
STOVES



58
MICROWAVES



912
OTHER

7,268

NON-RECYCLABLE HOUSEHOLD ITEMS COLLECTED
FOR SAFE HANDLING AND DISPOSAL

APPROXIMATELY **8,290** REQUESTS
FOR SERVICE

502 TONNES WERE COLLECTED
AND OF THIS, **271** TONNES WERE RECYCLED

13,669 ITEMS COLLECTED

CITY OF RICHMOND



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 cans, 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 empty garbage and recycling from approximately 5,100 City litter and recycling receptacles in the community each week, and assist with removing graffiti from City garbage cans. As well, they collect illegally-dumped materials found on City property and provide safe disposal and recycling of these items. Together, these measures help to support a safe and appealing community.

DID YOU KNOW?

The City sponsors engaging programs at elementary schools to teach students about reducing litter, and promotes a litter-free community through its Partners for Beautification Program.

MORE THAN
5,720 LOADS OF LITTER & RECYCLABLES
 COLLECTED
 FROM
 APPROXIMATELY **5,100** CITY LITTER & RECYCLING
 RECEPTACLES

Commercial buildings and multi-family complexes share a responsibility for recycling. Property owners and managers can facilitate recycling with well-designed recycling and garbage centres. Richmond has developed guidelines to help ensure commercial buildings and multi-family complexes are designed with accessible, centralized and well-organized recycling facilities. Increasing recycling in these buildings is integral to achieving the City's goals for reducing garbage going to landfills.

COMMERCIAL BUILDING GUIDELINES

Effective garbage and recycling management at commercial buildings is most successful when these facilities are integrated into the design and operations of the building or site. To support this, the City of Richmond has developed commercial building guidelines that are outlined in the City of Richmond Design Considerations for Commercial Properties: Recycling and Garbage. These guidelines assist designers and developers of commercial buildings in three key areas:

- the design of storage facilities for garbage and recycling;
- selection of containers for garbage and recycling; and
- planning of access for both tenants and collection service providers.

These guidelines help commercial property owners by giving general advice for meeting City regulations and suggesting goals for effective garbage and recycling programs. This information is provided as a resource and should be used with, not in place of, all applicable building codes, City standards and other relevant legislation.

For more information, visit www.richmond.ca/recycle.

MULTI-FAMILY BUILDING GUIDELINES

All multi-family residential and mixed-use buildings in Richmond require adequate storage for garbage and recycling, and these storage areas must meet Building Code Regulations. At the same time, garbage and recycling collection at multi-family and mixed-use buildings is an area where there is potential for future expansion and improvement.

As an important foundation, the City of Richmond has developed Multi-family Building Guidelines to help support consistent standards at all buildings. The guidelines include information such as basic service requirements, container access for residents and collection, and maximum container size. The information is provided as a convenient source of information, and property owners are responsible for ensuring they meet all applicable building codes, City standards and other relevant legislation.

For more information, visit www.richmond.ca/recycle.

DID YOU KNOW?

The City offers Green Cart recycling to multi-family complexes and commercial operators. There are also opportunities to apply for City Garbage Cart service and cardboard recycling.

CITY OF RICHMOND

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WORKING TOGETHER TO REDUCE WASTE

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2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

OUTREACH AND CUSTOMER SERVICE

SUPPORTING AWARENESS AND EDUCATION

Richmond recognizes that providing recycling services is the first important step in reducing waste; however, the second critical step is communication and community engagement. This includes informing residents about City and partner programs and services available in the community, educating them on how to use the programs, raising awareness about why recycling and reducing waste is important, and engaging the community to help design programs that fit their needs and priorities. The third essential step is providing excellent customer service. With its commitment to community outreach and customer service, the City goes beyond providing services – it supports residents so they can be successful in reducing their waste.



In 2015, approximately 150 youth volunteered more than 3,650 hours in Richmond's Green Ambassador program to support recycling awareness at events and outreach displays.



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

The Environmental Programs Information Line staff assisted customers with more than 14,000 calls in 2015, answering questions, assisting with requests relating to garbage and recycling and providing guidance on where to go for additional information and resources. Richmond also assists customers directly at the Recycling Depot, and through its outreach programs in the community.

At the 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.

14,000
CUSTOMER SERVICE
CALLS SUPPORTED

8,567
GARBAGE TAGS SOLD

775
GARBAGE DISPOSAL
VOUCHERS SOLD

67 COMPOST
BINS SOLD

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

Richmond is proud of its proven track record in service excellence, including being recognized with an international Gold Quill Award of Excellence from the International Association of Business Communicators. To support continuous improvement, the City measures the success of its programs, customer service and community engagement by monitoring a number of performance indicators, including progress towards waste reduction, the community's impressive track record for using programs properly to keep banned recyclables out of the garbage, and low contamination levels thanks to residents sorting recyclable materials into the correct containers.

2015 HIGHLIGHTS

ENGAGING STUDENTS

In 2015, the City hosted Clean Up Your Act and Zero Heroes shows at elementary schools to promote responsible actions to avoid littering, graffiti and vandalism. The shows reached 4,440 elementary school students and 220 teachers. To reinforce what they learned, these schools participated in the My School Sparkles Contest, which has two categories, and the Zero Heroes Contest. For the My School Sparkles Contest, schools are evaluated on levels of littering before and after the show. The winners of the "My School Always Sparkles" category for the school with the least amount of litter on its school grounds and adjacent public space were Sea Island Elementary School, Anderson Elementary School, and Spul'u'kwuks Elementary School. The winner of the "My School is Sparkling" category for the school that demonstrated the most improvement were awarded to Sea Island and Anderson Elementary Schools. The Zero Heroes Contest is based on collecting pledges to reduce and recycle waste. The winner of the Zero Heroes Contest was Talmey Elementary School.

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. In 2015, approximately 150 students in the program contributed more than 3,650 volunteer hours to promote recycling at community events and organize the REaDY Summit. These energetic and environmentally conscious individuals also manage green initiatives in their school.

RICHMOND HOSTS 4TH ANNUAL EARTH DAY SUMMIT

This year's REaDY Summit showcases how community partners, students and residents can come together to celebrate sustainable actions that can trigger a positive change in our community.

Summit participants included students from 21 Richmond schools, as well as residents from nine municipalities. Thanks to help from more than 40 student volunteers, 94% of the waste from the event was recycled. This year's Summit featured three youth-led keynote presentations and the opening ceremony included speeches by four students between grades three to nine who spoke on the topic "My Planet, My Future".

CITY OF RICHMOND

**EVENT RECYCLING**

Recycling stations are required for all special event bookings taking place in Richmond. For some events, the City hosts recycling stations with assistance from the Green Ambassador volunteers. This involves setting up recycling stations and having recycling assistants at the event to advise people on how to recycle. In 2015, the City hosted recycling stations at 12 events, including the Public Works Open House, Children's Art Festival, Move for Health, Doors Open, Pan Am Games Torch Relay, Multicultural Festival, Ship to Shore Festival, Salmon Festival and Maritime Festival. Typically, very high diversion rates are achieved thanks to the efforts of the City's Green Ambassadors. Examples include:

- Maritime Festival – 85.35% diversion rate
- World Festival – 82.27% diversion rate

The City also supports events by providing organizers with recycling bins for events at no charge. The City's convenient resources include recycling stations and garbage carts rentals and collection services, which makes it easy for event organizers to keep the venue clean and recyclables out of the landfill. In 2015, 40 event organizers used the City's event recycling program to help keep recyclable materials out of the garbage at events.

GREAT CANADIAN SHORELINE CLEAN-UP

Jointly led by the Vancouver Aquarium and World Wildlife Foundation, the Great Canadian Shoreline Clean-Up focuses on educating and empowering people to make a difference through community clean-up events. As part of this initiative, Environmental Programs partnered with Parks to support 45 community clean-up events on the City's waterfront involving approximately 1,277 volunteers.

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS



COMMUNITY WORKSHOPS

Richmond's free community workshops provide education and tips that support recycling and waste reduction techniques. In 2015, the City hosted 32 community workshops with a total of 599 participants. A summary of workshops that focus on helping residents towards the City's goal for 80% waste diversion is provided below.

For information on the workshops, email esoutreach@richmond.ca. To attend free workshops offered by the City, visit richmond.ca/register for workshop details and registration information.

COMMUNITY WORKSHOPS			
TYPE OF WORKSHOP	NUMBER OF WORKSHOPS	NUMBER OF PARTICIPANTS	DESCRIPTION
Composting Workshops	5	38	Whether a novice or an experienced compost creator, learn simple compost harvesting techniques and how to effectively convert food and yard waste into an organic soil conditioner.
Do-it-yourself Recycling Workshops	9	131	Turn second hand items into amazing treasures. Participants learn how to 'upcycle' various old items into new things such as pallet gardens, stationary items, holiday-themed gift baskets and repurposing old clothing into new knit or crocheted items.
Food Waste Reduction Workshops	16	383	Reduce food waste by learning harvesting, freezing/canning, and fermenting techniques to store foods.
Eco-cleaning	2	47	Homemade household cleaners work well, save money and are less harmful to people, animals and the environment. With a few easy steps, participants learn to make and use eco-friendly cleaners. Eco-cleaning reduces the use of toxic household items, and the course includes tips on how to recycle and safely dispose of these harmful materials.
Total	32	599	

CITY OF RICHMOND

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MULTIPLE SERVICES AND PARTNERSHIPS TO PROMOTE RECYCLING

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2014 REPORT • LEADERSHIP AND EXCELLENCE TO ACHIEVE GOALS

TIPS AND RESOURCES

EASY STEPS TO INCREASE RECYCLING AND REDUCE WASTE

In Richmond, we care about our community, and we are working together to trim our waste. The City works with residents and community partners to make it easy and convenient to reuse and recycle at home and on the go. It's all about making recycling a way of life. This at-a-glance resource on the various types of recycling programs and services available through the City of Richmond is a valuable guide to support being recycling smart in Richmond. The Tips and Resources include highlights such as how and where to recycle, what to do with hazardous waste and where to find additional information.

Resources also include 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 with minimum contamination in the waste going to the landfill.



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

CITY OF RICHMOND



BLUE BOX

Richmond's Blue Box recycling program provides convenient collection for residents in single-family homes and some townhomes to recycle mixed paper, plastic containers, milk cartons, paper and plastic drink cups, flower pots, empty aerosol cans and spiral wound tins like frozen juice concentrate containers as well as glass bottles and jars, which are separated into the grey Glass Recycling Bin.

Recyclable materials from the Blue Box program are collected from single-family homes and some townhome complexes on the same day that garbage is collected. Containers are placed into the Blue Box, glass bottles and jars are placed in the grey Glass Recycling Bin and all paper products, including newspaper and flattened cardboard are placed in the yellow Mixed Paper Recycling Bag. Blue Boxes are available in two sizes: regular (16 gallons) and tall (22 gallons) for extra capacity.

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. Also, plastics like toys, hangers and laundry hampers are not accepted in the Blue Box but can be brought to the Richmond Recycling Depot.

For a list of items accepted in Blue Box recycling, see page 33 or visit www.richmond.ca/recycle.

Set Out Time

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

Report a Missed Collection

Call 604-276-4010 or email garbageandrecycling@richmond.ca.

How to Get a Mixed Paper Recycling Bag, Glass Recycling Bin or Blue Box

There is no charge for new or replacement Blue Boxes, Glass Recycling Bins or Mixed Paper Recycling Bags.

For additional Blue Box supplies call 604-276-4010 or pick them up at the following locations:

Richmond Recycling Depot

5555 Lynas Lane
Wednesday to Sunday (Closed on Mondays, Tuesdays & Statutory Holidays)
9:00 a.m. to 6:15 p.m.

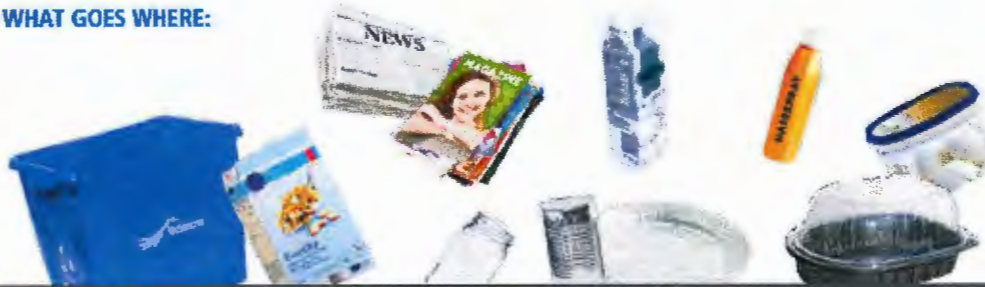
City Hall

6911 No. 3 Road
Monday to Friday (Closed on Saturdays, Sundays & Statutory Holidays)
8:15 a.m. to 5:00 p.m.

Please note: Tall Blue Boxes are only available at the Richmond Recycling Depot.

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

WHAT GOES WHERE:



MIXED PAPER RECYCLING BAG

ACCEPTED	HOW TO RECYCLE	NOT ACCEPTED
<ul style="list-style-type: none"> ✓ Newspapers, inserts & flyers ✓ Flattened cardboard boxes ✓ Catalogues & magazines ✓ Cereal boxes ✓ Clean pizza boxes ✓ Corrugated cardboard (small pieces) ✓ Envelopes ✓ Junk mail ✓ Paper bags ✓ Paper egg cartons ✓ Paper gift wrap & greeting cards ✓ Telephone books ✓ Writing paper (notepads, loose leaf paper, white or coloured paper, printed paper, shredded paper) 	<ul style="list-style-type: none"> • Remove plastic liners/covers. • Remove any food residue. • Flatten boxes. • Place in Mixed Paper Recycling Bag. • Cardboard bundle size: 3 ft x 2 ft x 4 in (90 cm x 60 cm x 10 cm) <p>Note: Oversized/excessive amounts of cardboard can be dropped off at the City's Recycling Depot at 5555 Lynas Lane.</p>	<ul style="list-style-type: none"> ✗ Cardboard boxes with wax coating ✗ Plastic bags used to cover newspapers/flyers ✗ Metallic wrapping paper ✗ Ribbons or bows ✗ Musical greeting cards with batteries ✗ Padded envelopes ✗ Plastic or foil candy wrappers

GLASS RECYCLING BIN

ACCEPTED	HOW TO RECYCLE	NOT ACCEPTED
<ul style="list-style-type: none"> ✓ Clear or coloured glass bottles & jars (pickle jars, jam jars, spaghetti sauce jars, soy sauce bottles) 	<ul style="list-style-type: none"> • Remove lids & caps. • Remove food residue. • Empty & rinse. • Place in Glass Recycling Bin. 	<ul style="list-style-type: none"> ✗ Glasses, dishes, cookware, window glass or mirrors ✗ Ceramic products ✗ Lids & caps (place in Blue Box)

BLUE BOX FOR CONTAINERS

ACCEPTED	HOW TO RECYCLE	NOT ACCEPTED
<ul style="list-style-type: none"> ✓ Empty aerosol cans & caps (food items, air fresheners, shaving cream, deodorant, hairspray) ✓ Microwavable bowls, cups & lids ✓ Paper food containers & cartons (ice-cream, milk, liquid whipping cream) ✓ Paper & plastic drink cups with lids ✓ Plastic containers, trays & caps (bakery containers & deli trays) ✓ Plastic and paper garden pots & trays ✓ Spiral wound paper cans & lids (frozen juice, potato chips, cookie dough, coffee, nuts, baby formula) ✓ Aluminium cans & lids ✓ Aluminium foil & foil containers (foil wrap, pie plates, food trays) ✓ Plastic bottles & caps (food items, condiments such as ketchup, mustard & relish, dish soap, mouthwash, shampoos, conditioners) ✓ Plastic jars & lids ✓ Plastic tubs & lids (margarine, spreads, dairy products such as yogurt, cottage cheese, sour cream, ice cream) ✓ Tin cans & lids 	<ul style="list-style-type: none"> • Remove food residue. • Remove caps or lids; place loose in the Blue Box. • Empty and rinse. • Place in Blue Box. <p>Note: Flatten containers where possible.</p>	<ul style="list-style-type: none"> ✗ Aerosol cans with hazardous materials (spray paint) or with remaining content* ✗ Ceramic plant pots ✗ Compostable/biodegradable plastic bags & containers ✗ Containers for motor oil, or vehicle lubricant or wax products ✗ Foil-lined cardboard lids from take-out containers ✗ Garden hoses ✗ Plastic bags & over wrap* ✗ Plastic string or rope ✗ Styrofoam materials* <p>* Take to the Richmond Recycling Depot.</p>

CITY OF RICHMOND



BLUE CART

All multi-level multi-family complexes like apartments and condominiums and some townhomes have a recycling depot with Blue Carts for recycling mixed paper, plastic containers, milk cartons, paper and plastic drink cups, flower pots, empty aerosol cans and spiral wound tins like frozen juice concentrate containers as well as glass bottles and jars, which are separated into the Glass Recycling Cart. They are generally located in the garbage room or other convenient location.

For sorting recycling, containers are placed in the Containers Recycling Cart, glass bottles and jars are placed in the Glass Recycling Cart and paper products including newspaper and flattened cardboard are placed in the Mixed Paper Recycling Cart. These recyclable materials are banned from landfill.

The carts are emptied once a week. Statutory holidays do not generally affect the collection; however, Christmas Day may delay collection by one day if it falls on a weekday. For information about the recycling depot location in your building, contact your building manager or property manager.

It is important to ensure materials are sorted correctly into the proper recycling carts. For example, recyclables must be placed individually in bins – not stacked, nestled, or in plastic bags. Also, plastics like toys, hangers and laundry hampers are not accepted in the Blue Box but can be brought to the Richmond Recycling Depot.

For a list of items accepted in Blue Cart recycling, see page 35 or visit www.richmond.ca/recycle.

Cart Emptying

Some carts are retrieved from their site, however, some are brought out to a collection area.

Carts brought out must be at the collection area before 7:30 a.m.

Report a Missed Collection

Call 604-276-4010 or email garbageandrecycling@richmond.ca.

How to Get an Indoor Collection Bag for Blue Cart Recycling

There is no charge for new or replacement Blue Cart recycling bags. For additional bags call 604-276-4010 or pick them up at the following locations:

City Recycling Depot

5555 Lymas Lane
Wednesday to Sunday (Closed on Mondays, Tuesdays & Statutory Holidays)
9:00 a.m. to 6:15 p.m.

City Hall

6911 No. 3 Road
Monday to Friday (Closed on Saturdays, Sundays & Statutory Holidays)
8:15 a.m. to 5:00 p.m.

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WHAT GOES WHERE:



MIXED PAPER RECYCLING CART

ACCEPTED

- ✓ Newspapers, inserts & flyers
- ✓ Flattened cardboard boxes
- ✓ Catalogues & magazines
- ✓ Cereal boxes
- ✓ Clean pizza boxes
- ✓ Corrugated cardboard (small pieces)
- ✓ Envelopes
- ✓ Junk mail
- ✓ Paper bags
- ✓ Paper egg cartons
- ✓ Paper gift wrap & greeting cards
- ✓ Telephone books
- ✓ Writing paper (notepads, loose leaf paper, white or coloured paper, printed paper, shredded paper)

HOW TO RECYCLE

- Remove plastic liners/covers.
- Remove any food residue.
- Flatten boxes.
- Cut cardboard into small pieces – 12 in x 12 in (30 cm x 30 cm)
- **Place in Mixed Paper Recycling Cart.**

Note: Oversized/excessive amounts of cardboard can be dropped off at the City's Recycling Depot at 5555 Lynas Lane.

NOT ACCEPTED

- ✗ Cardboard boxes with wax coating
- ✗ Plastic bags used to cover newspapers/flyers
- ✗ Metallic wrapping paper
- ✗ Ribbons or bows
- ✗ Musical greeting cards with batteries
- ✗ Padded envelopes
- ✗ Plastic or foil candy wrappers

GLASS RECYCLING CART

ACCEPTED

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

HOW TO RECYCLE

- Remove lids & caps.
- Remove food residue.
- Empty & rinse.
- **Place in Glass Recycling Cart.**

NOT ACCEPTED

- ✗ Glasses, dishes, cookware, window glass or mirrors
- ✗ Ceramic products
- ✗ Lids & caps (place in Containers Recycling Cart)

CONTAINERS RECYCLING CART

ACCEPTED

- ✓ Empty aerosol cans & caps (food items, air fresheners, shaving cream, deodorant, hairspray)
- ✓ Microwavable bowls, cups & lids
- ✓ Paper food containers & cartons (ice cream, milk, liquid whipping cream)
- ✓ Paper & plastic drink cups with lids
- ✓ Plastic containers, trays & caps (bakery containers & deli trays)
- ✓ Plastic and paper garden pots & trays
- ✓ Spiral wound paper cans & lids (frozen juice, potato chips, cookie dough, coffee, nuts, baby formula)
- ✓ Aluminium cans & lids
- ✓ Aluminium foil & foil containers (foil wrap, pie plates, food trays)
- ✓ Plastic bottles & caps (food items, condiments such as ketchup, mustard & relish, dish soap, mouthwash, shampoos, conditioners)
- ✓ Plastic jars & lids
- ✓ Plastic tubs & lids (margarine, spreads, dairy products such as yogurt, cottage cheese, sour cream, ice cream)
- ✓ Tin cans & lids

HOW TO RECYCLE

- Remove food residue.
- Remove caps or lids; place loose in the Blue Cart.
- Empty and rinse.
- **Place in Containers Recycling Cart.**

Note: Flatten containers where possible.

NOT ACCEPTED

- ✗ Aerosol cans with hazardous materials (spray paint) or with remaining content*
- ✗ Ceramic plant pots
- ✗ Compostable/biodegradable plastic bags & containers*
- ✗ Containers for motor oil, or vehicle lubricant or wax products
- ✗ Foil-lined cardboard lids from take-out containers
- ✗ Garden hoses
- ✗ Plastic bags & over wrap*
- ✗ Plastic string or rope
- ✗ Styrofoam materials*

* Take to the Richmond Recycling Depot

CITY OF RICHMOND

GREEN CART

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

Residents with curbside collection may continue to use Green Cans for excess food scraps and yard trimmings. Paper yard waste bags and tied bundles of yard trimmings are also accepted. Please visit www.richmond.ca/greencart for more information.

Please note that Green Carts stay with the property. Residents with curbside collection may exchange their Green Cart for a different size for \$25. See page 19 for cart size options. If residents move to another house in Richmond, they will have a Green Cart at that location. If there is no cart, or to exchange a cart size, please call 604-276-4010.

WHAT GOES IN THE GREEN CART:



ACCEPTED	HOW TO RECYCLE	NOT ACCEPTED
FOOD SCRAPS & FOOD SOILED PAPER <ul style="list-style-type: none"> ✓ Breads, pasta, rice & noodles ✓ Coffee grounds & filters ✓ Dairy products ✓ Fruit ✓ Eggshells ✓ Meat, poultry, fish, shellfish & bones ✓ Paper towels/mopkins/plates ✓ Pizza delivery boxes ✓ Tea bags ✓ Vegetables ✓ Small amounts of grease/oil absorbed into paper towel ✓ Solid grease 	YARD TRIMMINGS <ul style="list-style-type: none"> ✓ Flowers ✓ Leaves ✓ Grass clippings ✓ Other organic yard materials ✓ Plants (living or dead/dried) ✓ Plant trimmings ✓ Table scraps & food scrapings ✓ Tree & hedge prunings <ul style="list-style-type: none"> • Collect food scraps in your kitchen container. • 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). • Place your Green Cart at the curb along with unlimited paper yard trimmings bags and/or Green Cans, Blue Box recycling and garbage by 7:30 a.m. on your regular collection day. <p><i>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.</i></p>	<ul style="list-style-type: none"> ✗ Coffee cups ✗ Compostable and biodegradable plastic bags ✗ Cork or Styrofoam cups, meat trays or takeout containers ✗ Garden hoses or flower pots ✗ Liquid grease ✗ Lumber ✗ Pet feces or kitty litter ✗ Plastic bags and plastic overwrap ✗ Plastic wraps ✗ Prunings over 4 inches (10 cm) in diameter ✗ Rocks, dirt or sod

Yard Trimmings Drop-off Locations

Richmond residents and approved commercial landscapers who service residential properties can drop off yard trimmings (see above for materials accepted) at the following locations, free of charge with proof of residency.

Ecowaste Industries

15111 Triangle Road
Open Monday to Friday from 7:00 a.m. to 5:30 p.m.
(last load in at 4:30 p.m.)

Open Saturday and Sunday from 8:00 a.m. to 4:00 p.m.
(last load in at 4:00 p.m.)

Visit ecowaste.com or call 604-277-1410 for detailed information.

City Recycling Depot

5555 Lynas Lane
Wednesday to Sunday (Closed on Mondays, Tuesdays & 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 \$20 per cubic yard. Commercial operators will be charged a fee of \$20 per cubic yard at the Richmond Recycling Depot.

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS



HOME COMPOSTING

Home composting turns your food scraps and yard trimmings into nutrient-rich soil that can be spread on lawns and flowerbeds.

BACKYARD COMPOST BIN

"Garden Gourmet" compost bins are available to Richmond residents at the Recycling Depot for \$25 plus tax. The bin dimensions are 36 inches (90 cm) high, 22 inches (56 cm) wide and 22 inches (56 cm) deep. They are suitable for residential backyard composting of grass, leaves, vegetable trimmings, fruit trimmings and other miscellaneous organic garden trimmings.

COMPOSTING WORKSHOPS

To learn about composting, attend a Richmond composting workshop, held from January to November. Visit www.richmond.ca/register for workshop dates and locations or call Parks & Recreation at 604-276-4300 and press '2' from Monday to Friday between 8:30 a.m. to 5:30 p.m.

COMPOST HOTLINE

The Compost Hotline offers support and tips for best practices in home composting. It is operated by City Farmer, which has researched and promoted the best methods of urban composting since 1978.

Compost Hotline

Phone: 604-736-2250

Email: composthotline@telus.net

COMPOST DEMONSTRATION GARDEN

A compost demonstration garden is located at 2631 Westminster Highway in the Terra Nova Rural Park. Composting demonstration units are on display for viewing year-round, from dawn to dusk.



Nitrogen Rich Green Materials:

- PLANT TRIMMINGS
- FRUIT & VEGETABLE PEELINGS
- FRESH GRASS CLIPPINGS
- COFFEE GROUNDS & TEA LEAVES

Carbon Rich Brown Materials:

- DRY LEAVES
- SAWDUST
- STRAW
- SHREDDED NEWSPAPER CLIPPINGS

HOW TO COMPOST

- 1 USING A BACKYARD COMPOST BIN, START WITH A GOOD LAYER OF COARSE ORGANIC MATERIAL, SUCH AS STRAW, LEAVES OR PRUNING AT THE BOTTOM TO ALLOW AIR TO CIRCULATE.
- 2 ADD A GOOD LAYER OF NITROGEN-RICH GREEN MATERIAL FOLLOWED BY ONE LAYER OF CARBON-RICH BROWN MATERIAL, UNTIL THE BIN IS FULL.
- 3 COMPOST REQUIRES AIR. TURN AND STIR YOUR COMPOST WEEKLY SO THE ORGANISMS GET NECESSARY OXYGEN.
- 4 COMPOST REQUIRES MOISTURE. WATER YOUR COMPOST BIN FREQUENTLY, TO ENSURE IT STAYS AS MOIST AS A WRING-OUT SPONGE.
- 5 GIVE IT TIME - IN 12-18 MONTHS, MATERIAL AT THE BOTTOM AND MIDDLE OF THE BIN SHOULD BE COMPOSTED. USE THIS THROUGHOUT YOUR GARDEN. USE THE UN-COMPOSTED MATERIAL TO START A NEW BATCH. CHIPPING OR CHOPPING THE MATERIAL CAN INCREASE THE SPEED OF THE PROCESS. REGULAR AERATION IS KEY TO SUCCESSFUL COMPOSTING.

CITY OF RICHMOND

GARBAGE COLLECTION**CURBSIDE COLLECTION SERVICE****Biweekly Garbage Cart Program**

Starting in 2016, Garbage Carts are collected biweekly (every other week) and residents can select their preferred cart size. Annual curbside garbage collection fees are based on the size of the cart – the smaller the cart, the lower the fees. Residents may exchange their Garbage Cart for a different size for \$25 by calling 604-276-4010.

For cart size options and related fees, visit www.richmond.ca/garbage.

Preparing Garbage for Collection

It's important to secure or wrap loose garbage to prevent loose 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 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

Purchase Garbage Tags or Garbage Disposal Vouchers to dispose of extra garbage.

\$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.

Garbage Disposal Vouchers

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

Visit www.richmond.ca/recycle for a list of City facilities selling Garbage Tags and Garbage Disposal Vouchers.

Large Item Pick-Up Program

Residents in single-family homes, some townhomes and multi-family complexes with City garbage service, can arrange for curbside collection of four large household items each year. See page 39 for details.

Sign Up for the Richmond Collection Schedule App

Get weekly collection reminders by downloading the free Richmond Collection Schedule app at the Apple or Android app stores to receive weekly reminders about curbside garbage and recycling collection, and to use the Recycling Wizard for tips on where to recycle.

The following items are **not** accepted in the garbage:

MATERIAL	HOW TO RECYCLE OR DISPOSE
X DEMOLITION WASTE	<ul style="list-style-type: none"> Take to Ecowaste Industries at 15111 Triangle Road, or call the RCBC Recycling hotline at 604-RECYCLE (732-9253).
X DIRT, ROCK, CONCRETE OR BRICKS	<ul style="list-style-type: none"> Take to Ecowaste Industries. Visit ecowaste.com or call 604-277-1410 for accepted items & hours.
X DRYWALL (Gypsum, sheetrock, plasterboard, gyproc & wallboard)	<ul style="list-style-type: none"> Special restrictions apply. Please call the RCBC Recycling Hotline for details at 604-732-9253.
X HAZARDOUS WASTE	<ul style="list-style-type: none"> Call RCBC Recycling Hotline at 604-RECYCLE, visit www.metrovancouverrecycles.org or see page 46-52 for drop-off locations.
X MATERIALS THAT ARE TOO BIG OR MAY DAMAGE GARBAGE TRUCK	<ul style="list-style-type: none"> See Large Item Pick Up program on page 39 for disposal options.
X PROVINCIAL PRODUCT STEWARDSHIP COLLECTION (TAKE BACK) ITEMS	<ul style="list-style-type: none"> Visit bestewards.com or call 604-RECYCLE.
X RECYCLABLE MATERIALS* (Mixed paper, cardboard, plastic containers, empty aerosol cans, tin & aluminium cans, glass bottles & jars, and other materials accepted in the Blue Box/Blue Cart program)	<ul style="list-style-type: none"> Recycle with the Blue Box or Blue Cart program. Remember to recycle glass separately using the Glass Recycling Bin/Cart. See pages 32-35 for details.
X YARD TRIMMINGS & FOOD SCRAPS	<ul style="list-style-type: none"> Place in Green Carts or for yard trimmings only, paper yard waste bags. For yard trimmings only, one cubic yard or less may be dropped off at Recycling Depot. Unlimited amounts of yard trimmings can be dropped off at Ecowaste Industries with proof of residency. Check Green Cart section for restrictions and accepted materials on page 36.

For a list of drop-off locations, use the City's Recycling Wizard available on the Richmond Collection Schedule app and at www.richmond.ca/recycle or call the RCBC Recycling Hotline at 604-732-9253.

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COLLECTION SERVICE FOR LARGE HOUSEHOLD ITEMS

Richmond's Large Item Pick Up program provides a convenient collection service for up to four large household items per year, including mattresses, furniture and appliances. The program is available to residents in single-family homes, as well as townhomes and multi-family complexes with the City's garbage collection service and/or Blue Box program.

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, which will help Richmond achieve its goal for 80% waste diversion from the landfill by 2020.

STEPS ON HOW THE PROGRAM WORKS:

- 1** To schedule collection of up to four items per year, residents can contact the City's service provider, Sierra Waste Services at 604-270-4722 or schedule online at www.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.

Safety Consideration: If the large item is a freezer, refrigerator, icebox or other container that is equipped with a latch or locking device, the door/latch must be removed and placed beside the large item for safety reasons.



DID YOU KNOW?

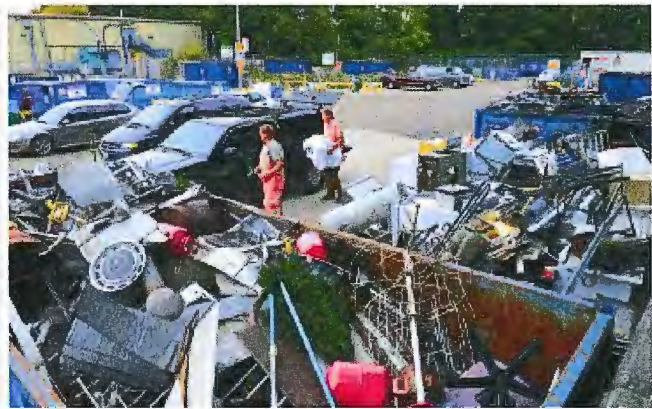
Wet mattresses cannot be recycled and pose safety hazards for lifting. Please ensure the mattress stays dry and mould-free by covering it in a plastic bag. Reuse the bag from newly-purchased mattresses or purchase bags from home hardware and supply stores. Water-logged items that become too heavy may not be picked up.

LIST OF ITEMS ACCEPTED

ACCEPTED	NOT ACCEPTED
<ul style="list-style-type: none"> ✓ Appliances (e.g. stove, dishwasher, washer and/or dryer, hot water tank, refrigerator, freezer, microwave, cooler) ✓ Barbecues (remove propane tank and/or lava rock briquettes) ✓ Bed frame ✓ Electric lawnmowers ✓ Furniture (e.g. couch, coffee table, chair, desk, dresser, TV stand, cabinet, drawer, table, hutch, crib, high chair, entertainment centre) ✓ Headboard ✓ Outdoor furniture (e.g. chairs, patio tables, patio umbrellas) ✓ Small household goods, which must be in boxes or bundled and are a reasonable size (one box or bundle is equal to one of the resident's four allotted items) ✓ Weight training equipment (e.g. treadmills, ellipticals, stationary bikes, stair masters, weight sets) ✓ Mattresses or boxsprings – please cover your mattress with a plastic bag. 	<ul style="list-style-type: none"> ✗ Car bodies or parts ✗ Carpets ✗ Construction materials ✗ Drywall ✗ Gas lawnmowers ✗ Hazardous waste ✗ Lumber, demolition or home renovation materials ✗ Propane tanks ✗ Tree stumps ✗ Tires <p>Note: Items that contain any hazardous liquids such as gas, oil, etc. will not be accepted.</p> <p>See page 46 - 52 for disposal locations or call the RCBC Recycling Hotline at 604-732-9253.</p>

Note: The item(s) must be able to be safely handled from the curbside in order to qualify for collection.

CITY OF RICHMOND



RECYCLING DEPOT

The Richmond Recycling Depot is located at 5555 Lynas Lane and is open from Wednesday through Sunday from 9:00 a.m. to 6:15 p.m. The Depot accepts Styrofoam, batteries, cell phones, used cooking oil, large appliances, large metal items and yard trimmings, as well as recyclables normally placed curbside.

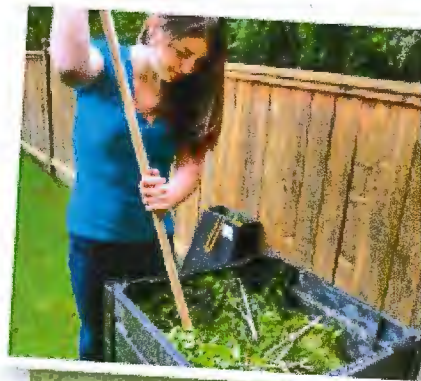
Residents are encouraged to use the curbside recyclables collection for glass bottles and jars, rigid plastic containers, newsprint and mixed paper. Businesses are encouraged to subscribe to onsite collection services if a large quantity of recyclables is produced. Residents and small business operators can drop off one cubic yard of recyclables and three large appliances at the Depot per day.

In addition, the Depot is a Product Stewardship (Take Back) Collection site for paint, solvents, flammable liquids, pesticides, lights, lighting fixtures and small appliances.

FOR SALE AT THE RECYCLING DEPOT

Residents can purchase the following items from the Depot:

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



TIP FOR RESIDENTS

Residents can purchase compost bins from the Richmond Recycling Depot. To learn more about how to compost, see page 37, or visit the Compost Demonstration Garden located at 2631 Westminster Highway in the Terra Nova Rural Park.

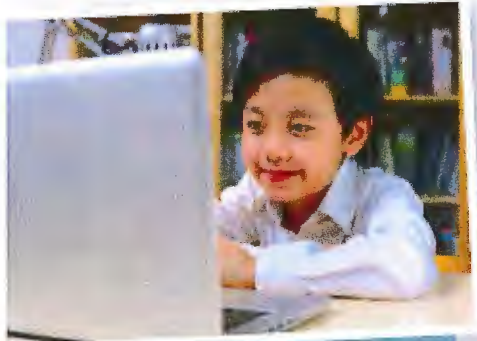
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**MATERIALS ACCEPTED AT THE RICHMOND RECYCLING DEPOT**

Please note: All materials must be sorted into different containers at the Recycling Depot. Please visit www.richmond.ca/recycle for drop-off details.

- | | | |
|---|---|--|
| ✓ Aluminium materials (aluminium foil, pie plates) | ✓ Flammable aerosols | ✓ Newspaper |
| ✓ Appliances (small and large electrical/battery operated appliances including dishwashers, washing machines, stoves, barbeques, ovens, microwaves, fridges, freezers, vacuums, hair dryers, toaster ovens, etc.) | ✓ Flammable liquids | ✓ Paints (household paints) |
| ✓ Batteries (small household batteries less than 5 kg) | ✓ Flower pots (paper/plastic garden pots) | ✓ Paint aerosols |
| ✓ Books | ✓ Gasoline (in approved ULC containers) | ✓ Pesticides (domestic pesticides) |
| ✓ Cell phones (including batteries) | ✓ Glass bottles and jars (clear and coloured) | ✓ Plastic containers |
| ✓ Clean untreated wood | ✓ Lights (fluorescent tubes, compact fluorescent lights, light emitting diodes, halogen and incandescent lights, high intensity discharge and other mercury containing lamps) | ✓ Plastic grocery shopping bags and plastic overwrap |
| ✓ Cooking oil and animal fat | ✓ Lighting fixtures | ✓ Sewing, knitting and textile machines |
| ✓ Corrugated cardboard (flattened, clean corrugated boxes) | ✓ Magazines | ✓ Styrofoam packaging |
| ✓ Exercise and hobby machines (treadmills, elliptical / cross trainers, cycling machines) | ✓ Metal items (bike frames, clean 45 gallon drums, clean automotive parts, lawn chairs, steel coat hangers, steel or lead piping) | ✓ Tin cans |
| | ✓ Paper (mixed paper products including flattened boxboards, envelopes, junk mail, flyers, inserts, office paper, paper egg cartons, telephone books, etc.) | ✓ Tools (power tools such as angle saws, jigsaws, trimmers, drum machines, etc.) |
| | | ✓ Yard and garden trimmings |

CITY OF RICHMOND



TIP FOR RESIDENTS

Many electronics products can be reused by others and there are convenient services to sell them or give them away. You can also give them to a number of organizations who accept donated equipment to redistribute in the community. Please contact these agencies in advance to ensure they will accept specific items for donation.

BC Electronics Material Exchange: bcmex.ca
Free Geek Vancouver: freegeekvancouver.org

COMMUNITY RESOURCES AND PARTNERS

METRO VANCOUVER RECYCLES — REUSE AND RECYCLE IN THE REGION

A convenient web tool called Metro Vancouver Recycles makes it easy to connect with people who could use products you don't need, or to find options for recycling products that cannot be included in your curbside collection, visit metrovancoverrecycles.org.

There are also convenient links to online services if you want to sell or give away goods. The following are just a few examples in the Metro Vancouver region:

weRecycle

iPhone app (available from iPhone App Store and at metrovancoverrecycles.org)

Metro Vancouver Recycling Directory

metrovancoverrecycles.org

MetroVan Reuses

bc.reuses.com

Richmond Shares

richmondshares.bc.ca

Multi-Material BC (MMBC)

multimaterialbc.ca

RCBC COMMUNITY RESOURCES

Recycling Hotline

Monday to Friday, 9 a.m. to 4 p.m.

Phone: 604-RECYCLE (604-732-9253)

Email: hotline@rcbc.bc.ca

RCBC Recyclepedia at rcbc.bc.ca/recyclepedia

Smart Phone App: BC Recyclepedia App

(available at iPhone App Store and Android Market)

RCBC MATERIALS EXCHANGE PROGRAM (MEX)

The RCBC MEX program is a completely self-serve web-based program comprised of Residential Reuse Programs and the BC Industrial Materials Exchange (BC IMEX) and is available at bc.reuses.com

DID YOU KNOW?

Four, 2-litre plastic bottles can be recycled into one t-shirt, filling for a ski jacket and two ball caps.

CITY OF RICHMOND

PRODUCT STEWARDSHIP PROGRAM CATEGORIES

The following categories highlight the products that can be returned to retailers and other community partners. For a list of drop-off locations for each category, please see pages 47 to 52.

TAKE BACK PROGRAMS	WHAT IS INCLUDED	STEWARDSHIP AGENCY
BATTERIES	Household batteries	Call2Recycle Contact call2recycle.ca 1-888-224-9764 info@call2recycle.ca Drop off site locator 1-877-273-2925
BEVERAGE CONTAINERS	Almost all types of beverage containers	Encorp Pacific (Canada) Contact return-it.ca/locations 1-800-330-9767 or 604-473-2400 retumit@retumit.ca Note: Beverage containers like pop and juice cans and bottles can be recycled with the Blue Box or Blue Cart or can be dropped off at Richmond's Recycling Depot as part of the City's recycling services. Beverage containers can also be returned for a refund on the deposit at a number of Return-It Depot locations in Richmond.
CELL PHONES	Mobile/wireless devices that connect to a cellular or paging network, including all cell phones, smart phones, wireless personal digital assistants (PDAs), external air cards and pagers, as well as cell phone batteries and accessories, including headsets and chargers	Canadian Wireless Telecommunications Association Contact RecycleMyCell.ca 1-888-797-1740 info@recyclemycell.ca
ELECTRONICS	Televisions and computer and printer products such as desktop computers, display devices, portable (laptop) computers, desktop printers and fax machines and computer accessories like keyboards, pointing devices, track balls and mice	Encorp Pacific (Canada) Contact return-it.ca/electronics 1-800-330-9767 or 604-473-2400 retumit@retumit.ca
MEDICATION	All expired or leftover prescription medication, non-prescription medication and mineral supplements, anti-fungal and anti-bacterial creams	Health Products Stewardship Association Contact healthsteward.ca/returns/british-columbia 613-723-7282 or 1-844-535-8889 info@healthsteward.ca

DID YOU KNOW?

100% of brewer packaging is either reusable or recyclable, and in addition to standard beer cans and bottles, brewers reuse or recycle their aluminium kegs and their secondary packaging including plastic shrink wrap, cardboard and wooden pallets.

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

**DID YOU KNOW?**

A littered aluminum can takes 500 years to disintegrate, but it only takes six weeks to be manufactured, filled, sold, recycled, remanufactured, refilled and be back out on the marketplace.

TAKE BACK PROGRAMS	WHAT IS INCLUDED	STEWARDSHIP AGENCY
PACKAGING AND PRINTED PAPER	Aerosol cans, microwavable bowls/cups/lids, paper food containers & cartons, plastic & paper drink cups with lids, plastic containers/jars/tubs/trays, aluminium cans, tin cans, etc. Visit recyclinginbc.ca for a complete list.	Multi Material British Columbia (MMBC) Contact www.multimaterialbc.ca 778-588-9504 or 1-855-875-3596 Twitter: @recyclemorebc info@multimaterialbc.ca
PAINTS, SOLVENTS, PESTICIDES AND GASOLINE	Paints, solvents, pesticides and gasoline	Product Care Association Contact regeneration.ca 1-888-772-9772
SMALL APPLIANCES AND POWER TOOLS	Kitchen countertop appliances (e.g. toasters, microwaves, coffee makers and food processors), electric bathroom scales, hair dryers, carpet cleaners, vacuum cleaners, portable fans, power tools, sewing and exercise machines	ElectroRecycle is a non-profit, province-wide, small electrical appliance recycling program in B.C. and the first of its kind in Canada through the Canadian Electrical Stewardship Association (CESA) with the help of BC's Product Care Association Contact electrorecycle.ca 1-877-670-2372 info@cesarecycling.ca
TIRES	Car tires, truck tires and some agricultural and logger/skidder tires	Tire Stewardship BC (TSBC) Contact tsbc.ca 1-866-759-0488
THERMOSTATS	Mercury-containing and electronic thermostats	Heating, Refrigeration and Air Conditioning Institute of Canada in partnership with the Canadian Institute of Plumbing and Heating, and delivered by Summerhill Impact. Contact switchthestat.ca 416-922-2448 (ext 232) jcourt@summerhillgroup.ca
USED OIL AND ANTIFREEZE	Motor oil, oil filters, empty oil containers, antifreeze and used antifreeze containers	BC Used Oil Management Association Contact usedoilrecycling.com/en/bc 1-866-254-0555 reception@usedoilrecycling.ca

CITY OF RICHMOND

HAZARDOUS WASTE AND OTHER DISPOSAL ITEMS

The 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 disposal 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 \$50 minimum surcharge, plus the cost of removal, clean-up or remediation. Loads containing banned materials are assessed a 50% tipping fee surcharge.

Many common hazardous household and automotive products must be recycled or disposed through special depots. Disposal sites and take back collection options for hazardous and banned 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.

For a list of drop-off locations, use the City's Recycling Wizard available on the Richmond Collection Schedule app and at www.richmond.ca/recycle, or call the RCBC Recycling Hotline at 604-732-9253.

BANNED AND HAZARDOUS MATERIALS

BANNED HAZARDOUS AND OPERATIONAL IMPACT MATERIALS	BANNED MATERIALS THAT CAN BE RECYCLED WITH CITY SERVICES	BANNED PRODUCT STEWARDSHIP MATERIALS
<ul style="list-style-type: none"> x Agricultural waste x Asbestos x Automobile parts and bodies x Barrels, drums, pails or other large (205 litre or greater) liquid containers, whether full or empty 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 Mattresses x Propane tanks x Refuse that is on fire, smoldering, flammable or explosive 	<ul style="list-style-type: none"> x Beverage containers x Clean wood x Containers made of glass, metal or banned recycled plastic  x Corrugated cardboard x Food waste x Green waste x Recyclable paper 	<ul style="list-style-type: none"> x Antifreeze and antifreeze containers x Batteries x Electronics and electrical products, including metal household and commercial appliances x Fluorescent lights x Gasoline x Lead-acid batteries x Lubricating oils and lubricating oil containers x Oil, oil filters and oil containers x Paint x Oil, oil filters and oil containers x Pesticides x Pharmaceutical products and medications x Solvents and flammable liquids x Thermostats x Tires
For a complete list of banned materials, please visit www.metrovancouver.org/services/solid-waste/bylaws-regulations/banned-materials		

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

**TIP FOR RESIDENTS**

To spot hazardous waste, look for the words Danger, Warning, or Caution on the product label, and any of the symbols shown above.

**ANTIFREEZE AND EMPTY CONTAINERS ^{DB}**

DROP-OFF LOCATION	ADDRESS	PHONE
Richmond Audi	5680 Parkwood Way	604-279-9663
Canadian Tire	3500 No. 3 Road	604-273-2939
Certigard Petro-Canada	4011 Francis Road	604-277-3620
Cowell Motors Ltd. - Volkswagen	13611 Smallwood Place	604-273-3922
Jaguar Land Rover Richmond	5660 Parkwood Way	604-273-6068
Jiffy Lube	10991 No. 4 Road	604-448-0142
Metron Auto Service Ltd.	104 - 8077 Alexandra Road	604-270-1668
Mr. Lube	9120 Westminster Highway	604-273-5823
Rainbow Auto Service	142 - 11788 River Road	604-276-2820

For a complete list of antifreeze or containers accepted, visit <http://usedoilrecycling.com/en/bc> or call 604-732-9253.

APPLIANCES - SMALL ^{DB}

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot	110 - 11020 Horseshoe Way	604-275-0585
OK Bottle Depot	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Richmond Return-It Depot	135 - 8171 Westminster Hwy	604-232-5555
Steveston Return-It Depot	2 - 12320 Trites Road	604-241-9177

For a complete list of small appliances accepted, visit electroniccycle.ca or call 604-732-9253.

AUTOMOTIVE BATTERIES ^{DB}

DROP-OFF LOCATION	ADDRESS	PHONE
Canadian Tire	3500 No. 3 Road	604-273-2939
	11388 Steveston Highway	604-271-6651
Kal Tire	2633 No. 5 Road	604-278-9181
Regional Recycling *	13300 Vulcan Way	604-276-8270
Sota Battery Canada	11871 Horseshoe Way	604-271-9727

Note: All retail locations accept a used car battery for each new one purchased. For a list of collection sites, please visit www.recyclingbattery.ca

DB: Disposal ban | * A fee is charged

Please note: Drop-off locations may change without notice. Please call individual locations to confirm address and hours of operation.

CITY OF RICHMOND

**BABY CAR SEATS**

DROP-OFF LOCATION	ADDRESS	PHONE
City of Vancouver Landfill *	5400 72nd Street, Delta	604-873-7000

BATTERIES AND MOBILE PHONES DB

Batteries weighing five kilograms or less

DROP-OFF LOCATION	ADDRESS	PHONE
Best Buy	700-5300 No. 3 Road	604-273-7335
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Dr Battery	102 - 4460 Jacobs Road	604-273-8248
Home Depot	2700 Sweden Way	604-303-9882
London Drugs	5971 No. 3 Road	604-448-4811
	3200 - 11666 Steveston Highway	604-448-4852
Pharmasave	116 - 10151 No. 3 Road	604-241-2898
Rona	7111 Elmbridge Way	604-273-6006
Staples	8171 Ackroyd Road	604-270-9599
	110 - 2780 Sweden Way	604-303-7850

For a complete list of batteries accepted, please visit call2recycle.ca or call 1-888-224-9764.

For a complete list of mobile phones drop off locations, visit call2recycle.ca/locator.

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

To erase information from your device, including text messages, contacts and personal files, use Cell Phone Data Erasers by recyclemycell.ca/recycling-your-device available for free.

CARBON MONOXIDE (CO), SMOKE AND COMBINATION SMOKE AND CO ALARMS DB

DROP-OFF LOCATION	ADDRESS	PHONE
London Drugs (smoke detectors only)	5971 No. 3 Road	604-448-4811
	3200 - 11666 Steveston Highway	604-448-4852
Regional Recycling	13300 Vulcan Way	604-276-8270
Steveston Return-It Depot	2 - 12320 Trites Road	604-241-9177

For a complete list of alarms accepted, please visit regeneration.ca or call 604-732-9253.

DB: Disposal ban | * A fee is charged

Please note: Drop-off locations may change without notice. Please call individual locations to confirm address and hours of operation.

**ELECTRONICS: AUDIO VISUAL EQUIPMENT, COMPUTERS, MONITORS, TVs, PRINTERS, FAX MACHINES, SCANNERS, VIDEO GAMES & ACCESSORIES**

DROP-OFF LOCATION	ADDRESS	PHONE
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	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Staples	8171 Ackroyd Road	604-270-9599
	110 - 2780 Sweden Way	604-303-7850
Steveston Return-It Depot	2 - 12320 Trites Road	604-241-9177

For a complete list of materials accepted, please visit return-it.ca/electronics or call 604-473-2400.

EXERCISE & HOBBY MACHINES DB

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot	110 - 11020 Horseshoe Way	604-275-0585
OK Bottle Depot	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Richmond Return-It Depot	135-8171 Westminster Hwy	604-232-5555

EYEGLASSES

DROP-OFF LOCATION	ADDRESS	PHONE
Drop off at a local optometrist or eye care professional.		

2015 REPORT • APPLYING BEST PRACTICES TO ACHIEVE GOALS

DID YOU KNOW?

The Product Stewardship Program helps with take back of many recyclable materials and is guided by the principle that whoever designs, produces, sells or uses a product takes responsibility for minimizing that product's environmental impact. The costs for

recycling these products are covered through environmental handling fees that are charged on the sale of products and through refundable deposits on items like beverage containers.

**FLAMMABLE LIQUIDS^{DB}, PESTICIDES^{DB}, SOLVENTS^{DB}, GASOLINE^{DB}**

(Gasoline must be in approved UL/C container)

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Regional Recycling	13300 Vulkan Way	604-276-8270

For a complete list of flammable liquids, gasoline, pesticides and solvents accepted, please visit regeneration.ca or call 604-732-9253.

GENERAL HAZARDOUS MATERIALS

DROP-OFF LOCATION	ADDRESS	PHONE
Tervita *	160 - 13511 Vulkan Way	604-214-7000
Terrapure Environmental *	9 - 7483 Progress Way, Delta	604-952-1220

GYPSUM DRYWALL^{DB}

No other materials attached to or on drywall

DROP-OFF LOCATION	ADDRESS	PHONE
City of Vancouver Landfill *	5400 72nd Street, Delta	604-873-7000
Ecowaste Industries Ltd. *	15111 Triangle Road	604-277-1410
New West Gypsum Recycling *	38 Vulkan Street, New Westminster	604-534-9925
Vancouver Transfer Station (Maximum 1/2 sheet with a paid load of garbage)	377 W. Kent Avenue N.	604-326-4600

HYPODERMIC NEEDLES

Purchase a "Sharps Container" from a pharmacy and return the container to same pharmacy when full.

**LIGHTS & LIGHTING FIXTURES^{DB}**

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
London Drugs	5971 No. 3 Road	604-448-4811
	3200 - 11666 Steveston Highway	604-448-4852
Rona	7111 Elmbrook Way	604-273-4606

For a complete list of lighting products accepted, please visit regeneration.ca or call 604-732-9253.

LUBRICATING (USED) OIL^{DB}, OIL FILTERS^{DB}, PLASTIC OIL CONTAINERS^{DB}

DROP-OFF LOCATION	ADDRESS	PHONE
Audi of Richmond	5680 Parkwood Way	604-279-9663
Canadian Tire	3560 No. 3 Road	604-273-2939
	11388 Steveston Highway	604-271-6651
Crowell Motors Ltd - Volkswagen	13611 Smallwood Place	604-273-3022
Esso Service Station (Blundell)	7991 No. 1 Road	604-277-1105
Jaguar Land Rover of Richmond	5660 Parkwood Way	604-273-6068
Jiffy Lube	10991 No. 4 Road	604-448-0142
Meltron Auto Service Ltd.	104 - 8077 Alexandra Road	604-270-1668
Mr. Lube	9120 Westminster Highway	604-273-5823
Sky Auto Services	110 - 5791 Minoru Boulevard	604-233-1828

For a complete list of lubricating oil, oil filters and plastic oil containers accepted, visit usedoilrecycling.com or call 604-732-9253.

DB: Disposal ban | * A fee is charged

Please note: Drop-off locations may change without notice. Please call individual locations to confirm address and hours of operation.

CITY OF RICHMOND

Working together with the City of Richmond, producers, retailers and residents can divert hazardous waste and other special disposal items from the landfill. Producers and retailers who support product stewardship and related take back programs assist with recycling and proper disposal, and residents can use these programs to help turn waste into resources.

**MATTRESSES AND BOXSPRINGS DB**

DROP-OFF LOCATION	ADDRESS	PHONE
Canadian Mattress Recycling*	1210 Cliveden Avenue, Delta	604-777-8324
City of Vancouver Landfill*	5400 72nd Street, Delta	604-873-7000
MattressRecycling.ca*	11571 Twigg Place	604-324-3211

Richmond's Large Item Pick Up Program: Contact Sierra Waste at 604-270-4722. Please note some restrictions apply. See page 39.

MEDICAL DEVICES & EQUIPMENT DB

DROP-OFF LOCATION	ADDRESS	PHONE
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	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Staples	8171 Ackroyd Road	604-270-9599
	110 - 2780 Sweden Way	604-303-7850
Steveston Return-It Depot	2 - 12320 Trites Road	604-241-9177

**MUSICAL INSTRUMENTS DB**

DROP-OFF LOCATION	ADDRESS	PHONE
Ironwood Bottle & Return-It Depot	110 - 11020 Horseshoe Way	604-275-0585
OK Bottle Depot (electrical instruments only)	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Staples (electrical instruments only)	8171 Ackroyd Road	604-270-9599
	110 - 2780 Sweden Way	604-303-7850

PAINT & PAINT AEROSOL CONTAINERS DB

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Regional Recycling	13300 Vulcan Way	604-276-8270
Rona	7111 Elmbridge Way	604-273-4606
Steveston Return-It Depot	2 - 12320 Trites Road	604-241-9177

For a complete list of paint & paint aerosol containers accepted, please visit regeneration.ca or call 604-732-9253.

DB: Disposal ban | * A fee is charged

Please note: Drop-off locations may change without notice. Please call individual locations to confirm address and hours of operation.

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**PHARMACEUTICAL DB**

All pharmacies accept left over 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/returns/british-columbia or call 604-732-9253.

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

PROPANE TANKS - REFILLABLE (EMPTY)

DROP-OFF LOCATION	ADDRESS	PHONE
City of Vancouver Landfill*	5400 72nd Street, Delta	604-873-7000
Richmond Husky Service *	8011 No. 3 Road	604-270-3822

PROPANE TANKS (SMALL) - DISPOSABLE (EMPTY)

DROP-OFF LOCATION	ADDRESS	PHONE
City of Vancouver Landfill	5400 72nd Street, Delta	604-873-7000

OUTDOOR POWER EQUIPMENT DB

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Regional Recycling	13300 Vulcan Way	604-276-8270

**SEWING, KNITTING & TEXTILE MACHINES DB**

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot	110 - 11020 Horseshoe Way	604-275-0585
OK Bottle Depot	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Richmond Return-It Depot	135 - 8171 Westminster Hwy	604-232-5555
Steveston Return-It Depot	2 - 12320 Trives Road	604-241-9177

STYROFOAM - MOLDED PACKAGING & FOOD CONTAINERS

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010

London Drugs customers can return the moulded packaging Styrofoam from their appliance, computer and accessories products to any London Drugs store with proof of purchase.

STYROFOAM CHIPS (PEANUTS)

DROP-OFF LOCATION	ADDRESS	PHONE
The UPS Store	185 - 9040 Blundell Road 3080 - 11666 Steveston Hwy 130 - 8191 Westminster Hwy	604-231-9643 604-271-1501 604-279-0988
Packaging Depot	6360 Kingsway, Burnaby 5524 Cambie Street, Vancouver	604-451-1206 604-325-9966
Westcoast Plastic Recycling Inc.*	215 - 7080 River Road	604-247-1664

TELUS EQUIPMENT (RENTAL OR RETAIL) DB

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.

DB: Disposal ban | * A fee is charged

Please note: Drop-off locations may change without notice. Please call individual locations to confirm address and hours of operation.

CITY OF RICHMOND

**THERMOSTATS DB**

DROP-OFF LOCATION	ADDRESS	PHONE
Andrew Sheret Ltd.	4500 Vanguard Road	604-278-3766

For more information, visit switchthestat.ca or call 1-416-922-2448 ext. 232.

TIRES DB

DROP-OFF LOCATION	ADDRESS	PHONE
Charlot Tire Ltd.	404 - 5940 No. 6 Road	604-276-2966
Island City Automotive	180 - 5400 Minoru Blvd	604-273-4023
Canadian Tire	3500 No. 3 Road	604-273-2939
	11388 Steveston Highway	604-271-4651
Express Lube & Tune Centre	2840 No. 3 Road	604-278-1018
Kal Tire	2633 No. 5 Road	604-278-9181
Metro Tires Ltd.	13320 Mitchell Road	604-321-9004
Midas Auto & Tire Service	4660 No. 3 Road	604-273-9664
OK Tire Store	5831 Minoru Boulevard	604-278-5171
Redline Automotive Ltd.	1 - 11711 No. 5 Road	604-277-4269
Roadrunners Dial A Tire Ltd.	125 - 11780 River Road	604-274-8473
Signature Mazda	13800 Smallwood Place	604-278-3185
Vancouver Landfill	5400 72nd Street, Delta	604-873-7000

Note: All retail locations accept a used tire for a new one purchased.
For a complete list of tires accepted, visit tsbc.ca or call 1-866-759-0488.

DB: Disposal ban | * A fee is charged

Please note: Drop-off locations may change without notice. Please call individual locations to confirm address and hours of operation.

DID YOU KNOW?

Recycled tires are used in products such as athletic tracks, playground safety surfaces, synthetic turf fields and roofing products.

**BICYCLE TIRES, TUBES, HELMETS, LOCKS AND WORKING BIKES**

DROP-OFF LOCATION	ADDRESS	PHONE
Village Bikes	3891 Moncton Street	604-274-3865

For more information, visit tsbc.ca/bike.php or call 1-866-759-0488.

TOOLS - POWER (ELECTRONIC & ELECTRICAL) DB

DROP-OFF LOCATION	ADDRESS	PHONE
City's Recycling Depot	5555 Lynas Lane	604-276-4010
Ironwood Bottle & Return-It Depot	110 - 11020 Horseshoe Way	604-275-0585
OK Bottle Depot	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270
Richmond Return-It Depot	135 - 8171 Westminster Hwy	604-232-5555
Steveston Return-It Depot	2 - 12320 Trites Road	604-241-9177

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

DROP-OFF LOCATION	ADDRESS	PHONE
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	7960 River Road	604-244-0008
Regional Recycling	13300 Vulcan Way	604-276-8270

NON HAZARDOUS MISCELLANEOUS ITEMS

DROP-OFF LOCATION	ADDRESS	PHONE
Vancouver Landfill *	5400 72nd Street, Delta	604-873-7000



CITY OF RICHMOND

Environmental Programs Information Line:
604-276-4010

www.richmond.ca/recycle

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