



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** October 2, 2015
From: Tom Stewart, ASCT.
Director, Public Works Operations **File:** 10-6370-01/2013-Vol
01
Re: **Management of Waste and Recyclable Materials from Demolition Activities**

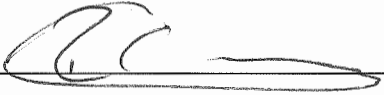

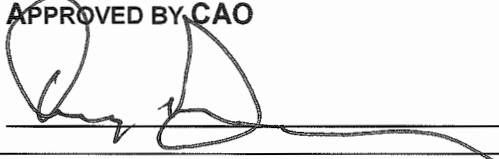
Staff Recommendation

That:

1. staff prepare a Demolition Waste and Recyclable Materials Bylaw which establishes the following requirements for management of waste from single-family home demolitions:
 - a. achieve a minimum of 70% diversion of demolition waste, and
 - b. establish a \$250 non-refundable fee assessed as part of the demolition permit application process, and
 - c. establish a \$2/square foot refundable fee, based on demolition waste recycling performance, and
 - d. require that demolition contractors/builders submit a Waste Disposal and Recycling Services Plan as part of their demolition permit application, and a Compliance Report at the conclusion of the demolition process.
2. a new Building Inspector 1 position be approved and a position complement control number assigned; and
3. this program be considered as part of the 2016 Operating Budget process.

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

Att. 2

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

Staff Report

Origin

At their April 18, 2007 meeting, Public Works and Transportation Committee passed the following referral motion:

That the matter of requiring the submission of a demolition waste recycling plan as a requirement of the issuance of demolition permits be referred to staff for review and comment to the Committee on the feasibility of the proposal.

In addition, at their March 3, 2015 meeting, Planning Committee passed the following referral motion, in part, per Item (4):

That staff: . . . (4) examine options to restructure demolition fees and regulate the recycling of demolition material; and report back.

This matter has been pending subject to actions at the regional level relating to the development of the Integrated Solid Waste and Resource Management Plan (ISWRMP), which includes an action item (2.4.1) that requires demolition recycling at construction/demolition sites. In addition, the region has been working to establish some consistency through the development of a model bylaw that could be tailored and implemented by local governments as well as help foster development of facilities for processing waste and using recycled products from demolitions. In addition, a clean wood waste disposal ban at regional facilities was implemented in January 2015. These are among many action items identified in the ISWRMP that will be necessary to reach regional waste diversion targets of 70% by 2015 and 80% by 2020.

The regulatory authority to require recycling at demolition sites rests with local governments. To assist with this, the model/suggested bylaw approach developed by Metro Vancouver was used by Richmond staff to spearhead consultation with Richmond's Small Builders Group. The consultation process included undertaking a pilot project to compare current practices against a varying range of options for increased recycling.

This report presents the results of the consultation process and pilot project, and recommends development of a bylaw to require recycling of demolition waste from single-family home demolitions.

Analysis

Background

Based on 2013 Metro Vancouver recycling and solid waste quantity data, demolition, landclearing and construction (DLC) waste accounts for 30% of total waste disposed in the region, or approximately 392,000 tonnes. The majority of the disposed waste is made up of wood waste and mineral aggregates (rubble, soil, asphalt products, concrete and stucco, etc.). The balance includes metals, plastics, organics, glass and hazardous waste. Past waste composition studies for Metro Vancouver indicate that over 55% of DLC waste is from single-family residential demolition. Diversion rates are lowest for single-family residential

demolitions, compared to demolitions of multi-family residential or non-residential structures. The most impactful initiative, therefore, would be one that targets single-family residential home demolitions.

Over 510 demolition permits are issued on average annually in Richmond based on five year trend data. A summary of demolition permit activity over the last five years is provided below for information:

2010: 558
2011: 653
2012: 492
2013: 332
2014: 521

In 2010, Richmond's demolition permit activity represented approximately 20% of that across the region. Based on disposal tonnages at the Vancouver Landfill in 2012 and 2013, it is estimated that 70,000 tonnes of demolition waste disposed of from projects in the region originates in Richmond. Collectively, demolitions in the four largest municipalities (Richmond, Vancouver, Surrey and Burnaby) represent about 70% of the demolition activity happening across the region. It is expected that up to 80% of waste from demolition, land clearing and construction activities can be captured for recycling to help advance the region's diversion goals.

In light of the significant proportion of demolition waste originating from Richmond, actions to promote recycling of demolition waste are an important consideration to support established regional waste diversion targets. This includes initiatives that are both corporate and community based.

Corporate Action

As an initial step and as part of leading by example, Council adopted Policy 2308 at their June 23, 2014 meeting (Attachment 1). This policy establishes a target of 80% diversion for waste from City facilities-based projects, including demolition and construction activities. This policy is administered by the Project Development section of the Engineering and Public Works Division.

Community Action

Pilot Program Results

To establish an effective approach to promote recycling at the community level, consultation with Richmond's Small Builders Group was undertaken. The scope included waste from single-family home demolitions, based on Metro Vancouver's findings, which indicate that the majority of material sent to disposal facilities is from this sector. Construction waste and that from demolitions of multi-family residential or non-residential structures are not targeted at this time based on low demolition waste volumes from these sectors. In construction, this is principally due to economic reasons. Current industry practices relating to management of demolition waste from multi-family and non-residential structures is already at an advanced stage.

The consultation process with Richmond's Small Builders Group included seeking their input on Metro Vancouver's model bylaw as well as undertaking a pilot project in the spring of 2014. The pilot project involved testing four different recycling options at properties in Richmond to assess:

1. *Steady State*: To gain an understanding of current practices for demolition of single-family homes and diversion rates achieved.
2. *Maximum Recycling*: Use a deconstruction approach to determine maximum achievable diversion rates.
3. *Accelerated Recycling*: Aim to achieve at least a 70% diversion rate by recovering some specific materials that are not generally sorted and recovered on typical demolition projects.
4. *Mixed Loads to Recycling Facility*: An approach where normal demolition waste practices are followed with remaining waste taken to a demolition waste recycling facility. This approach is very similar to the current practise where mixed demolition materials are loaded onto a truck. However, instead of being hauled to a landfill, the materials are taken to a designated facility where materials are sorted for recycling.

Four similar-styled single family homes located in Richmond were selected for this pilot program at 9431, 9451, 9471 and 9491 Williams Road.

The results of the pilot project are summarized in the following table. This project showed that diversion rates of up to 90% can be achieved, with low to moderate time and cost impacts.

Spring, 2014: Single-family Home Demolition Recycling Pilot Initiative				
Address:	9491 Williams	9431 Williams	9451 Williams	9471 Williams
Objective	Steady State	Maximum Recycling	Accelerated Recycling	Mixed Loads to Recycling Facility
Recycling Activity Location	On Site	On Site	On Site	Off Site (mixed loads separated for recycling)
Materials Recycled ¹	<ul style="list-style-type: none"> Concrete Metals 	<ul style="list-style-type: none"> Clean wood Concrete Clean drywall Metals Mattress Asphalt 	<ul style="list-style-type: none"> Trees Concrete Metals 	<ul style="list-style-type: none"> Clean wood Trees Concrete Clean drywall
Total Cost (\$) (excludes hazardous materials)	\$ 13,548.45	\$ 18,236.21	\$ 13,916.20	\$ 21,115.81
Total Cost per ft ² (excludes hazardous materials)	\$ 6.86	\$ 9.36	\$ 5.14	\$ 7.01
Cost Variance Compared to Steady State (per ft ²)	0%	+ 36%	N/A	+2.18%
Diversion Rate	51.6%	90.1%	54.3%	89.4%
Duration (work days)	3	10	5	4

¹ Hazardous materials were managed separately for each site based on WorkSafe BC Occupational Health and Safety Regulation Part 20

Receiving Facilities

There are a number of licensed facilities in Richmond and the region that are able to accept demolition waste. These facilities are outlined in Attachment 2.

One potential concern with implementing initiatives designed to increase recycling is that existing facilities may not be able to manage increasing waste volumes (as other communities follow suit). This has been discussed at the regional level, where it is recognized that this is a supply and demand issue. As with past recycling initiatives, there is confidence that as demand for recycling services for demolition waste increases, the business opportunity will drive new facilities and increased market capacity. As it stands, there is considered to be sufficient recycling capacity to manage increased recycling volumes from a Richmond-based bylaw approach.

Approaches in Other Cities

1. The City of Vancouver introduced the following as a condition of receiving a building permit effective September, 2014:
 - 90% waste diversion from demolitions involving pre 1940's character homes, and
 - 75% recycling of other pre 1940's homes.
2. The City of Port Moody has a demolition waste management/recycling fee (set by bylaw) that is refundable based on recycling performance if at least 70% diversion is achieved.
3. The City of North Vancouver has a Council endorsed policy that requires recycling of specified materials.
4. The District of West Vancouver requires the owner to sign a notarized statutory declaration listing where material has been taken for recycling.
5. The City of New Westminster undertook a pilot program in 2015 as part of seeking consultation on the proposed Metro Vancouver bylaw that directs 100% of loads containing recyclable materials to recycling facilities.

Options

The following three options are presented for Council's consideration in relation to demolition waste recycling:

1. *Adopt Metro Vancouver Model Bylaw:*

The Metro Vancouver model bylaw would direct all source-separated or mixed loads containing recyclable materials from demolition projects to approved recycling facilities, including private facilities licensed by Metro Vancouver. The Metro Vancouver model bylaw establishes a structure where no non-refundable fees are paid. Instead, proponents pay a fee (established by the local government) which is refundable based on their recycling performance. In other words, if 100% waste diversion is achieved, they receive 100% of their fee back. If 80% diversion is achieved, they receive 80% of their fee back.

Local governments set their refundable fees at a level where forfeited fees cover administration costs and other costs associated with demolition waste management.

This option was reviewed with Richmond's Small Builders Group and was considered to be too difficult to achieve as a starting point. Discussion and preference was to establish what would still be a stretch target for industry at the outset, gradually increasing as industry practices mature. Therefore, this option is not recommended.

2. *Retain Status Quo:*

As per the findings from the pilot program, industry is already recycling just over one-half of waste (~51.6%) based on current practices including waste disposal bans and prohibitions, economies of scale, etc. Under this option, Council would take a hands-off approach and allow the industry to mature independent of any additional requirements or regulations placed on builders by the City.

This option is not recommended as it does not give the catalyst that might otherwise be needed to further waste diversion to advance the targets in the ISWRMP.

3. *Adopt a Richmond-Specific Bylaw Approach (RECOMMENDED):*

After considering the results of the pilot program and receiving input from the Small Builders Group, another option is to develop a bylaw/policy approach specific to Richmond. Under this option, a stretch target of 70% would initially be established, increasing to 80% over time as industry practices mature. Builders would pay an upfront, non-refundable fee (to cover additional administration costs), plus a fee which is 100% refundable if the 70% waste diversion target is achieved.

This is the recommended option as it will help advance demolition waste recycling and create a level playing field for builders. This option was supported by Richmond's Small Builders Group.

In reviewing both the Metro Vancouver model bylaw and the results of the pilot project with Richmond's Small Builders Group, the following key elements were developed:

- A bylaw requirement to achieve a minimum of 70% diversion of demolition waste from single-family home demolitions. As industry practices mature, the minimum diversion rate can be increased to 80%;
- A \$250 non-refundable fee assessed as part of the demolition permit application process, collected as Building Approval revenue. This fee will be retained to support an additional Building Inspector position that will be required to administer the project.
- A \$2/square foot refundable fee. The fee is refundable based on recycling performance achieved, i.e. $x/70$. For example, if 70% waste diversion is achieved, the entire fee is fully refunded. The amount of the refund is reduced proportionately if waste diversion is less than 70%. Based on an average of 510 permits issued

annually and an average single-family demolition of 2,000 square feet, annual Building Approval revenue would be \$2.04 million. It is assumed that all of this amount would be refunded, for no net budgetary impact.

- The bylaw and program is to be fully administered by the Building Approvals group.
- Demolition contractors/builders will be required to complete a Waste Disposal and Recycling Services Plan and pay the applicable fees as part of their demolition permit application. At the conclusion of the demolition, the contractor must submit a compliance report, with supporting receipts attached for review by the City. Compliance reports are reviewed by the City for accuracy/completeness and appropriate refundable fees applied based on recycling performance.

Under the proposed approach, it is estimated that 10% of total regional demolition waste could be diverted (50%-70% of 70,000 tonnes = 35,000 to 49,000 tonnes/392,000). This corresponds to the diversion of about 3% of the overall regional waste going to disposal (35,000 to 49,000 tonnes/1,328,000 tonnes). When considered against overall total regional waste generation (including recycling) of 3,348,000 tonnes, the estimated diversion of 35,000-49,000 tonnes from this initiative would represent one percentage point closer to the regional diversion goal of 80% by 2020.

Resource Requirements

Staff note that a new position for a Building Inspector to administer this program is required due to the added workload. Generally, three hours per permit is required at the commencement of the program, or one full time equivalent for every 500 permits. Once the program is established, the required processing time reduces to two hours per permit. Based on this range and the average number of demolition permits issued by the City annually (approximately 510) as well as the expectation that future demolition permit activity will be higher, it is estimated that one new full-time equivalent position will be required. Staff, therefore, are seeking approval for a new full time building inspector position as part of this initiative.

Next Steps

Should Council support the recommended approach, staff would recommend that a Demolition Waste and Recyclable Materials Bylaw be prepared and brought to Council for consideration. Staff envision the new requirements coming into effect in the first quarter of 2016 to allow industry sufficient notice and time to adapt their practices.

Financial Impact

The cost for a building inspector is \$115,220, including fringe, fleet vehicle and related items. Full cost recovery for this additional resource will be recovered as part of the proposed \$250 demolition waste permit fee, for no net budgetary impact, i.e., the estimated revenue from the demolition waste permit fee is \$127,500, based on issuing an average of 510 permits.

The above expenditure amounts and offsetting revenues will be included in the 2016 budget process, for consideration.

Conclusion

Development of a process to require demolition recycling is a key initiative identified in the Regional Integrated Solid Waste and Resource Management Plan. After consultation with Richmond's Small Builders Group, staff are recommending support for development of a Richmond-specific bylaw to require 70% waste diversion for demolition of residential single-family homes, commencing in 2016.



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- Att. 1: Policy 2308 – Management of Waste and Recyclable Materials from City Facilities
Demolition and Construction Activities
2: Demolition Waste, Recycling and Disposal Facilities at and Near Richmond



City of Richmond

Policy Manual

Page 1 of 1	Adopted by Council: June 23, 2014	Policy 2308
File Ref: 6370-00	MANAGEMENT OF WASTE AND RECYCLABLE MATERIALS FROM CITY FACILITIES DEMOLITION AND CONSTRUCTION ACTIVITIES	

POLICY 2308:

It is Council policy that:

1. TARGETS

- 1.1 The City of Richmond will target a diversion rate of 80% by weight for the demolition of City facilities houses, new facility construction, and major facility renovations, recognizing that in some instances it will not be feasible to achieve this target in a fiscally prudent manner.

2. OBJECTIVE

The City of Richmond will:

- 2.1 Continue to increase the reuse and recycling of demolition, land clearing and construction (DLC) waste from City facilities.
 - (a) Require contractors to provide a Waste Disposal and Recycling Services Plan for demolition and construction projects.
 - (i) Require contractors to provide a Compliance Report, documenting adherence to the Plan.
 - (b) Prioritize the salvage of building components for reuse, then recycling, and finally other waste diversion and disposal technologies, whenever technically feasible and fiscally prudent.
 - (c) Encourage contractors to recycle and/or salvage for reuse wood especially, to help build markets for wood waste diversion, and avoid disposal.
 - (i) Require that all clean/untreated wood waste be reused or recycled.
- 2.2 Seek to improve DLC waste management practices in the demolition and waste management industries.
 - (a) Document and share the City's DLC waste management practices with industry.
- 2.3 Ensure the demolition activities of City facilities shall comply with the applicable health and safety regulations.
 - (a) Ensure a qualified person inspects the site to identify hazardous materials that may be handled, disturbed or removed.
 - (b) Ensure the City is provided the resulting hazardous materials report.

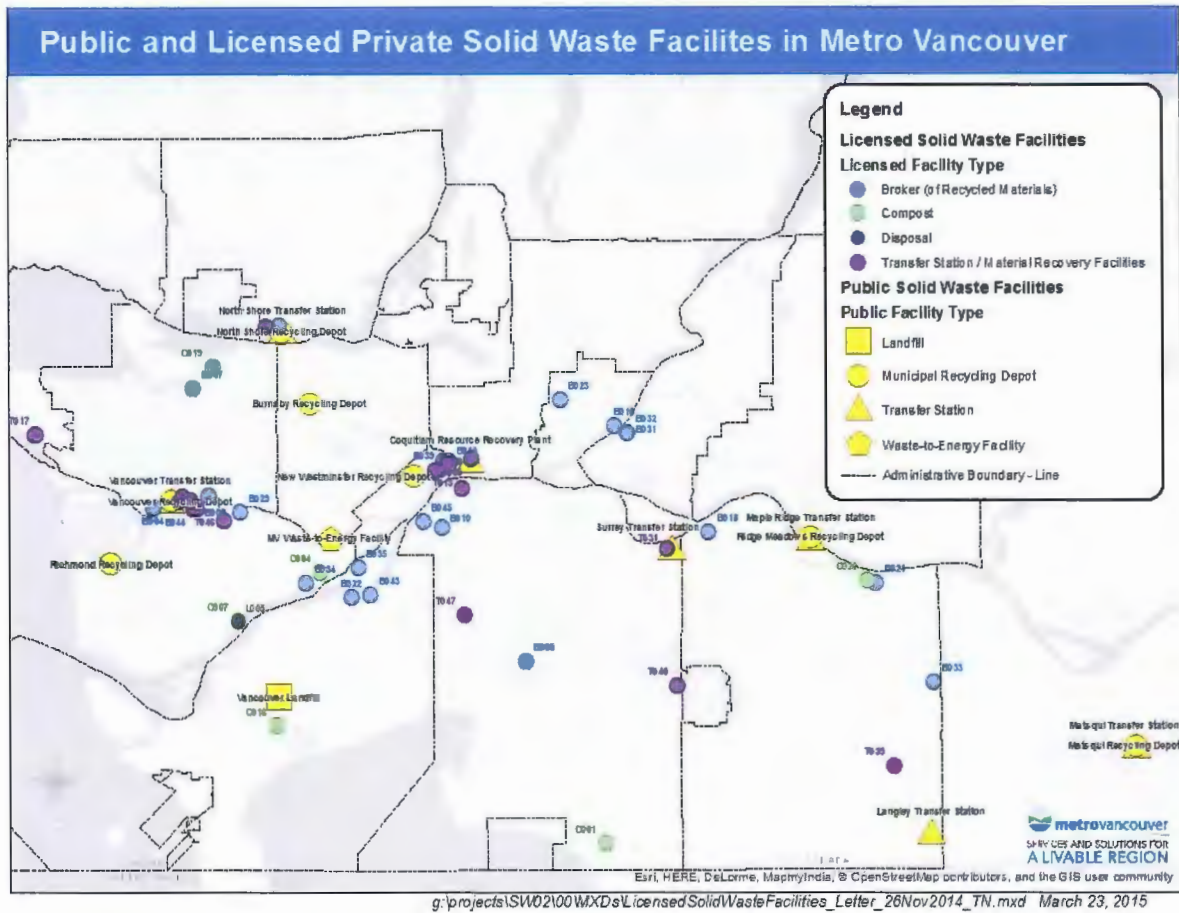
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Attachment 2

Demolition Waste, Recycling and Disposal Facilities At and Near Richmond

		Address	Issued	Status	Material
Licensed specific material brokers					
1	B008 New West Gypsum Recycling (B.C.) Inc	38 Vulcan St., New Westminster, BC	1997	Active	Gypsum drywall
2	B022 Basran Fuels Ltd.	9486 River Road, Delta, BC	2011	Active	Wood waste
3	B034 Lafarge Canada Inc.	7611 # 9 Road, Richmond, BC	2011	Active	
4	GRE Manufacturing Cdn. Inc	10064 River Road, Delta, BC	2013	Active	Glass
5	Stonewolf Ventures Ltd. (Tidy Trailers)	11571 Twigg Place, Richmond, BC	2013	Active	DLC Materials
Currently don't require a license (using specific recycled materials, used building material retailers)					
6	Lock Block	115-13171 Mitchell Road Richmond, BC			Concrete
7	Columbia Bitulithic Lafarge	13340 Mitchell Road, Richmond, BC			Concrete, asphalt
8	Richmond Steel	11760 Mitchell Road Richmond, BC			Metals
9	Ailed Salvage and Metals	11651 Twigg Pl, Richmond, BC			Metals
10	Mainland Sand and Gravel	- 12500 No 5 Rd, Richmond, BC - 14271 River Rd, Richmond, BC			Concrete, asphalt
11	Regional Recycling	13300 Vulcan Way, Richmond, BC			Cardboard, scrap metal
12	Richvan Holdings Ltd.	15300 River Rd, Richmond, BC			Concrete, asphalt
13	Fairway Disposal	11566 Twigg Place, Richmond, BC			Concrete, asphalt
14	Jack's New and Used	4912 Still Creek Ave, Burnaby, BC			Used building materials
15	Habitat for Humanity	7977 Enterprise Street, Burnaby, BC 69 West 69 th Avenue, Vancouver, BC			Used building materials
Licensed DLC MRFs, transfer stations, or landfills with recycling drop-off					
16	T001 Urban Wood Waste Recyclers Ltd.	110 East 69th Avenue, Vancouver, BC	1997	Active	Wood waste
17	T027 Urban Wood Waste Recyclers Ltd.	4 Spruce Street, New Westminster, BC	2003	Active	Wood waste
18	T003 726223 B.C. Ltd. (Waste-Away Disposal Services)	11560 Twigg Place, Richmond, BC	1996	Active	
19	T005 Inner-City Demolition Ltd.	11640 Twigg Place, Richmond, BC	1998	Active	Concrete, asphalt, cardboard, land clearing debris, plates, soap metal, wood, mixed construction waste
20	T045 (Mitchell Island MRF)	11611 Twigg Place, Richmond, BC	2007	Active	
21	Northwest Group Properties	460 East Kent Avenue South, Vancouver, BC	2013	Active	
22	Smithers Enterprises	8501 Ontario St, Vancouver, BC			
23	Pacific Carpet Recycling (PAC Recycling)	130 – 2351 No.6 Road, Richmond, BC	2014	Active	Used carpet
24	EcoWaste Industries	15111 Williams Rd, Richmond, BC	1997	Active	Wood, gypsum, drywall, metal
25	Vancouver South Transfer Station	377 West Kent Avenue North, Vancouver, BC			Wood
26	Vancouver Landfill	5400 72nd Street, Delta, BC			Drywall

Attachment 2 (cont'd)



Attachment 2 (cont'd)



Metro Vancouver Licensed Solid Waste and Recyclable Material Facilities

License	Licensed Name	Site Address	Issued	Status
B002	733166 B.C. Ltd. (Western Material Recovery)	11610 Twigg Pl., Richmond, BC	2000	Active
B003	Halton Recycling Ltd. (Emterra Environmental)	132 Riverside Dr., North Vancouver, BC	1997	Active
B004	Halton Recycling Ltd. (Emterra Environmental)	955 W. Kent N. Ave., Vancouver, BC	1997	Active
B005	Halton Recycling Ltd. (Emterra Environmental)	6362 -148th St., Surrey, BC	1997	Active
B008	New West Gypsum Recycling (B.C.) Inc.	38 Vulcan St., New Westminster, BC	1997	Active
B010	Cascades Recovery Inc.	12345 - 104 Ave., Surrey, BC	1997	Active
B013	Wastech Services Ltd.	1001 United Blvd., Coquitlam, BC	1997	Active
B016	Augustine Trucking Ltd.	1708 Perkins St., Port Coquitlam, BC	2001	Active
B018	Cloverdale Fuels Co. Ltd.	20408 - 102B Avenue, Langley, BC	2004	Active
B021	James Environmental Services	8910 - 256th Avenue, Langley, BC	2008	Active
B022	Basran Fuels Ltd.	9486 River Road, Delta, BC	2011	Active
B023	Happy Star's Recycling Services Ltd.	1603 Langan Ave., Port Coquitlam, BC	2009	Active
B029	Urban Impact Recycling Ltd.	15360 Knox Way, Richmond, BC	2010	Active
B031	Augustine Soil & Mulch Ltd.	17949 Kennedy Road, Pitt Meadows, BC	2011	Active
B032	Meadows Landscape Supply Ltd.	17949 Kennedy Road, Pitt Meadows, BC	2011	Active
B033	Recyc-Mattress Inc.	Unit 212 - 27353 58th Crescent, Langley, BC	2011	Active
B034	Lafarge Canada Inc.	7611 #9 Road, Richmond, BC	2011	Active
B035	Canadian Mattress Recycling Inc.	1210 Cliveden Avenue, Delta, BC	2011	Active
B039	Urban Impact Recycling Ltd.	5 Capilano Way, New Westminster, BC	2011	Active
B043	GRE Manufacturing Cdn. Inc.	10064 River Road, Delta, BC	2013	Active
B044	Stonewolf Ventures Ltd.	11571 Twigg Place, Richmond, BC	2013	Active
B045	International Material Recovery Inc.	10619 Timberland Road, Surrey, BC	2013	Active
B046	Pacific Mattress Recycling Inc.	8275 Sherbrooke Street, Vancouver, BC	2014	Active
B047	Recycling Alternative	449 Industrial Ave, Vancouver, BC	2014	Active
C001	Baird Cattle & Border Feedlot Corp.	17256 - 8th Ave., Surrey, BC	1997	Active
C004	Fraser Richmond Soil & Fibre Ltd.	End of No. 8 Rd., Richmond, BC	1997	Active
C007	Ecowaste Industries Ltd.	15111 Williams Rd., Richmond, BC	1997	Active
C016	Enviro-Smart Organics Ltd.	4295 72nd Street, Delta, BC	2011	Active
C019	Strathcona Business Improvement Association	1235 East Hasting Street, Vancouver, BC	2012	Active
C020	Glenval Organics Ltd.	25330 88th Avenue, Langley, BC	2013	Active
L005	Ecowaste Industries Ltd.	15111 Williams Rd., Richmond, BC	1997	Active
T001	Urban Wood Waste Recyclers Ltd.	110 East 69th Ave., Vancouver, BC	1997	Active
T003	726223 B.C. Ltd. (Waste-Away Disposal Services)	11560 Twigg Pl. Richmond, BC	1996	Active
T005	Inner-City Demolition Ltd.	11640 Twigg Pl. Richmond, BC	1998	Active
T009	Wastech Services Ltd.	1200 United Blvd., Coquitlam, BC	1997	Active
T013	Bright Sky Disposal Ltd.	12863 - 116 Ave., Surrey, BC	1998	Active
T015	King Kubota Services Ltd.	140 Mountain Hwy, North Vancouver, BC	1998	Active
T017	The University of British Columbia	6055 Nurseries Rd., Vancouver, BC	1999	Active
T027	Urban Wood Waste Recyclers Ltd.	4 Spruce Street, New Westminster, BC	2003	Active
T031	Wastech Services Ltd.	9770 - 192nd Street, Surrey, BC	2004	Active
T032	AWS Transport Ltd.	11 Braid Street, New Westminster, BC	2006	Active
T039	Cloverdale Disposal Ltd.	26116 31B Avenue, Langley, BC	2012	Active
T040	Northwest Group Properties Inc.	19500 - 56th Avenue, Surrey, BC	2012	Active
T041	Northwest Group Properties Inc.	460 East Kent Avenue South, Vancouver, BC	2013	Active
T042	Smithers Enterprises Inc.	8501 Ontario Street, Vancouver, BC	2013	Active
T043	Eagle Disposal Inc.	11611 Twigg Place, Richmond, BC	2013	Active
T044	Northwest Group Properties Inc.	460 East Kent Avenue South, Vancouver, BC	2014	Active
T046	Pacific Carpet Recycling (PAC Recycling)	130 - 2351 No. 6 Road, Richmond, BC	2014	Active
T047	Great West Disposal Inc.	7800 Anvil Way, Surrey, BC	2014	Active

as of June 1, 2015

Source: <http://www.metrovancouver.org/services/Permits-regulations-enforcement/PermitRegulationEnforcementPublications/ActiveSolidWasteLicenceList.pdf>