

Engineering & Regional Utilities 2014 Solid Waste Annual Report



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1.0 Introduction

The City is responsible for planning, implementing and administering single family curbside recycling, composting, and garbage collection programs, managing the operations contract for the Abbotsford Mission Recycling Depot (AMRD), abandoned materials litter pick-up and waste reduction programs. This annual report provides an overview of the City’s 2014 programs and services, plus outlines objectives planned for 2015 to achieve further waste reduction.

2.0 Fraser Valley Regional District

The City is a member of the Fraser Valley Regional District (FVRD) and works under the mandate of the FVRD Solid Waste Management Plan to effectively manage municipal solid waste and reduce the amount of waste requiring disposal. In 2014, revisions to the FVRD Solid Waste Management Plan (Plan) were finalized and the Plan was submitted to the BC Ministry of Environment for approval. A committee, which includes representation from the City, provides guidance with respect to revision of the Plan and will also monitor implementation of the updated Plan. The updated Plan included the following goals:

- 1) Reduce waste generation
- 2) Maximize diversion and material recovery with key actions including establishing a mixed waste material recovery facility, and implementation of an organics ban
- 3) Dispose of residuals responsibly

One of the suggestions in the plan includes a Materials Recovery Facility (MRF), which is a facility where black bag garbage is sent to further remove compostables and recyclables prior to disposal, and would help the region strive for an even higher diversion rate. The idea of a MRF is in preliminary stages of exploration and discussion. The FVRD plans to implement an organics ban, prior to building a MRF.

The City will continue to align its services with the goals of the FVRD.

3.0 Garbage, Recycling and Compostable Curbside Collection Services

The 2014 curbside collection for Abbotsford single family and duplex homes is summarized in the table below. All homes received weekly compostable and recyclable collection, and bi-weekly garbage collection.

# of Homes	Collector
12,451	Contractor
13,204	City

The private contractor providing services was Emterra Environmental.

In 2014, the solid waste utility rate was \$220 (same as 2013) for single family residences, with the exception of 2,800 western rural homes where the fee was \$204 (an increase of \$12 from 2013). Historically, these homes received bi-weekly garbage

collection while the rest of the City received weekly collection, and their fee is being phased in to match all other homes.

Multi-family residences were charged \$13 for the processing of recyclables at AMRD. Appendix I shows the historical collection rates and the corresponding tipping fee at the Matsqui Transfer Station.

4.0 Diversion Summary Statistics

The diversion rate is the percentage of materials being recycled or composted, instead of being sent to the landfill. The 2014 single family residential diversion rate was 66.9%, which includes curbside compostable collection and yard waste drop off with a residential coupon at Net Zero Waste. This is comparable to the 2013 single family residential diversion rate of 67.4%, and is a significant improvement from the 2012 diversion rate of 45.6%. The large increase in residential diversion is largely due to the implementation of weekly curbside compostable collection and the reduction of garbage collection to bi-weekly across the City in 2013. Historical diversion rates can be seen in Appendix II.

5.0 Recycling

In 2014, the recycling program was comprised of the following components:

- Weekly curbside collection of recyclables for all single family homes;
- The AMRD, including:
 - residential recyclables and hazardous waste residential drop-off area;
 - commercial recyclables drop-off area;
 - recyclables processing area;
 - compost demonstration garden; and
 - recycling education centre.
- Abandoned materials pick-up;
- Public education and outreach;
- Recycling initiatives at multi-family and Industrial, Commercial, and Institutional (ICI) properties; and
- Participation in the FVRD Solid Waste Management Plan.

Provincial product stewardship programs for oil filters and containers, electronics, small appliances, beverage containers, tires, paint, medications, lead-acid batteries, solvents and flammable liquids complement the City's programs. The initiation dates of each of these programs can be found in Appendix III. Most of these materials are accepted for drop-off at the AMRD. A more complete list of stewardship disposal options is provided in Appendix VII.

In 2014, the Province added a packaging and printed paper stewardship program. The City of Abbotsford has requested to join this program but Multi-Material BC, the program steward, had not accepted the City into the program by the end of 2014.

5.1 Single Family Curbside Recycling

In 2014, curbside collection of recyclables was provided to all single family and duplex homes, totaling over 25,000 units. The following recyclables were collected in transparent blue bags:

- Beverage containers, including tetra paks;
- Cardboard;
- Newspapers, magazines, office paper and phone books;
- Glass bottles and jars;
- Tin and aluminum cans and foil;
- Milk cartons;
- Plastics: numbers 1, 2, 4 and 5; and
- Film plastics.



The AMRD performs waste audits approximately every two years, or as needed, on behalf of Abbotsford and Mission. The most recent audit was performed in the summer of 2013. Materials from Abbotsford and Mission garbage and recycling are sorted into distinct categories to better understand their composition. Abbotsford curbside recycling was found to contain 62% paper products, 15% plastics, 7% glass, 5% refundable containers, 4% metals and 7% residual solid waste. This can be seen in Figure 1.

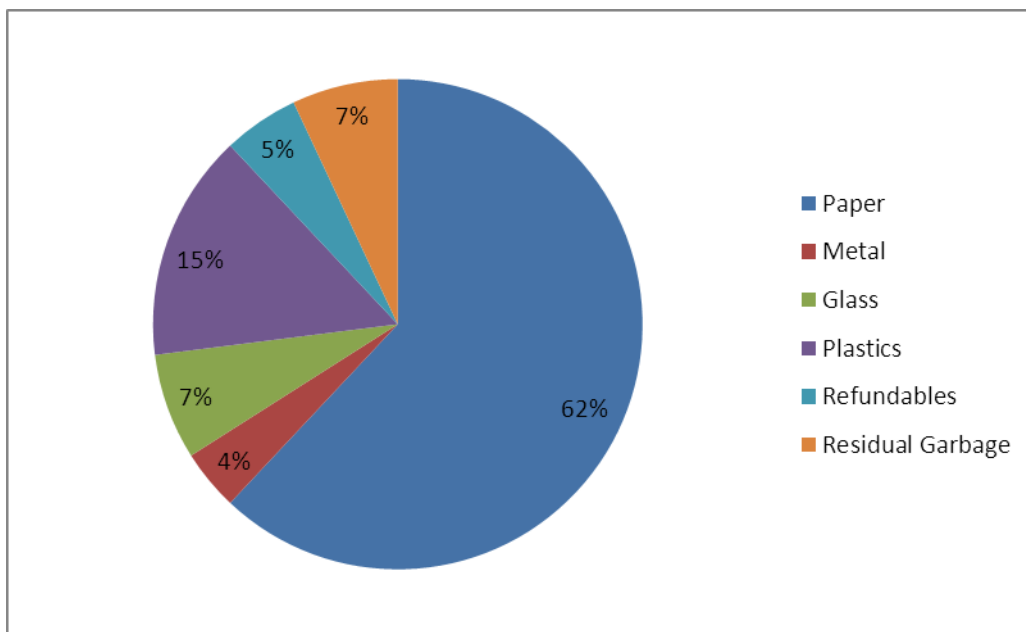


Figure 1: 2013 Composition of Abbotsford Recycling

In 2014, approximately 5,400 tonnes of recyclables were collected from the curbside blue bag program. This is comparable to 2013, and increased from 4,700 tonnes in 2012. The increase is likely due to the introduction of bi-weekly garbage collection, while maintaining weekly recyclable collection. Appendix IV shows historic amounts of recyclables collected at the curbside.

2014 curbside recycling tonnages were comparable to 2013 and increased 15% from 2012.

5.2 Multi-Family Recycling

In 2014, there were over 18,000 multi-family residential units in Abbotsford. Multi-family residential properties were required under Bylaw No. 2213-2013, “Solid Waste Collection Bylaw” to maintain a program for the separate collection of recyclables from residents of that property. Recycling collection arrangements for multi-family complexes may vary by contract, but must include all blue bag recyclables. Each property owner is responsible for disposing recyclables at an authorized recycling depot.

A 2009 audit of the 400 multi-family complexes in Abbotsford showed a bylaw compliance rate of 99%. In 2014, staff conducted 17 audits at multi-family complexes. Fourteen were found to be in complete compliance, and two properties were found to have only cardboard recycling. All properties are now within compliance. In 2015, staff will continue to inspect multi-family complexes where complaints or concerns are identified and will conduct several random audits as well. Where concerns are identified, staff will provide support, as necessary, to achieve compliance with the Bylaw.

5.3 Industrial, Commercial & Institutional (ICI) Recycling

In 2012, Bylaw No. 2213-2013 was amended to require recycling at ICI properties. ICI properties are required to make their own arrangements for collection and disposal of garbage and recyclables. In 2014, staff conducted four random inspections at ICI properties. Three were found to be in complete compliance, and the fourth came into compliance. In 2015, staff will continue to inspect ICI properties where complaints or concerns are identified and will conduct several random audits as well. Where concerns are identified, staff will provide support as necessary to achieve compliance with the Bylaw.

5.4 Abbotsford Mission Recycling Depot (AMRD)

The AMRD is owned jointly by the City of Abbotsford (City) and District of Mission (District) and operated through a service agreement with Abbotsford Community Services (ACS). Recyclables arriving at the AMRD are sorted by a combination of hand-sorting and machine-sorting. The sorted commodities are then baled and shipped to various processing facilities in the Lower Mainland and overseas. Each commodity is subject to market fluctuations, and the operating budget is adjusted based on current commodity values.

The AMRD features a free drop-off area for recyclables and household hazardous waste. The materials accepted at the drop-off area in 2014 included:

- all blue bag recyclables;
- paint (good quality paint may be made available for others to use);
- gasoline;
- flammable liquids;
- household pesticides;
- batteries (car, household);
- scrap metal (washers, dryers, stoves, propane tanks, etc.);
- electronics (televisions, printers, etc.);
- cell phones and cell phone batteries;

- ink jet cartridges;
- fluorescent tubes;
- small appliances;
- smoke alarms;
- toilets; and
- aerosol cans.

Appendix V identifies the historic recyclable material received at the AMRD from the City of Abbotsford. In 2014, approximately 15,000 tonnes of recyclables were received from the City of Abbotsford with approximately 5,400 tonnes from the curbside collection of blue bags and 9,600 tonnes from residential and ICI drop off. This tonnage is increased from approximately 12,000 tonnes of recyclables received in 2013. The primary reason for this increase is likely a combination of greater participation in recycling by the ICI sector, and increased recycling coming from outside of Abbotsford due to zero tipping fees at the AMRD whereas other locations charge tipping fees.

The AMRD Recycling Education Centre

The Recycling Education Centre opened in September 2008 and is used by the AMRD to provide environmental programs for the community. In 2014, the ACS Recycling Education Coordinator and staff hosted and attended many events and schools (see section 8.0 for more information).

FVRD Compost Demonstration Garden

The AMRD has a Compost Demonstration Garden that is open to the public during business hours. The Compost Demonstration Garden allows the community to learn about composting and pesticide-free gardening techniques. In addition, visitors can also learn how rain barrel systems are placed and connected to the gutter system.

6.0 Compostable Collection



Starting in 2013, single family residents received weekly compostable collection, which included all food and yard waste. In 2014, collection was limited to ten compostable collection containers per household, with free drop off at the Net Zero Waste Abbotsford Composting Facility (NZW) for any additional items. All curbside materials were taken to NZW to be composted.

9,555 tonnes of curbside food and yard waste were diverted from landfill in 2014, compared to about 9,209 tonnes in 2013. The amount of total residential free (coupon) yard waste drop off at NZW in 2014 was 703 tonnes and an additional 4,138 tonnes were from other drop-off, primarily commercial sources. Historic compostable waste amounts are available in Appendix VI. The significant increase in compostable collection relative to 2012 is due to the initiation of weekly curbside compostable collection in 2013.

Compostable collection from residential drop-off and curbside collection increased 9% from 2013 to 2014.

7.0 Garbage

Garbage is what remains in the solid waste stream following all possible diversion activities. In 2014, all single family and duplex residences were provided bi-weekly curbside garbage collection. Garbage was limited to three 80L containers. Curbside garbage was deposited at the Metro Vancouver Matsqui Transfer Station (MTS) and then transferred to the Cache Creek Landfill. In 2014, approximately 7,700 tonnes of garbage was sent to the MTS from the residential curbside collection program. This is a slight increase from 7,200 tonnes in 2013, but is significantly lower than 2012 when 12,600 tonnes of garbage was sent to the MTS.

The amount of garbage processed at MTS from the City increased slightly from 2013 to 2014, but decreased 43% between 2012 and 2013.

In 2013, a waste and recycling audit was performed. Abbotsford curbside garbage was found to contain 15% recyclables, 32% compostables, with garbage comprising 36%. It also should be noted that in 2013, pet waste comprised 11% of the garbage stream. The 2013 breakdown can be seen in Figure 2.

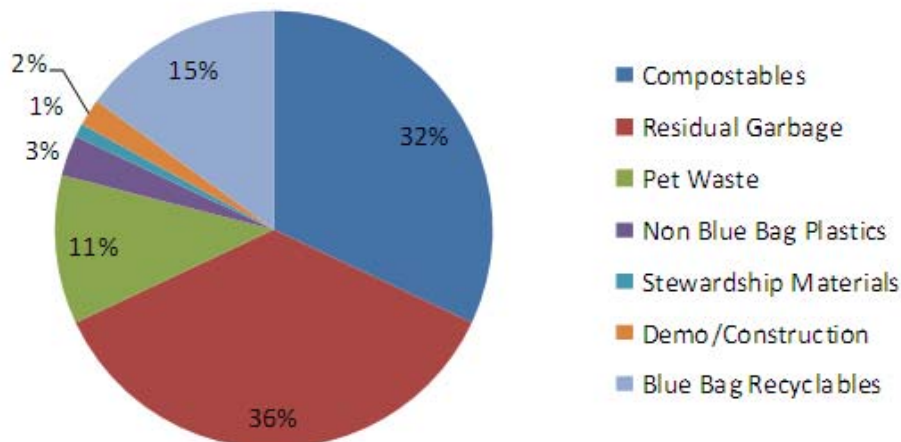


Figure 2: 2013 Composition of Abbotsford Garbage

Appendix I contains the historic MTS tipping fees. Tipping fees are expected to continue to increase over the next few years. In order to minimize disposal costs, the City must continue to decrease waste generation and increase recycling and composting efforts. Additionally, in 2014 the City gave the Matsqui Transfer Station one year’s notice for discontinuation of drop-off of curbside materials, and starting on November 1, 2015 will be bringing garbage to the First Class Transfer Station for disposal.

In 2014, garbage generated from multi-family, ICI properties, and the demolition, land clearing and construction (DLC) sector was accepted at the MTS and at private facilities, such as the BFI/Progressive and the First Class transfer stations. Garbage from these private facilities was hauled to the Roosevelt Regional Landfill in Washington State.

Some waste from Abbotsford was also sent to First Nations landfills in the Fraser Valley. Limited disposal bans and lower tipping fees at the private facilities are resulting in decreased tonnages at MTS and increased tonnages at private and First Nations facilities.

According to information provided by the FVRD and Metro Vancouver, the total amount of waste sent to transfer stations in Abbotsford in 2012 (most recent numbers available) from single family, multi family, ICI and DLC sectors is 168,500 tonnes. 50,700 tonnes were received at the Matsqui Transfer Station, 94,200 tonnes at the BFI Transfer Station, and 23,600 tonnes at the First Class Transfer Station. 18,300 tonnes received at the Matsqui Transfer Station and an estimated 75,000 tonnes received at the BFI Transfer Station were from Metro Vancouver. The tonnage received at the Matsqui Transfer Station in 2013 decreased to 42,300 tonnes, of which 18,400 tonnes were from Metro Vancouver. The Matsqui Transfer Station will be closing on November 1, 2015.

8.0 Public Education & Outreach

The City has an operating agreement with Abbotsford Community Services, which includes promotion of waste reduction and recycling initiatives throughout the community. In 2014, the AMRD promoted the solid waste and recycling program by participating in events, giving presentations to community groups, ICI and MF sectors, presenting educational workshops at schools, offering free composting classes and leading tours of the Compost Demonstration Garden. The AMRD participated in many events, including Canada Day, Berry Beat Festival, Pumpkin Decorating, Abbotsford Christmas Tree Lighting, and the Mission Candlelight Parade. Presentations were given to various organizations and thousands of students participated in school workshops.



Public outreach also included the following:

- Waste collection schedules delivered annually to all single-family and duplex residents receiving City collection;
- Recycling, Composting and Garbage Handbooks available online, at City Hall, Abbotsford Recreation Center (ARC), Matsqui Recreation Center (MRC), AMRD and at the Public Works Yard;
- Educational stickers developed for residents requiring additional information at the curb;
- Support for community clean ups and events such as Compost Awareness Week, Waste Reduction Week and Earth Day;
- Support for local schools through development of recycling and composting programs and educational materials;
- City's Garbage and Recycling website providing detailed information on collection requirements, collection calendars, facility information, alternatives to disposal and waste reduction tips;
- Collection and diversion messaging on side of waste collection vehicles;

- Newspaper City Page advertisements and telephone messages on hold; and
- Additional public outreach in the form of utility bill inserts, billboard advertising, posters, kitchen catcher pail delivery and program brochures to promote the curbside compostable collection.

9.0 Conclusion

Waste reduction and recycling efforts have achieved positive results in 2014. Although population continues to rise, the City of Abbotsford has seen the amount of garbage requiring disposal decrease, and recycling and compostable collection increase.

Staff will work on the following initiatives in 2015 to decrease waste generation, increase diversion efforts, and maintain low costs:

- Continue support, education and promotion for curbside recycling and compostable collection and bi-weekly garbage collection.
- Begin program development and public consultation for a City-wide multi-family compostable collection program.
- Continue program development and public consultation for compostable collection in the food services and processing sector, while continuing to support the ICI recycling program.
- Continue to work with the provincially approved stewardship agency to explore the possibility of joining the packaging and printed paper extended producer responsibility program.
- Investigate opportunities and work with industry to increase demolition, land clearing, and construction (DLC) recycling.
- Continue to develop an inventory of reduce and reuse options currently available in the City.
- Foster an ethic of stewardship throughout the City with continued messaging, community engagement and education campaigns.
- Conduct inspections of multi-family properties to ensure they are in compliance with the recycling Bylaw, and provide assistance as necessary.
- Conduct inspections of ICI properties to ensure they are in compliance with the recycling Bylaw, and provide assistance as necessary.
- Develop and implement a communication plan to inform the public and businesses of the closure of the Matsqui Transfer Station on October 31, 2015, and the availability of options.
- Increase diversion through existing programs.

Appendix I – Historical Residential Garbage Rates and Matsqui Transfer Station Tipping Fees

Year	MTS Tipping Fee	Residential Garbage (except West Rural)	West Rural Garbage (Former Bi-Weekly)	Multi-Family Recycling
2007	\$64.00	\$120.00	\$100.00	\$10.00
2008	\$68.00	\$125.00	\$105.00	\$10.00
2009	\$71.00	\$174.00	\$154.00	\$12.00
2010	\$83.25	\$205.00	\$170.00	\$12.00
2011	\$92.35	\$215.00	\$175.00	\$13.00
2012	\$108.45	\$220.00	\$180.00	\$13.00
2013	\$108.55	\$220.00	\$192.00	\$13.00
2014	\$109.65	\$220.00	\$204.00	\$13.00
2015	\$110.65	\$220.00	\$220.00	\$13.00

Appendix II – Historical Residential Diversion Rates

Year	Diversion Rate***
2008	36.8%
2009*	40.5%
2010	43.6%
2011	45.3%
2011 – In Food Waste Pilot Area	65.0%
2012	45.6%
2013**	67.4%
2014	66.9%

*Curbside Yard Waste Collection started in June 2009

**Curbside Compostable Collection and bi-weekly garbage collection started January 2013

*** All diversion rates include curbside collection, as well as residential yard waste drop off at the compost facility.

Appendix III – Provincial Product Stewardship Programs

1991 – Lead Acid Battery Collection Program

1991 – Tire Recycling Incentive Program

1992 – Used Oil Regulation

1994 – Post Consumer Paint Stewardship Program

1994 - Post Consumer Residual Stewardship Program (Paint, Pharmaceuticals, Pesticides, Gasoline)

1997 – Beverage Container Stewardship Program

2007 – Electronic Stewardship Program

2011 – Small Appliance Stewardship Program

2011 – Smoke Alarm Recycle

2014 – Packaging and Printed Paper
(Abbotsford was not included in 2014 roll out and may join in 2015)

Appendix IV – Recyclables Collected at Curbside

Year	Homes Collected From	Recyclables (Tonnes)
2008	24800	4566
2009	25100	4501
2010	25300	4869
2011	25500	5175
2012	25500	4786
2013*	25600	5425
2014	25655	5399

*Bi-weekly garbage collection started January 1, 2013

Appendix V – Recyclable Materials Received at the Abbotsford Mission Recycling Depot in 2014

Table 1: Recyclable Material Received at AMRD from Abbotsford

Item	Total (Tonnes)(2012)	Total (Tonnes)(2013)	Total (Tonnes)(2014)
Cardboard	5,820	6,232	5,509
Paper	8,575	6,710	7,455
Metal	387	409	411
Glass	172	172	166
Beverage Containers	94	119	127
Plastics	567	579	704
Electronics	409	363	372
Hazardous Waste, Paint and Batteries	158	153	194
Garbage	476	657	908
TOTAL	16,658	15,394	15,846

Table 2: Recyclable Materials Received at AMRD Historically from Abbotsford

Year	Tonnage Received (MT)
2006	8,900
2007	10,230
2008	12,287
2009	14,218
2010	14,646
2011	14,976
2012	13,750
2013	12,212
2014	14,943

Appendix VI – Compostable Tonnes Diverted

Year	Residential Drop-Off ^d (Tonnes)	Commercial Drop-Off ^d (Tonnes)	Total Drop-Off (Tonnes)	Curbside Collection (Tonnes)	Compostable Waste (Tonnes)
2008 ^a	2,966		2,966		2,966
2009 ^{a,b}	2,835		2,835	1,237	4,072
2010 ^{a,b}	1,894		1,894	2,944	4,838
2011 ^{a,b}	1,741		1,741	3,450	5,191
2012 ^{a,b}	1,881		1,881	3,907	5,788
2013 ^{a,b,c}	168	1,549	1,717	9,209	10,926
2014 ^{a,b,c}	703	4,138	4,841	9,555	14,396

Notes: a) residential yard waste drop-off started January 2008
 b) curbside bi-weekly yard waste collection added June 2009
 c) food waste added to curbside yard waste collection, changed to weekly, and garbage collection reduced to bi-weekly, across entire City, started January 2013
 d) residential and commercial drop-off only includes compostables delivered to facilities under contract to City (AMRD 2008-2012, and NZW 2013-2014)

Appendix VII – Recycling and Disposal Options in Abbotsford

Facility	Address	Phone #	Mixed Recyclables (including blue bag recyclables)	Pre-Sorted Recyclables ¹								
				Paper	Plastics (1,2,4,5)	Cardboard	Metals	Glass Jars and Bottles	Beverage Containers ² (No refund)	Beverage Containers ² (Refund if sorted)	Milk Containers	
Abbotsford Bottle Depot	33236 Walsh Ave	604-853-7770								✓	✓	✓
Abbotsford Mission Recycling Depot	33670 Valley Road	604-850-3551	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aberdeen Recycling Centre	28789 Fraser Hwy	604-857-8808									✓	✓
Moe's Bottle Depot	2625 Gladys Avenue	604-859-1979									✓	✓
R & T Recyclables & Bottle Depot	23-31550 South Fraser Way	604-852-6092									✓	✓
Regional Recycling	750 Riverside Road	604-852-9152		✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ Authorized facilities are approved under the Fraser Valley Regional District Solid Waste Management Plan.

² Beverage Containers are a part of the Extended Producer Responsibility program Return-It (www.return-it.ca).

Authorized Recycling Facilities for Other Recyclables (not required to be collected under ICI bylaw requirements) ¹												
Facility	Address	Phone #	Small Appliances ²	Large Appliances	Household Batteries ³	Car Batteries	Cardboard	Drywall (non-asbestos containing) ⁴	Electronics ⁵	Light bulbs/Light Fixtures ⁶	Paints and Pesticides ⁷	Scrap Metal
Abbotsford Bottle Depot	33236 Walsh Ave	604-853-7770							✓		✓	
Abbotsford Mission Recycling Depot	33670 Valley Road	604-850-3551	✓	✓	✓	✓	✓		✓	✓	✓	✓
BFI Canada	34321 Industrial Way	604-864-9177					✓	✓				✓
Capt'n Crunch	34314 Vye Road	604-852-1296	✓	✓	✓	✓						✓
Matsqui Transfer Station	33621 Valley Road	604-853-0508	✓	✓	✓	✓		✓				✓
R & T Recyclables & Bottle Depot	23-31550 South Fraser Way	604-852-6092	✓		✓	✓	✓		✓	✓		
Regional Recycling	750 Riverside Road	604-852-9152	✓	✓	✓	✓	✓		✓	✓	✓	✓
The Battery Exchange	34220 South Fraser Way	604-852-2772			✓	✓						

¹ Authorized facilities are approved under the Fraser Valley Regional District Solid Waste Management Plan.
^{2,3,5,6,7} Part of Extended Producer Responsibility (EPR) programs. See below for specific programs.
² ElectroRecycle (www.electrorecycle.ca); ³ Call2Recycle (www.call2recycle.ca); ⁵ Return-it (www.return-it.ca); ⁶ LightRecycle (www.lightrecycle.ca); ⁷ Product Care (www.productcare.org)
⁴ For definition of acceptable drywall with respect to asbestos, please see the drywall section of "http://www.metrovancouver.org/services/solidwaste/disposal/Pages/bannedmaterials.aspx".