

# **Recommendations for Independently-owned Vancouver Cafés to Achieve Zero Waste Targets**

**The Importance of Participating in the Circular Economy,  
Sharing Education, and Networking**

Report prepared at the request of Dillon Consulting Limited, in partial fulfilment of  
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## **Executive Summary**

Independently-owned cafés in Vancouver can achieve Zero Waste targets by participating in a circular economy, sharing education, and networking. A circular economy is the economic system that achieves Zero Waste goals by closing production loops. To integrate into a circular economy, it is important for community, businesses, and industry to link with each other in order to coordinate the use of discarded resources. Even though transferring to a circular economy from the traditional linear economy has some challenges, with government initiatives and entrepreneurial passion, it is possible. When the owner-manager has a small business, there are even more possibilities for them to change their system to become more environmentally sustainable.

According to seven interviews with owner-managers of independently-owned cafés, who have awareness of sustainable practices, they aim to achieve Zero Waste by: 1) carrying reusable materials; 2) using compostable materials as much as possible; 3) sorting waste correctly, and 4) purchasing their food and food supplies locally and from other small suppliers to manage quality and quantity of their supplies.

The challenges towards achieving Zero Waste are: 1) the gap between regulation and actual practice; 2) the gap in interest and knowledge of Zero Waste between cafés and their customers, suppliers, neighbouring businesses, and strata, and 3) lack of governmental financial support.

These challenges can be solved by businesses becoming active participants in a circular economy, sharing education, and networking since communication provides the opportunity for collaboration with each other and encourages behaviour change towards Zero Waste.

Vancouver consumers wishing to support Zero Waste initiatives should consider patronizing the following small businesses: Basic Refill, Finch's Tea & Coffee House, FLOAT ON, Greens Organic + Natural Market, Groundswell Cafe & Learning Space, Le Marché St. George, Lost + Found Café, Lupii Café, Matchstick Coffee Roasters, Second Nature Home, SweetSalt Bakery And Café, SMAK, The Mighty Oak, The Soap Dispensary, The Uncommon Café, Zero Waste Market.

**Key words:** Zero Waste, Small Business, Café, Circular Economy, Networking, Education, Success, Challenge,

## **Introduction**

Of all businesses in British Columbia (BC), 98% are small businesses that have less than 50 employees: 61% of them are in the Mainland/Southwest region of BC to which Vancouver belongs (The Government of British Columbia et al, 2015). The City of Vancouver has set a Zero Waste target: by 2020 it will reduce solid waste going to landfill and incineration by 50% from 2008 levels (City of Vancouver, 2015). Currently, the city is moving forward to focus on how businesses manage their waste (City of Vancouver, 2015). As a result, small businesses such as independently-owned cafés have a role in Vancouver's focus towards Zero Waste. In this research study interviews were done with owner-managers of independently-owned cafés to learn what they are doing to work towards Zero Waste and what their successes and challenges have been along the way. The overall response was that independently-owned cafés in Vancouver can target Zero Waste by participating in a circular economy, sharing education, and networking.

## **Zero Waste Definition**

The world standard definition of Zero Waste is written by the Zero Waste International Alliance:

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health. (Zero Waste International Alliance, 2009):

However, Zero Waste has a broad range of meanings and strictness from aiming to reduce failures and increase economic efficiency of the traditional method of

waste management, to literally Zero Waste where resource management plays a fundamental role (Bartl, 2014). Also, the term Zero Waste stands for numerous policies which show entirely different goals (Bartl, 2014). In Bartl's perspective, the term Zero Waste has no precise definition (Bartl, 2014). Therefore, owner-managers of independently-owned cafés need to set their own target goals towards Zero Waste.

Zero Waste can be achieved by “linking communities, business and industries, so that one's waste becomes another's feedstock” (Recycling Council of British Columbia, 2016).

### **Circular Economy**

A circular economy is an economic system that achieves the Zero Waste goals of waste reduction and the prevention of consumed goods being disposed in landfill. It “aims at using materials first as products, then as re-used or recycled materials and, finally, as energy” (Jurgilevich et al, 2016). A circular economy allows economic benefits and sustainable development, because the waste becomes a value-producing resource resulting in changes to the production and consumption systems of the traditional linear economy, which is a model of fast and cheap production and cheap disposal (Sauvé et al, 2016). A circular economy “rebuilds capital, whether this is financial, manufactured, human, social or natural” (Ellen Macarthur Foundation, 2016) by closing the loops at the smallest possible cycles and using a minimal amount of auxiliary inputs, such as energy, in the process (Jurgilevich et al, 2016).

In the Ellen Macarthur Foundation's model of the circular economy, flows of goods and services are separated into two systems: renewable flow management (biological flow) and stock management (technical flow) (Figure 1). In the café's case, food scraps and certified compostable containers are part of the biological flow.

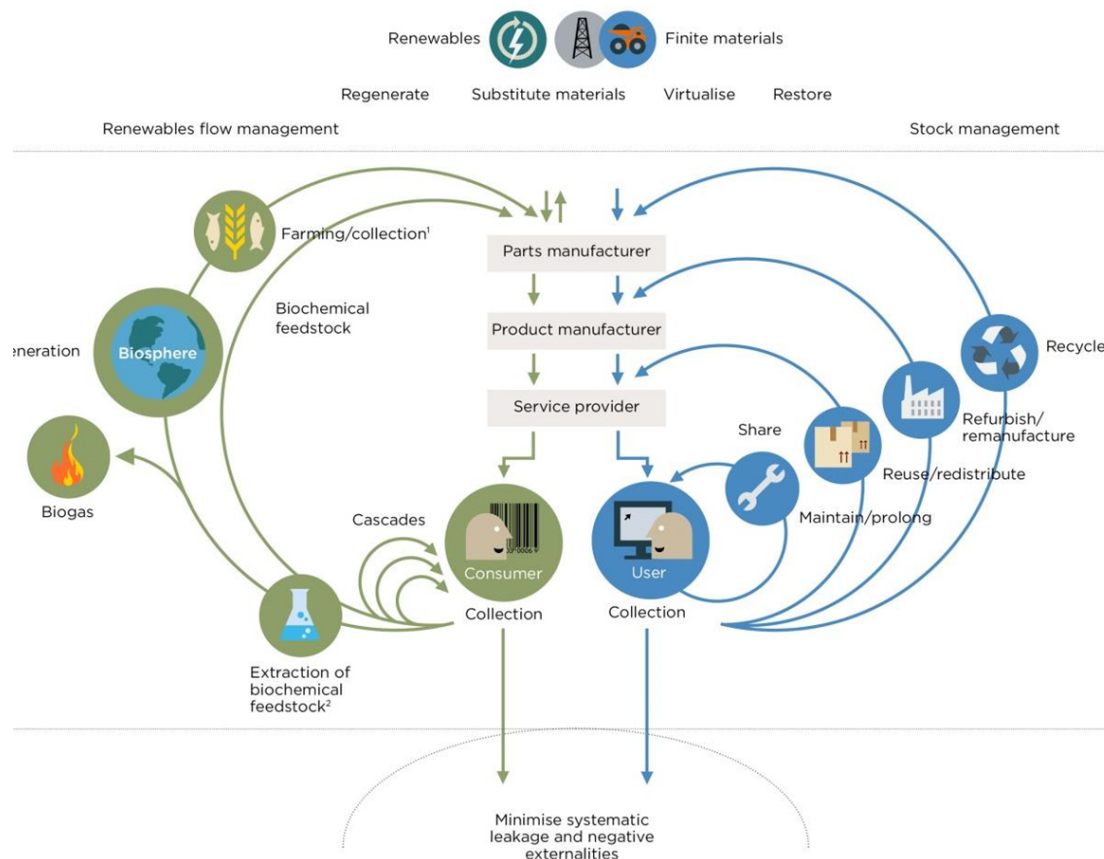


Figure 1: Circular Economy system diagram - Source: Ellen MacArthur Foundation  
<http://www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram>

All other materials, such as coffee cups, containers, packages, cutlery, equipment, and furniture represent the technical flow.

### a. Biological Flow

Jurgilevich et al. propose a circular economy specifically relating to the food system (i.e., biological flow) which can include cafés. This model of the circular economy involves “reducing the amount of waste generated in the food system, reuse of food, utilization of byproducts and food waste, and nutrient recycling” (Jurgilevich et al, 2016). Also, Jurgilevich et al. state that measures must be put into three levels: food production, food consumption, and food waste surplus management.

In the food production level, the regulation of nutrient flows using a cross-

sectoral approach is recommended, since nutrient flows affect multiple users and sectors - the agricultural sector as the nutrient-users, the waste sector for the recovery of nutrients, the energy sector for the recycling of nutrients, the consumers as the final users of foods, and local food systems, and the sanitation and waste systems in urban planning to manage nutrients safely in the society (Jurgilevich et al, 2016).

Furthermore, the localization of the food system is recommended, because it increases environmental sustainability through nutrient cycling and waste reduction (Jurgilevich et al, 2016).

In the food consumption stage, consumers play an important role in the transition towards a circular economy by making more sustainable choices: Sustainable consumption and waste management habits, including packaging campaigns, awareness and educational programs, are suggested (Jurgilevich et al, 2016).

In the food waste and surplus management stage, an integration takes place across all the relevant sectors, i.e., promoting sustainable food chain, closing material loops, revising food standards (e.g., ugly food is not waste), supporting consumers' sustainable choices in packaging, deposit-and refund schemes and recycling, and redistribution of unclaimed food (Jurgilevich et al, 2016).

## **b. Technical Flow**

For the technical flow Extended Producers Responsibility (EPR) needs to be installed into the circular economy, since it promotes that producers design less wasteful packaging or materials and reduce their usage of virgin resources as well as prevents financial disadvantages from the expense of these changes. The definition of EPR by the Organization for Economic Co-operation and Development is widely used:

an environmental policy approach in which a producer's responsibility for a

product is extended to the post-consumer stage of a product's life cycle. There are two related features of EPR policy: (1) the shifting of responsibility (physically and/or economically; fully or partially) upstream toward the producer and away from municipalities, and (2) to provide incentives to producers to incorporate environmental considerations in the design of their products. (Lifset et al, 2013)

### **c. Barriers to a Circular Economy**

However, there are some barriers for a circular economy because of its complexity gives practical challenges. The circular economy concept has been driven predominantly by academics, non-governmental organizations, and some private businesses (not the majority) (Andrew, 2015). Lack of knowledge and understanding of the concept and its representation - dramatic changes in practice - are the reasons (Andrew, 2015). Usually, manufacturing a durable long-lasting good is more expensive than the equivalent quick and disposable version (Sauvé et al, 2016). In a circular economy the costs related to a series of environmental and human health issues need to be fully integrated in the price paid by the consumers (Sauvé et al, 2016). EPR for the Packaging and Printed Paper (PPP) was regulated in BC effectively for all producers in May 2014. This exemption is applied to small producers if the company meets one of the following categories:

- Under one million dollars in annual revenues.
- Under one tonne of PPP supplied to BC residents.
- Operate as a single point of retail sale and are not supplied by or operated as part of a franchise, a chain or under a banner
- Is a registered charity (The Government of British Columbia, 2014)

This amendment was issued to protect small businesses in BC from being burdened by the expense of EPR. However, it limits small businesses from joining the circular economy. In addition it minimizes the effect of a circular economy because the majority of businesses in BC are a small business.

On the other hand, small businesses have an advantage in being able to react to changes in the business environment quicker than major corporations, since their size

is small and they have less staff, training costs, and renegotiating responsibilities (Redmond et al, 2008).

### **Small Business and Environmental Sustainability**

Owner-managers' perspectives towards environmental sustainability in small and medium size enterprises (SMEs) are key to the success of Zero Waste, because "firm performance is linked to an owner-manager's understanding of and commitment to environmental sustainability" (Battisti and Perry, 2011).

Small business owners who strive towards environmental sustainability as "bottom line" and "responsibility" are driven by personal values (Battisti and Perry, 2011). They are more ambitious and aim to minimize their waste compared to a group of small business owners, who perceive environmental sustainability as a "cost burden" and "business opportunity" (Battisti and Perry, 2011).

According to Ilomäki and Melanen's study in Finland, pressure from external stakeholders is the major stimulus for proactive SMEs to improve their environmental performance. The most important stakeholders are customers and in the case of a subsidiary company, the owner of the corporation (Ilomäki and Melanen, 2001).

In the Australian study by Redmond et. al., they found that owner-managers with environmental interests did not necessarily translate into better waste management, as a limited number implemented measures to ensure that their business disposed of waste appropriately (Redmond et al, 2008). They also found that

the owner-managers' actions were being influenced by their attitudes and awareness of the local environment" since following each of three results are considered as a cause of inaction: the majority of owner-managers had an attitude that their business had no impact on the environment, the internal barriers identified by the owner-managers to engagement related to perceptions and/or attitudes, and the owner-managers' low awareness of local environmental matters which assist appropriate waste disposal indicated a lack of commitment to the local and global environment (Redmond et al, 2008).



### **Government Initiatives**

Government initiatives through policies and the provision of waste related educational information (Appendix – List of Waste Related Information Sites) at national, provincial, and municipal levels, is important to assist small businesses in targeting Zero Waste.

For policy related to the biological flow of the circular economy, both the City of Vancouver and Metro Vancouver banned food scraps from all residential and commercial garbage as of January 1, 2015 (Metro Vancouver, 2015b). For the technical flow, both EPR and “product stewardship” programs (formerly referred to as Industry Product Stewardship in BC) are used in Canada (The Government of Canada, 2013). Beverage containers and other recyclables have been in these programs since early 90’s (Recycling Council of British Columbia, 2014). Under a Canada-wide action plan for EPR developed by the Canadian Council of Ministers of the Environment, the Province of British Columbia started an EPR program for PPP from residential properties in 2014. Even though the policy has been installed, there is no strict checking system to see if the rules are being followed. Therefore, the regulations are not compulsive enough.

For educational information, governments and non-profit organizations that involve EPR programs provide information on their websites. In Canada, the National Zero Waste Council, founded in 2013 by Metro Vancouver in collaboration with the Federation of Canadian Municipalities, started circular economy case studies for waste prevention and cross-sector collaboration (National Zero Waste Council, 2015). According to their website, they promote the circular economy and share information about the circular economy with the public by holding conferences and workshops, and through information on their website (National Zero Waste Council, 2015).

Metro Vancouver provides an annual Zero Waste conference (whose topic was “circular economy” in 2015), and educational videos and articles on their website to provide education on new policies, such as an organic disposal ban for every stakeholder. They also offer a monthly sustainability community breakfast to build networks and partnerships (Metro Vancouver, 2015c) and have created guides for restaurants that help independent cafés, as they indicate the steps for owners to follow. As discussed in the owner-manager’s perspectives towards environmental sustainability section, there are different types of owners’ values. In Metro Vancouver’s guide “How To Recycle Food Scraps a Guide for Restaurants”, it states that “every business is different and has its own culture” (Metro Vancouver, 2015b).

In addition, Metro Vancouver has an application process for local restaurants and foodservice businesses to participate in their “Food Waste Reduction Pilot” program. This program offers: collecting food waste data from the business for a 6-8 trial period, analysis of the data, and provision of waste reduction recommendations (Metro Vancouver, 2015a).

All the information described above is publicly accessible. However, how much information and how many business owner-managers access the information and can receive services is not publicly provided.

### **Current Successes and Challenges Towards Zero Waste**

I conducted seven interview sessions with owner-managers of independent cafés, one with a supplier, one with a founder of a Zero Waste grocery store, and one with a worker of Metro Vancouver (to obtain a government perspective). I targeted participant cafés that show evidence of sustainability awareness, such as using reusable cutlery, coffee cups and containers, e.g., mason jars, compostable containers,

and donating foods to community. Other independently-owned cafés can learn how to work towards zero waste from these sustainability-advanced cafés.

The successes towards zero waste of those cafés are by: 1) carrying reusable materials; 2) by using compostable materials as much as possible; 3) sorting waste correctly (compost for the biological flow and recycling for the technical flow in a circular economy), and 4) purchasing their food and food supplies locally and from other small suppliers to manage quality and quantity of their supplies.

<b>Opportunities</b>	
<b><u>Practice - Food Production Stage</u></b>	
Training staff	
<b><u>Biological Material</u></b>	<b><u>Technological Material</u></b>
Purchasing Local products	Sharing kitchen space with other small catering companies
Purchasing Edible products (ugly looking vegetables etc.)	High heat dishwasher
Choosing Extended Producer Responsibility suppliers	Used furniture and decorations
Purchasing less package products	Recycled material furniture and decorations
Purchasing big bulk as much as possible	Choosing EPR suppliers
Purchasing from small business suppliers (less packaging, easy to control quality and quantity)	
Quality and quantity management of production - no mass production	
Using biodegradable detergent	
Cooking from the scratch	
Freezing the food	
<b><u>Practice - Food Consumption Stage</u></b>	
<b><u>Biological Material</u></b>	<b><u>Technological Material</u></b>
Providing compostable/biodegradable containers, cutlery, cups	Reusable cutlery, plates and cups, no individual sugar or cream packages
Providing paper packaging/cardboard boxes/compostable paper for product sales or catering deliveries	Recycled material napkin -cloth
	Mason jar - with deposit/discount for return (financial incentive)
	Free filtered water in a glass - no bottled water
<b><u>Practice - Food Waste Surplus Management Stage</u></b>	
<b><u>Biological Material</u></b>	<b><u>Technological Material</u></b>
Setting up Green bin	Waste sorting system in the back
Food donation for leftover products or sell next day with discount (50% off)	Bring back recycles that haulers do not take to proper place
Espresso Water to plants	Give refundable cans and bottles to community
Using biodegradable bags for green bins	

Table 1: Findings from interviews - Opportunities

On the other hand, the challenges towards Zero Waste are two-fold: 1) the gap between regulation and actual practice, i.e. neighbouring businesses do not use a green bin, even though it is mandatory to have one, and 2) the gap in interest and knowledge of zero waste between cafés and their customers, suppliers, neighbouring businesses, and stratas. Also, there is dissatisfaction with the government due to the lack of financial support.

<b><u>Challenges</u></b>
Meet customer's needs (bottled water, plastic bags for takeout)
Balance economy, environment, and social
By-laws that not every supplier or business follows (EPR, No organic contamination in garbage bins) -
By-laws that do not support Zero Waste (Food safety act)
Consumerism/Capitalism
Insignificant influence to supplier/Waste haulers/strata/neighbor businesses
Plastic wrap/soft plastics both for packaging or keeping the products fresh
Customers' low awareness of sustainability - people bring own mugs or returning containers 1 - 35% - hard to change the customers behavior
No support/incentives from government for business waste - i.e. no subsidies, grants availability for profit enterprise – payment higher tax rate than individuals, but less waste management services
Cost of recycle and organic is higher than having a general garbage bin
Cleaning products prior to recycling takes time
Hard to recycle for unclarified material products
Empowering people to participate in the circular economy
Training staff who come from the communities that do not have recycling system
Hard to find good reusable/compostable cups for cold drinks
North America has different culture. - People do not know where/how the food comes from.

Table 2: Findings from interviews - Challenges

## **Recommendations**

The following are three recommendations for independently-owned cafés targeting Zero Waste as a result of the interviews.

The first recommendation is to participate in the circular economy, since independently-owned cafés cannot close the loop by themselves: for example, food scraps cannot be used in cafés unless they have their own garden or farm. As a result, the scraps go into the green bin so that the compost can be used by farmers to grow new products. Also, participating in the system means owner-managers and employees need to question where their supplies come from (Papania, 2016), and

where their supplies go after they use them (Ladner, 2016), because in a circular economy system the discarded materials need to become a resource for others to use. This helps their decision-making for purchasing supplies and affects their waste sorting behaviour. Financial incentives of up to \$0.25 for customers who bring their own container and coffee cups reduce the need to use virgin materials (Metro Vancouver, 2016). Another financial incentive of requiring deposits for the cafés' reusable containers may increase return rate of these items. Cafés can promote EPR by choosing producers/suppliers who follow the EPR regulation (Papania, 2016).

Secondly, sharing education with employees, neighbouring businesses, and suppliers through communication is important. The information or training about Zero Waste does not always come from employers. Employees who are a younger generation have more awareness of sustainability and can share their knowledge with their employers (Tolliday, 2016). Also, giving information about Zero Waste to producers and customers changes their behavior (Papania, 2016). Holding events about Zero Waste or sustainability-related topics at their own cafés can educate customers and community (Miller, 2016). Imposing a fine on employees based on contaminants in recycling, organic, and garbage bins after providing several training sessions, can change their sorting accuracy (Leimanis, 2016). Continuous training sessions by an employer to employees may prevent inaccuracies in sorting (Metro Vancouver, 2016).

Finally, networking with suppliers, neighboring businesses, waste haulers, and governments is recommended. An employee at BSI biodegradable solutions recommended “to connect with supply partners for culture change”. In fact, Leimanis, a café owner, recommended his sales person for this study, as he thought this person had valuable knowledge about Zero Waste. Contacting different waste haulers is also recommended, such as Recycling Alternative, Revolution Resource

Recovery, and Growing City Urban Composting Solutions (BSI, 2016). A person at Metro Vancouver recommended Climate Smart, a social enterprise that supports small businesses to cut costs and carbon. Subsidies for this program may be available if the company is a member of the Vancouver City Savings Credit Union (BSI, 2016). Checking Metro Vancouver's website and/or signing up with their e-mail addresses for sustainability events such as their sustainability community breakfast and conference is another recommendation. Since Metro Vancouver has not yet targeted independently-owned cafés for their Food Waste Reduction Pilot program (Metro Vancouver, 2016), it is still helpful for cafés to network with Metro Vancouver about this program and other initiatives to show their needs. Furthermore, it is important for cafés to connect with organizations and/or individuals such as local farmers, schools, and community gardens to have them use their food scraps for compost and reuse their egg-cartons or local artists to have them use their recycled materials. Cafés may find stakeholders who use their materials in the community by reaching out in various ways, such as in person and social media (Facebook and Craigslist).

### **Conclusion**

For success with the Zero Waste program, the best way for independent cafés is by participating in the circular economy. To integrate into the circular economy, the owner-manager's perspective towards environmental sustainability will be the key, since their value and commitment affects the daily business actions: The quote that Matthew, the owner of the Finch's Tea & Coffee House, stated, proves it: "Whether it is a small or a large company, it doesn't matter. It is the owner's choice to be more environmental or not." Since a circular economy needs cross sector approach, independently-owned cafés need networking and to share educational resources, as well as by government initiatives.

## **Appendix**

### **Waste Related Information Sites**

#### **General Waste Information for Business/Restaurant**

City of Vancouver. 2015. Waste disposal and recycling for businesses. Retrieved April 11, 2016, from: <http://vancouver.ca/doing-business/waste-collection-for-businesses.aspx>

#### **Food Waste, Food Donation, and Food Scraps Recycle**

BC Centre for Disease Control. Healthy Food Access & Food Security – Donation guidelines. Retrieved April 11, 2016, from: <http://www.bccdc.ca/health-info/food-your-health/healthy-food-access-food-security>

City of Vancouver. Prevent Food Waste. Retrieved April 11, 2016, from: <http://vancouver.ca/doing-business/prevent-food-waste.aspx>

Metro Vancouver. 2014. Closing THE LOOP with Organics Recycling – A practical guide for restaurant and food service operators. Retrieved February 1, 2016, from: <http://www.metrovancouver.org/services/solid-waste/SolidWastePublications/ClosingtheLoop.pdf>

Metro Vancouver. Food Scraps Recycling for Restaurants. Retrieved April 11, 2016, from: <http://www.metrovancouver.org/services/solid-waste/food-scraps-recycling/restaurants/Pages/default.aspx>

Metro Vancouver. Food Waste Reduction Pilot. Retrieved April 11, 2016, from: <http://www.metrovancouver.org/reductionpilot>

#### **Hauler**

City of Vancouver. Find a Hauler. Retrieved April 11, 2016, from: <http://vancouver.ca/doing-business/find-a-hauler.aspx>

City of Vancouver. Food Scraps Haulers List. Retrieved April 11, 2016, from: <http://vancouver.ca/doing-business/food-scraps-haulers-list.aspx>

#### **Recycle and EPR**

BC Recycles. British Columbia's Recycling Handbook. Retrieved April 11, 2016, from: [http://www.bcrecycles.ca/assets/pdf/BCR\\_2015\\_BC\\_Handbook.pdf](http://www.bcrecycles.ca/assets/pdf/BCR_2015_BC_Handbook.pdf)

Multi Material BC. Materials List. Retrieved April 11, 2016, from: <http://recyclinginbc.ca/program/mmbc-materials-list/>

Multi Material BC. B.C. Product Stewardship Programs – July 2015 Update.

Retrieved April 11, 2016, from:

[http://www.rcbc.ca/files/u7/epr\\_programsummary%28july2015%29.pdf](http://www.rcbc.ca/files/u7/epr_programsummary%28july2015%29.pdf)

Recycling Council British Columbia (RCBC). B.C. Recyclepedia - Search.

Retrieved April 11, 2016, from: <http://www.rcbc.ca/recyclepedia/search>

Recycling Council of British Columbia (RCBC). 2016. Recycling Hotline. Retrieved

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### **Networking – Membership, Conference**

Metro Vancouver. 2015. Sustainability Community Breakfasts. Retrieved February 1,

2016, from: <http://www.metrovancouver.org/events/community-breakfasts/Pages/default.aspx>

National Zero Waste Council. 2015. Become a Member/Supporter. Retrieved

February 1, 2016, from: <http://www.nzwc.ca/membership/Pages/default.aspx>

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