November 19, 2012



1.		duction	
2.	The Stewardship Agency		
3.	Packaging and Printed Paper		
	3.1	Packaging	
	3.2	Printed Paper	4
	3.3	Sources of Packaging and Printed Paper	
1.	Prog	gram Design	5
	4.1	BC Packaging and Printed Paper Reverse Supply Chain	5
	4.2	Packaging and Printed Paper Program Delivery Principles	6
	4.3	Packaging and Printed Paper Program Delivery Overview	6
	4.4	Collection of Packaging and Printed Paper from Residents and Streetscapes	7
	4.5	Post-collection	10
	4.6	Relationships between Collectors and Processors	11
	4.7	Collector and Processor Qualification Standards	12
	4.8	Dispute Resolution	13
	4.9	Communications	13
	4.10	Administration of the Packaging and Printed Paper Stewardship Plan	14
	4.11	Program Financing	15
5.	Prog	gram Performance	16
	5.1	Recovery Target	16
	5.2	Accessibility	20
	5.3	Product Life Cycle Management	22
	5.4	Pollution Prevention Hierarchy	23
	5.5	Reporting	24
pen	ndix A	∖ – Glossary	2
-		B – Producer Members of MMBC	

1. Introduction

The British Columbia (BC) Recycling Regulation (B.C. Reg. 449/2004 – the "Regulation") under the *Environmental Management Act* requires that, as of May 2014, every producer¹ of packaging and printed paper (PPP) product that wishes to sell, offer for sale or distribute their products to residents in British Columbia must operate, or be a member of, an approved plan concerning the end-of-life management of their products. The Regulation further stipulates that producers wishing to receive BC Ministry of Environment approval for such a plan must submit their plan to the Ministry on or before November 19, 2012.

The proposed stewardship plan is unique in that it deals with the residential packaging and printed paper product category that is already being recovered at an estimated 50% to 57% recycling rate through local government and not-for profit and private sector initiatives. This plan is different from other plans developed for BC where limited collection services or no collection services were in place prior to the material being added to the Recycling Regulation.

The PPP Stewardship Plan outlined in this document proposes to build on these existing services in order to minimize economic dislocation for those currently operating the system, to avoid confusion for residents, and to mitigate any potential temporary loss of environmental performance. Building on the current operating recycling system through development of commercial partnerships with existing economic players is considered the most responsible, economically efficient and environmentally prudent approach to maintaining and enhancing the recovery of residential PPP in BC.

2. The Stewardship Agency

This proposed stewardship plan for PPP has been developed by Multi-Material British Columbia (MMBC) pursuant to the requirements of the Regulation.

MMBC is a not-for-profit agency established under the British Columbia Society Act formed in anticipation of the requirement to develop, submit and implement a stewardship plan for packaging and printed paper. MMBC is acting as a stewardship agency on behalf of producers³ in order to discharge their obligations under Schedule 5 of the Recycling Regulation.

¹ Section 1 of B.C. Reg. 449/2004 defines "producer" of packaging and printed paper as,

⁽i) a person who manufactures the product and sells, offers for sale, distributes or uses in a commercial enterprise the product in British Columbia under the manufacturer's own brand,

⁽ii) if subparagraph (i) does not apply, a person who is not the manufacturer of the product but is the owner or licensee of a trademark under which a product is sold, distributed or used in a commercial enterprise in British Columbia, whether or not the trademark is registered, or

⁽iii) if subparagraphs (i) and (ii) do not apply, a person who imports the product into British Columbia for sale, distribution or use in a commercial enterprise.

² Refer to the report titled the *Current System for Managing Residential Packaging and Printed Paper in BC*, March 2012

³ Refer also to draft Definition of Producer for Purposes of Obligation and Reporting on MMBC website.

MMBC is governed by a Board of Directors comprising members appointed by the Retail Council of Canada, Food and Consumer Products of Canada, Canadian Federation of Independent Grocers, Canadian Restaurant and Foodservices Association, Loblaw Companies Limited, Overwaitea Food Group, Tim Hortons and McCain Foods.

MMBC is acting on behalf of its members who are producers of PPP in submitting this stewardship plan. For the purposes of the PPP Stewardship Plan, the producer for a specific unit of packaging or printed paper is the supplier of service packaging or the first of the brand owner, the franchisor or the first seller (also known as the first importer).

3. Packaging and Printed Paper

In October 2004, the province passed the Recycling Regulation. In May 2011, the Regulation was amended to include Schedule 5 which added packaging⁴ and printed paper from residents and streetscapes⁵ as product categories.

3.1 Packaging

British Columbia's *Environmental Management Act* defines packaging as "a material, substance or object that is used to protect, contain or transport a commodity or product, or attached to a commodity or product or its container for the purpose of marketing or communicating information about the commodity or product".

Schedule 5 does not further refine the definition of packaging beyond that provided in the *Environmental Management Act* as described above.

Packaging for purposes of producer obligation and reporting⁶ under the PPP Stewardship Plan includes:

- (a) Primary packaging i.e. packaging that contains the product at the point of sale to the residential consumer;
- (b) Grouped packaging or secondary packaging that goes to the household⁷:
- (c) Transportation, distribution or tertiary packaging that goes to the household⁸;

⁴ Schedule 1 of the Recycling Regulation addresses beverage containers which are managed under a provincial deposit return program, with the exception of milk containers which are excluded from the deposit return program.
⁵ Refer to Section 3.3 for a description of streetscapes.

⁶ While producers of packaging described in Section 3.1 are responsible for contributing to the cost of providing reasonable access and achieving a 75% recovery rate, only those types of packaging for which there are recycling end markets are proposed to be collected from residents at program launch in May 2014. Refer to Section 4.1.

Multiple packages of product sold in a unit, often wrapped in film plastic.
⁸ May be both the primary packaging for the product and the packaged used to ship the product but is referred to as transportation packaging that goes home with the consumer. For example, household products packaged in corrugated boxes intended for final use or management by the consumer or end user.

- (d) Service packaging designed and intended to be filled at the point of sale and "disposable" items sold, filled or designed and intended to be filled at the point of sale such as:
 - Paper or plastic carry-out bags provided at checkout;
 - Bags filled at the shelves with bulk goods, produce, baked goods, etc.;
 - Disposable plates and cups;
 - Take-out and home delivery food service packaging such as pizza boxes, cups, bags, folded cartons, wraps, trays etc.;
 - Flower box/wrap;
 - Food wraps provided by the grocer for meats, fish, cheese, etc.
 - Prescription bottles filled and provided by pharmacists;
 - Paper envelopes for developed photographs;
 - Gift wrapping/tissue paper added by the retailer; and
- (e) Packaging components and ancillary elements integrated into packaging, including ancillary elements directly hung or attached to a product and which perform a packaging function unless they are an integral part of the product and all elements are intended to be consumed or disposed of together⁹.

For the purposes of the PPP Stewardship Plan, paper packaging means all paper materials regardless of the cellulosic fibre source of the material including but not limited to wood, wheat, rice, cotton, bananas, eucalyptus, bamboo, hemp, and sugar cane (bagasse) fibre sources.

The following items are **not** considered packaging for the purposes of the PPP Stewardship Plan:

- Beverage containers governed by Schedule 1 to the Recycling Regulation;
- Empty oil containers as defined by Schedule 2 of the Recycling Regulation;
- Empty¹⁰ architectural coatings, paint and stain containers as defined by Schedule 2 of the Recycling Regulation;
- Empty antifreeze containers as defined by Schedule 2 of the Recycling Regulation;
- Transportation and distribution packaging that is not intended primarily for use or management in the home, for example plastic pallet wrap;
- Industrial or bulk packaging that is not intended for sale or use by residents in the home;
- Other items that are not generally considered to be packaging such as accessories to the product that do not serve a packaging function (e.g., plastic cutlery, straws, paper serviettes) and packaging components sold as product (empty) to the end consumer (e.g., garbage bags, organic waste bags, food storage bags, food storage containers);

¹⁰ Empty container means a container that holds less than 3% residual by volume, as defined in Schedule 2 of the Recycling Regulation.

⁹ Examples of this kind of packaging include, but are not limited to: labels and lids hung directly on or attached to the packaging; mascara brush which forms part of the container lid; staples, pins, clips; toy on the top of a candy product which forms part of the lid; devices for measuring dosage that form part of the detergent container lid; plastic makeup case; brush contained in the lid of corrective liquid paper; zipper on a plastic film bag containing a product.

items that constitute an integral part of the product (e.g., toner cartridges, single use cameras);

- Durable packaging, which is packaging that has a useful life of at least five years and is
 intended to facilitate storage or transport or to prevent the loss of product components
 for durable products and which remains with the product throughout its useful life (e.g.,
 CD/DVD cases, packaging used to store pieces of a board game); and
- Wood, ceramic, crystal, rubber and leather packaging.

3.2 Printed Paper

Schedule 5 defines printed paper as "paper that is not packaging, but is printed with text or graphics as a medium for communicating information, and includes telephone directories, but does not include other types of bound reference books, bound literary books, or bound text books".

For the purposes of the PPP Stewardship Plan, printed paper comprises any type of cellulosic fibre source including but not limited to wood, wheat, rice, cotton, bananas, eucalyptus, bamboo, hemp, and sugar cane (bagasse) fibre sources.

3.3 Sources of Packaging and Printed Paper

Under Schedule 5 of the Recycling Regulation, the packaging and printed paper program is to address residential premises and municipal property that is not industrial, commercial or institutional property.

Residential premises¹¹ are:

- Single-family dwellings inhabited year round or seasonally¹²; and
- Multi-family dwellings including rental, co-operative, fractional ownership, time-share, condominium and seniors residences¹³.

Municipal property that is not industrial, commercial or institutional property comprises the following which are collectively referred to as 'streetscape' in this stewardship plan:

• Sidewalks which are municipal property, which adjoin buildings in an urban commercial area and which are used for pedestrian traffic;

¹¹ Section 1 of the Recycling Regulation defines "residential premises" to included houses, apartments, condominiums, town homes and other premises in which persons reside but does not include institutional accommodations or visitor accommodations.

accommodations or visitor accommodations.

12 Vacation facilities, such as hotels, motels, cottages and cabins which are operated as commercial businesses are not included.

¹³ Residences at which medical care is provided, such as nursing homes, long-term care facilities and hospices, are considered institutions.

- Plazas or town squares which are municipal property and which are available to the public; and
- Parks which are municipal property.

4. Program Design

4.1 BC Packaging and Printed Paper Reverse Supply Chain

BC residents who participate in PPP recycling programs and collectors and processors of PPP can be charatecterized as a reverse supply-chain that moves PPP from residents to recycling end-markets. The reverse supply-chain comprises millions of BC residents served by hundreds of collectors who deliver PPP to dozens of PPP processors who then market the material to dozens of end-markets both in and outside of British Columbia.

Local governments are currently the primary drivers of residential PPP collection and recycling activity – they either deliver PPP collection and processing directly or contract for those services with private or not-for profit collectors and processors. In some cases, residents contract directly with private collectors for PPP collection or drop off PPP to private or not-for-profit depots for recycling.

Collection and processing of PPP involve varied and complex relationships between private, public and not-for-profit entities to move PPP from residents to recycling end-markets. The role that each plays is described below:

PPP collection is provided by:

- Local governments and First Nations governments delivering PPP collection services directly, supported by public education, promotion and first point of contact for collection service customers;
- Local governments and First Nations governments utilizing not-for profit organizations or private sector companies to provide the collection services, supported by local government or First Nations government delivery of public education, promotion and first point of contact for collection service customers;
- Private sector PPP collectors delivering collection services through subscription;
- Private depots receiving PPP delivered by residents; and
- Not-for-profit depots¹⁴ receiving PPP delivered by residents.

PPP processing is provided by:

Local governments delivering PPP processing directly;

¹⁴ Not-for-profit depots may or may not have a funding relationship with their local government.

- Local governments utilizing private sector PPP processors or not-for-profit organizations;
 and
- Private sector PPP processors which may be vertically integrated with collectors (i.e. the same company provides collection and processing services) or may provide processing services to local government collectors, private collectors, private depots and not-forprofit depots.

4.2 Packaging and Printed Paper Program Delivery Principles

Selecting the PPP program design has been driven by one overarching objective – continuous improvement in recovery effectiveness and efficiency without undermining existing PPP recovery efforts in British Columbia.

To achieve the objective of maximizing outcomes while minimizing dislocations, MMBC has developed the following market engagement principles to guide the development of the PPP stewardship plan:

- Focus on outcomes, not process maximize recovery, maximize efficiency, enhance resident service levels while minimizing complexity;
- Provide economic incentives and set simple rules effective economic incentives
 will drive behaviour that increases recovery activity throughout the PPP reverse supplychain; simple rules will provide clarity and certainty to those collecting and recycling
 PPP;
- Foster interaction, collaboration and competition to drive innovation innovation is
 the result of complex interactions of ideas and efforts among producers and private,
 public and not-for-profit entities with parties bringing together complimentary skills to
 collaborate and deliver more value; and
- Set the stage for evolution harness existing activities and build on success through continuous improvement and use of economic incentives to increase collection of PPP and improve system efficiency.

4.3 Packaging and Printed Paper Program Delivery Overview

Under the Recycling Regulation, MMBC will assume responsibility for driving residential PPP collection and recycling activity in BC, effectively supplanting the role that local governments have historically played. Accordingly, at the outset, it is assumed that MMBC will largely assume responsibility for the existing BC PPP collection and recycling system and will set conditions for future improvements in effectiveness and efficiency of PPP recovery in BC.

The approach that MMBC has chosen to do this involves direct and separate interaction with collectors and processors based on two core elements:

- An agreement between MMBC and each qualified collector and qualified processor setting out the activities to be performed and the outcomes to be achieved (e.g. collected tonnes successfully delivered to processors, households serviced, tonnes of PPP marketed, etc.); and
- Payment to the service provider upon verification that the outcomes specified in the agreement have been achieved.

The nature of the agreements and how the agreements are entered into differ between collectors and processors, as described below.

4.4 Collection of Packaging and Printed Paper from Residents and Streetscapes

The approach to delivery of PPP collection services¹⁵ is based on providing opportunity for those involved in the collection of PPP today to be part of the PPP collection system when producers assume responsibility for the PPP recovery system in May 2014.

Qualified collectors will be offered financial incentives for PPP collection¹⁶. The value offered will be established as market-clearing prices¹⁷. Consistent with an outcomes-based approach to program operation, MMBC will pay collectors once the PPP they have collected has been accepted for processing by a primary processor under contract with MMBC.

MMBC will establish a set of collector qualification standards¹⁸ that will include basic qualifications common to all PPP collectors today as well as additional requirements¹⁹ for tracking and reporting sources and quantities of collected PPP. Local governments, private companies and not-for-profit organizations that meet these collector qualification standards will be qualified as MMBC collectors, subject to the following approach.

MMBC will engage qualified collectors as follows:

• Where single-family and multi-family residents deliver PPP to curbside²⁰ in areas that meet the reasonable access criteria²¹

¹⁶ The financial incentive will be offered for collection services. Collection services are distinct from post-collection activities which include receiving PPP from collection vehicles, picking up PPP from depots and consolidation and transfer where required.

¹⁹ Collectors will be required to provide free access for residents to the collecton services being provided by the collector through its agreement with MMBC as part of the qualification standards.

²⁰ While the majority of PPP diverted is collected in dedicated recycling systems, some local governments accept

¹⁵ Also refer to Section 5.2 Accessibility.

¹⁷ A market-clearing price is a payment available to collection service providers (subject to executing an agreement to provide the collection service, comply with the collector qualification standard on a continuous basis, report specified data on a defined schedule) designed to stimulate collection activities and act as a market clearing mechanism.

¹⁸ Also refer to Section 4.6 Collector and Processor Qualification Standards.

while the majority of PPP diverted is collected in dedicated recycling systems, some local governments accept specific types of PPP, such as soiled paper packaging, in organic waste collection programs. MMBC will undertake research to determine the quantity of PPP in organic waste collection programs and will, if the quantity is significant, develop a market-clearing price financial incentive reflecting the portion of PPP in the organic waste stream. Should local governments decline the offer, MMBC will not directly undertake collection of organic waste given the relatively small portion of PPP compared to food waste in this collection stream.

- MMBC will offer a financial incentive to a local government or First Nation government for the provision of services that include PPP curbside collection services, public education, promotion and first point of contact for curbside collection service customers; and
- Where the local government or First Nation government declines the offer, MMBC will issue a tender for collection services, will select a service provider to provide PPP collection services²² and will provide public education, promotion and management of collection service customers through its own means.
- Where multi-family residents deliver PPP to a central storage area accessible by all residents of the multi-family complex and collection occurs from this central storage area MMBC will offer a financial incentive for multi-family building PPP collection services to any interested party that is able to comply with the collector qualification standards:
 - Where a local government accepts the offer of the financial incentive, an additional incentive will be offered to provide public education, promotion and first point of contact for collection service customers; and
 - Where a private company accepts the offer of the financial incentive, MMBC will provide public education, promotion and management of collection service customers through its own means.
- To operate depots for receiving PPP from residents generated from single-family and multi-family households MMBC will offer a financial incentive to any interested party that is able to comply with the collector qualification standards for PPP collection services contingent on the types of materials accepted from residents:
 - Where a local government accepts the offer of the financial incentive, an additional incentive will be offered to provide public education, promotion and first point of contact for collection service customers; and
 - Where a private company accepts the offer of the financial incentive, MMBC will provide public education, promotion and management of collection service customers through its own means.
- To service streetscapes in areas that meet the reasonable access criteria²³
 - MMBC will offer a financial incentive²⁴ to the local government for the provision of services that include PPP collection services²⁵, public education, promotion and first point of contact for collection service customers; and
 - Where the local government declines the offer, MMBC may issue a tender for PPP streetscape collection services, may select a service provider and may

²² MMBC will work with the local government to co-ordinate delivery of PPP collection service by MMBC and delivery of garbage collection service by the local government. ²³ Refer to Section 5.2 Accessibility.

²⁴ Prior to offering a financial incentive for streetscape collection services, MMBC will conduct audits of PPP and garbage in existing streetscape collection programs and conduct one or more pilot projects in order to develop a preferred approach to streetscape collection and recycling services.

²¹ Refer to Section 5.2 Accessibility.

Streetscape collection activities include collection of PPP generated by routine pedestrian traffic and by those participating in public events where waste management services are provided by local governments, rather than event organizers.

provide public education, promotion and management of collection service customers through its own means, subject to reaching agreement with the local government on the management of the garbage component of streetscape system.

Market-clearing prices are the prices at which the market will deliver the service required by MMBC. Setting appropriate market-clearing prices is important to drive effectiveness (i.e. collection of PPP), reward the efficient operator and encourage efficiency among other operators. An effective market-clearing price should reward and encourage continued efficiency by those who can deliver the service at less than the market-clearing price while encouraging initiatives to reduce costs where costs exceed the market-clearing price.

The financial incentives offered to collectors will be determined by establishing market-clearing prices for the collection of PPP from single-family and multi-family households at curbside, from multi-family buildings, at depots and through streetscape collection systems. Establishing the market-clearing prices for collection has two components:

- A clear definition of the outcome being priced: The market-clearing price can be set
 at a flat rate per tonne accepted for processing by a primary processor or at a flat rate
 per household serviced, or some combination. Market-clearing prices offered as
 incentives should drive behaviour to maximize PPP placed into the PPP collection
 stream rather than the garbage stream by all households serviced. Since MMBC's
 objective is to increase the collection of PPP, the market-clearing price will be
 benchmarked against a baseline performance standard²⁶.
- The price level or quantity of financial incentive: The price level will be determined through research into collection service performance (i.e. kilograms collected per household) and service delivery costs across British Columbia. The results of this research will be used to inform a market-clearing price for each type of service for which a market-clearing price will be offered. The market-clearing price will take into account cost drivers and may vary should these cost drivers vary across BC. The market-clearing price will be set taking into consideration any additional requirements of collectors as a result of the PPP Stewardship Plan.

Market-clearing prices may be stratified to accommodate circumstances, such as fuel prices, that change over time. As well, market-clearing prices may be reviewed in relation to the changing characteristics of PPP being supplied by producers to residents²⁷. Setting market-clearing prices to drive collection activities is an iterative process that will be monitored and adjusted to reflect changing conditions.

Changes implemented by producers to the material utilized for packaging (e.g. plastic rather than glass) and/or to the design of a package or a printed paper product can increase the cubic volume of a tonne of PPP collected.

²⁶ Measured as kilogram per household served by dividing total tonnes collected by households served.

4.5 Post-Collection

MMBC will contract directly for post-collection services which include all activities subsequent to the collection of PPP from BC residents through the collection channels described in Section 4.4. Post-collection activities include receiving PPP from collection vehicles, picking up PPP from depots, consolidation and transfer where required, handling and sorting PPP, preparing PPP for shipment to end-markets or downstream processors, marketing PPP to maximize commodity revenue, appropriately managing residual materials and reporting the quantities of material received and marketed and other metrics to MMBC as required.

Primary processors are considered to be the first receivers of collected PPP that market at least some types of processed PPP directly to end markets. Primary processors may engage subcontractors to provide consolidation, transfer and transportation services to move PPP from the collection location to the processing facility. Primary processors may also engage secondary or downstream processors that can more efficiently or effectively sort, process and market some types of PPP.

MMBC will engage PPP primary processors on a contractual basis using the following process:

- Issue a Request for Expressions of Interest (REOI) to PPP processors to gauge processors' capacity to receive, process and market a defined list of PPP received from collectors.
- 2. **Issue a Request for Proposals** (RFP) to PPP processors that are able to manage the defined list of PPP.

Processors will be provided with the names and locations of qualified collectors participating in the MMBC program. This information will allow processors to make arrangements with these qualified collectors as required in order to respond to the RFP.

The RFP will solicit information to allow MMBC to confirm a processor's ability to meet processor qualification standards set by MMBC. The RFP will also solicit bid prices for post-collection services, delivered in compliance with the processor qualification standards, including:

- Receiving PPP from vehicles operated by qualified collectors;
- Picking up PPP from depots operated by qualified collectors;
- Consolidating and transferring PPP from qualified collectors where required:
- Preparing PPP for shipment to end-markets or downstream processors;
- Marketing PPP to end-markets;
- Transferring PPP to downstream processors, as required;
- Appropriately managing residual materials;

- Tracking materials received and shipped by the processor and its downstream processors to final destination; and
- Reporting to MMBC as required.

Processors will be qualified based on compliance with the processor qualification standards and evaluation criteria including but not limited to price, location, capability, capacity, output to recycling end-markets per tonne received and material revenue received. In assessing best value, MMBC will also consider the implications of processor and recycling-end market locations on its contract administration activities including, for example, audits and compliance.

In the contractual arrangement between MMBC and primary processors, primary processors will be tasked to find the "best" markets for materials (i.e. reliable markets that command the highest commodity prices) and the agreements will incorporate mechanisms to share market revenue and commodity risk. By building in opportunities for processors to benefit from maximizing commodity values, processors have a strong incentive to maximize both the amount of PPP marketed and its commodity value.

4.6 Relationship between Collectors and Processors

Collectors will have a contractual relationship with MMBC in order to receive the market-clearing price for the PPP collection services they provide to MMBC. Similarly, processors will have a contractual relationship with MMBC in order to receive payment for the post-collection services they provide to MMBC.

Collectors and processors are also able to establish relationships with one another. Arrangements between qualified collectors and processors will be left to the discretion of the parties through arrangements made in the free-market. These relationships are expected to be established, on a prospective basis, as processors prepare their bids to respond to the post-collection RFP.

A processor and collector may establish mutually agreeable terms that would take effect should the processor be selected by MMBC to provide post-collection services for the PPP collected by the collector. Such terms might include:

- · Delivery procedures and freight arrangements;
- · Consolidation and transfer arrangements;
- Capacity to receive materials for processing including service assurance;
- Material quality requirements including degree of commingling, material quality premiums and material contamination surcharges;
- Payments for services outside of MMBC's scope of service such as management of ICI PPP:
- Other financial arrangements independent of MMBC; and
- Dispute resolution independent of MMBC.

Free-market arrangements between primary processors and collectors offer the best opportunity to maximize the quality of materials received by primary processors and, in turn, maximize the quantity and quality of PPP marketed by processors. As collectors are remunerated by MMBC when primary processors accept their collected PPP, primary processors are able to provide collectors with a strong incentive to ensure that PPP is collected in a manner that maximizes material quality.

4.7 Collector and Processor Qualification Standards

Collector and processor qualification standards, including reporting protocols, are the minimum operating standards that a service provider must meet on a continuous basis in order to be eligible to provide collection, depot operation and/or processing services under a contract with MMBC.

Qualification standards will be used by MMBC to support the continued growth of a safe, stable and sustainable PPP collection and processing system across British Columbia. MMBC will incorporate qualification standards into requests for expressions of interest (REOI), request for proposals (RFP) and into agreements with collectors and processors.

Qualification standards²⁸ will set out basic requirements, such as free collection service to residents, proof of all necessary licenses and permits, compliance with health and safety requirements and specified liability and business insurance coverage. Qualification standards will also include reporting requirements to allow MMBC to meet its reporting requirements to the MOE.

Collectors will be required to report data such as:

- Number of single-family and multi-family households served with curbside collection;
- Number of multi-family buildings and households served with multi-family building collection;
- Number of single-family and multi-family households served by depot collection;
- Number of streetscape collection locations;
- Tonnes of PPP collected through curbside, multi-family building, depot and streetscape collection; and
- Tonnes of PPP delivered to each processor under contract to MMBC.

Processors will be required to report data such as:

 Tonnes of PPP received from each collector under contract to MMBC and, of this amount, tonnes of PPP delivered to downstream processors and recycling end-markets by material type;

²⁸ Qualification standards for collectors and processors will be subject to consultation following submission of the PPP Stewardship Plan.

- Names and locations of recycling end-markets receiving PPP from the primary processor and downstream processors;
- Revenues received for PPP materials marketed;
- Processing residue rates; and
- Names and locations of recovery end-markets and disposal locations.

4.8 Dispute Resolution

MMBC will seek to balance the principles of access, efficiency, fairness and equitable outcomes in the design of its dispute resolution mechanisms. Dispute resolution processes will be tailored to the nature of disputes as well as the likely parties to a typical dispute. The objectives of the dispute resolution process are to manage disputes to resolution rather than adjudication, earlier and faster and at a reduced cost to all parties involved.

The following suite of alternative dispute resolution processes will be used:

Dispute Type	Path of Escalation/Resolution
Residents	 Discussion with MMBC management If unresolved, involvement of MMBC Board
Collectors and processors	 Discussion with MMBC senior management Facilitation: to prevent escalation and to explore interests/remedies Mediation: to be used if facilitation is unsuccessful process to be specified in commercial agreements regarding selection of mediator, roles of parties, time and place of mediation, conduct of mediation, length, responsibility for fees/costs, confidentiality, conclusion of mediation by agreed settlement or final settlement proposal by the mediator Arbitration: to be used if mediation is unsuccessful; process to be specified in commercial agreements regarding notice of arbitration, submission of written statements, place and conduct of meetings and hearings, the process for rendering and delivering decisions; jurisdiction and powers of the arbitrator, allocation of costs/fees; application of the B.C. Arbitration Act (RSBC 1996)

4.9 Communications

The Recycling Regulation requires that, as part of the stewardship plan, MMBC design and deliver an effective resident education program that achieves two overarching objectives:

 Make residents and other target audiences aware of the program features and benefits through communication activities; and

 Employ promotion and education (P&E) activities to engage and encourage residents to make informed and proper decisions concerning the preparation and management of PPP for collection and recycling.

The design of the PPP stewardship communication activities will be set out in a strategic communication and P&E plan that will be developed following approval of the stewardship plan. The communication and P&E plan will comprise three activity phases: pre-launch, launch and post-launch.

The principles guiding the development of the communication and P&E plan will be:

- Understand MMBC's resident and stakeholder audiences identify the various audiences who will participate in the PPP stewardship program by sorting, collecting, processing and recycling PPP and assessing each group's information and P&E needs;
- **Design effective communication and P&E** ensure that communication strategies, images, messages and tools reflect needs, are clearly understood, overcome perceptual and real barriers, contain a call to action and motivate appropriate behaviour;
- Collaboration explore opportunities to collaborate with other BC stewardship agencies, local governments, retailers, community-based organizations and others to develop strategies and distribute P&E materials that strive to inform and motivate;
- **Establish measurement metrics** establish a benchmark measurement of program awareness, perceptions and reported behaviour against which to track and assess changes pertaining to year-over-year performance;
- Deploy an effective mix of communication and P&E tactics develop and disseminate a strategic mix of tactics that ensure residents and stakeholders are effectively exposed to primary and supportive messaging; to undertake this in cooperation with local governments and others who have developed and operate successful, mature recycling programs; and
- Engage audiences to elicit feedback employ contemporary methods of communication interaction (e.g. social media) as well as traditional methods to engage residents and encourage them to provide direct feedback regarding program changes and to ask questions.

The communications plan will be evaluated periodically using various key performance metrics such as its effectiveness in developing consumer awareness and delivering clear, comprehensible P&E messages across geographical and cultural demographics. The communications plan will be updated and enhanced as required.

4.10 Administration of the Packaging and Printed Paper Stewardship Plan

MMBC is responsible for implementing this PPP Stewardship Plan on behalf of the producers that have chosen to be members.

MMBC will administer the implementation of the PPP Stewardship Plan effectively and efficiently through a combination of in-house and outsourcing of key specialized functions or services. Activities to be administered through out-sourcing include those that will not compromise the relationship between MMBC and BC stakeholders and where effectiveness and efficiency is enhanced by the best practices already incorporated by the service provider that would otherwise be a multi-year continuous improvement effort for MMBC.

MMBC will directly administer collection and processing services including dispute resolution, communications to BC residents and performance reporting to the BC MOE.

MMBC will outsource producer registration, reporting, fee invoicing, payments, audits and compliance in order to facilitate harmonized systems for Canadian producers, whether operating only in BC or in other Canadian provinces.

4.11 Program Financing

MMBC is responsible to the producers that have chosen to be its members to deliver an efficient and effective PPP stewardship program.

Producers that choose to be members of MMBC are responsible to pay fees that are sufficient, in aggregate, to implement the PPP Stewardship Plan. These costs fall into three categories:

- Administration what it takes to manage the business;
- Resident awareness what it takes to promote the behaviours that drive collection; and
- Material management what it takes to manage materials.

Producers that supply types of PPP that are currently recyclable and that will be included in the PPP Stewardship Plan collection system will pay fees that are intended to cover:

- An equitable share of MMBC administration costs;
- An equitable share of resident awareness costs; and
- A contribution to the costs to manage the recyclable PPP that is the basis for the PPP stewardship program performance.

Producers that supply types of PPP that are currently not recyclable and will not be included in the PPP Stewardship Plan collection system when the program launches in May 2014 will pay fees that are intended to cover:

- An equitable share of MMBC administration costs;
- An equitable share of resident awareness costs:
- A contribution to the costs to manage the recyclable PPP that is the basis for the PPP stewardship program performance; and

- Research and development (R&D) to resolve technical and market capacity barriers so that the PPP that is currently not recyclable can be included in the collection system over time. R&D efforts will include:
 - Resolving sorting, processing and end-market technical challenges;
 - Establishing processing capacity; and
 - Establishing end-market capacity and demand.

It is anticipated that producers that choose to be members of MMBC will not apply a fee at the point of sale of products in packaging and printed paper, primarily due to the relatively low cost per unit of packaging and printed paper that, for many products, is less than one cent. In the absence of a fee at the point of sale, costs incurred by producers to meet their obligations under the Recycling Regulation through membership in MMBC would be considered a cost of doing business in BC and would be managed by the producer accordingly. Each individual producer will determine for its own business how it will manage the costs incurred to meet its obligations under the Recycling Regulation through membership in MMBC.

Costs incurred by MMBC to deliver and administer the PPP Stewardship Plan will be allocated among producers based on the following principles:

- Encourage reduction, redesign and recyclability Allocation of program delivery
 costs to reward producers that supply recyclable PPP for which there is market demand
 and high commodity value and to encourage producers that supply PPP for which there
 are no end markets or limited markets with low commodity value to consider reduction,
 redesign and recyclability;
- Program delivery costs, subject to the principle above Allocation of costs to
 producers that supplied the PPP for which costs were incurred; Where costs are
 incurred for commingled materials, allocation of costs to each category of PPP reported
 by producers using a cost allocation model²⁹ informed by composition audits, cost
 allocation studies and other analyses to identify the relative cost share for each category
 of PPP; and
- Administration costs Equitable sharing of administration costs and common costs by all producers.

5. Program Performance

5.1 Recovery Target

MMBC's aspiration is to have all PPP supplied into BC households effectively collected and recycled.

²⁹ The cost allocation model is subject to modification over time consistent with the principles of continuous improvement.

Achieving this outcome will involve a number of steps of which the first will be to expand the existing collection system to accommodate a uniform province-wide list of PPP materials. This list will be predicated on the existence of recycling end-markets for each material on the list. Collecting in all areas of the province the full range of PPP for which there are existing markets will require adjustments to the majority of collection programs³⁰ and by the primary and downstream processors that receive the collected material. It will also require effort to ensure that the additional PPP is effectively marketed with minimal disruption to local commodity market arrangements.

Subsequently, the uniform list of materials will be expanded incrementally over time to ensure collection, processing and marketing of additional materials will not compromise the operation and reliability of the existing collection and recycling system, the quality of materials shipped to end-markets, the viability of these end-markets, the confidence of residents in their recycling program and the environmental performance of the system.

The benefits of this incremental approach to expand the scope of collected materials include:

- It builds on the existing recycling collection and processing system in a logical, environmentally and economically prudent manner;
- It protects the environmental performance of the existing recycling system by ensuring the addition of materials to the list is preceded by requisite investments and operational changes to deliver best use of materials and no degradation to the collection and recycling of materials already on the list; and
- It upholds the pollution prevention hierarchy by ensuring the PPP program focuses on recycling outcomes.

The Recycling Regulation specifies that the PPP stewardship program must achieve, or is capable of achieving within a reasonable time, a 75% recovery rate.

The recovery rate is calculated by dividing the quantity of PPP recovered by the quantity of PPP generated by residents and available for collected. The numerator is based on the quantity of PPP shipped to recycling end-markets and the quantity of system processing residues shipped to recovery end-markets³¹ as reported by primary processors and verified by MMBC. The denominator is based on the quantity of PPP supplied to residents as reported by producers³² and verified by MMBC.

Approximately 30% of single-family households and less than 15% of multi-family households are currently receiving collection of all rigid plastics.

31 In compliance with the pollution prevention hierarchy.

Adjusted as required to reflect PPP that is retained by residents for extended periods of times (e.g. magazines) as determined from composition audits of PPP collected.

Based on surveys carried out in late 2011³³, it is estimated that approximately 200,000 tonnes of residential PPP were being recycled annually in BC. These 200,000 tonnes represent the numerator for purposes of calculating a baseline PPP recovery rate.

The quantity of PPP supplied to BC households cannot be accurately quantified until producers report to MMBC. In the absence of data on the quantity of PPP supplied by producers to BC residents, MMBC developed an estimate of 350,000 to 400,000 tonnes utilizing quantities supplied in other provincial producer responsibility programs cross-referenced with PPP composition data. These 350,000 to 400,000 tonnes have been used to calculate an estimated baseline PPP recovery rate between 50% and 57%.

To put BC's baseline residential recycling rate into context, both Quebec's PPP stewardship program (established in 2005) and Ontario's PPP stewardship program (established in 2004) are recycling 65% of the province's residential PPP. European stewardship programs³⁴ are recycling various amounts of the residential materials targeted in the program: France is recycling 63%³⁵; Germany is recycling 71%³⁶; and Belgium is recycling 93%³⁷.

Building on the PPP collection and recycling systems already in place, producers will be required to increase the recovery rate from BC's baseline recycling rate to the 75% target recovery rate. This additional recovery will involve:

- Delivering more collection services;
- Increasing participation by encouraging residents to utilize available collection systems;
- Collaborating with provincial and local governments to implement policies that support PPP collection, such as limits on the quantity of garbage that can be set out for collection, reducing the frequency of garbage collection, charging fees for garbage collection and/or banning PPP from disposal;
- Resolving technical and convenience barriers in multi-family collection systems;
- Increasing capture rates by encouraging residents to place PPP in the PPP collection system rather than the garbage collection system;
- Increasing the effectiveness of processing systems to reduce processing residues and increase the proportion of collected PPP delivered to end-markets; and
- Developing new end-markets and processing capability and capacity to support the addition of more types of PPP to the collection system.

³³ Refer to the report titled the *Current System for Managing Residential Packaging and Printed Paper in BC*, March 2012.

³⁴ Refer to report titled *Packaging and Printed Paper Stewardship Program Design Options*, March 2012: Section 4.2.1.

³⁵ Of glass, paper, steel, aluminum and plastic packaging.

³⁶ Of paper and packaging made of paper, plastics, metals and glass.

³⁷ Of glass, paper, steel and aluminum packaging and plastic bottles.

Getting to 75% Recovery

MMBC is committed to building the residential PPP collection and recycling system in BC to deliver the required 75% recovery target within a reasonable time and within the framework of the pollution prevention hierarchy.

To estimate the time required to achieve a 75% recovery target, MMBC requires:

- Information from collectors on the time required to modify their collection systems to accept a broader range of PPP and their interest and ability to expand service areas;
- Information from processors on the time required to modify their processing systems to accept a broader range of PPP and larger quantities of PPP;
- Information from recycling end-markets on their ability to manage larger quantities of PPP and their interest and ability to accept new types of PPP; and
- Accurate information from producers on the quantity of PPP being supplied to BC residents.

MMBC will be able to assess the ability of collectors and processors to manage larger quantities of PPP following the market-clearing price offers for collection services and the RFP for post-collection services.

In order to assess the ability of recycling end-markets to manage larger quantities of PPP, MMBC first requires information on the destination of marketed PPP reported by primary processors following program implementation. With this information, MMBC can work collaboratively with these recycling end-markets to assess their capability to manage larger quantities of PPP and to accept new types of PPP.

In order to develop accurate information on the quantity of PPP being supplied to BC residents, producers must determine:

- Which of their products are packaged in packaging that meets MMBC's definition of packaging and is supplied to BC residents;
- The quantity of each of these products actually supplied to BC residents, which is likely a subset of products shipped to distribution centres that service BC and then a subset of products distributed within BC;
- The types of materials used to package each of these products³⁸;
- The weight of each of the materials used to package each product;
- Which of the types of printed paper used in their business that meets MMBC's definition of packaging used in their business and is supplied to BC residents; and

³⁸ Some products are packaged in multiple types of materials e.g. a boxboard box that contains a container and cap of HDPE with a foil closure below the cap and with product instructions on printed paper.

• The quantity of each of these types of printed paper supplied to BC residents which is likely a subset of products shipped to distribution centres that service BC.

MMBC will be responsible for ensuring that data reported by producers are accurate through validation procedures and periodic auditing Experience with other Canadian producer responsibility programs suggests that a minimum of three annual reporting cycles is required to develop confidence in the integrity and accuracy of producer reporting systems.

After the first three years of program implementation, MMBC will have:

- Sufficient operating experience to reasonably assess the period of time required by its
 contracted collectors and processors and by the recycling end-markets utilized by its
 contracted processors to modify and/or expand their operations in order to manage the
 quantity of PPP that would be collected at a 75% recovery target; and
- Reasonable confidence in the quantity of PPP supplied to BC residents reported by producers as confirmed by its validation and auditing procedures.

Within six months following the first three years of program implementation, MMBC will develop an estimate of the timeline required to achieve the 75% recovery rate in consultation with its producers, collectors, processors, recycling end-markets and other interested stakeholders.

5.2 Accessibility

Section 5(1)(c) of the Recycling Regulation requires that a stewardship plan provide reasonable and free access to collection facilities.

Access by householders to various types of services differs across BC communities, reflecting population density and other factors. The following table sets out current access for residents to PPP collection services based on surveys carried out in late 2011³⁹.

	Single-family Households	Multi-family Households	Total Households
Total # of Households	1,202,930	512,511	1,715,441
# of Households Receiving Household Collection Service	936,118	405,666	1,341,784
% of Total Households Receiving Households Collection Service	78%	79%	78%
# of Households (Not Receiving Collection Service) with Access to Depots	217,758	90,096	307,854

³⁹ Refer to the report titled the *Current System for Managing Residential Packaging and Printed Paper in BC*, March 2012.

	Single-family Households	Multi-family Households	Total Households
% of Total Households with Access Only to Depots	18%	18%	18%
# of Households Receiving Household Collection Service or with Access to Depots	1,153,876	495,762	1,649,638
% of Total Households Receiving Household Collection Service or with Access to Depots	96%	97%	96%

MMBC will provide reasonable access to collection services for PPP taking into consideration the need for:

- Services in large, urban areas as well as remote, sparsely populated areas;
- Effective and efficient collection services within their geographic and/or demographic context;
- A collection system with sufficient capacity to achieve the recovery target; and
- Predictability for residents wishing to recycle PPP.

Reasonable access to collection services for PPP will be provided:

- For single-family households through
 - Curbside collection in areas currently receiving curbside collection of PPP;
 - Curbside collection in areas currently receiving curbside collection of garbage⁴⁰
 which can be serviced for the market-clearing price offered by MMBC; and
 - Depot collection for PPP in areas which can be serviced for the market-clearing price offered by MMBC;
- For multi-family households through
 - Curbside collection for PPP where the PPP is placed on public easements for collection on regular single-family curbside routes;
 - Collection services from multi-family dwellings where set-out of PPP is on private property which can be serviced for the market-clearing price offered by MMBC;
 and
 - Depot collection for PPP in areas which can be serviced for the market-clearing price offered by MMBC;
- For streetscapes, subject to proof of concept through testing effective delivery of streetscape collection systems, through collection
 - In urban commercial areas with business activities that generate large amounts of PPP;
 - Where the local government operates a litter collection system; and

⁴⁰ Where a local government prefers depot collection over curbside collection, MMBC will consider this preference.

- In municipalities with a population of 20,000 or more and a population density of 200 or more people per square kilometre.

5.3 Product Life Cycle Management

Section 5(1)(c)(vii) of the Recycling Regulation requires that a stewardship plan adequately provide for eliminating or reducing the environmental impacts of a product throughout the product's life cycle.

The producers that are members of MMBC will contribute to eliminating or reducing the environmental impacts of packaging or printed paper through innovations that affect the stages of its life cycle *before* it reaches the consumer. The following are examples of activities that have been implemented.

Reduction

- A number of brands, primarily in the home and personal care category, have created refill packs designed to make it very simple for the consumer to refill the original pack with new product. The refill pack is manufactured of a lightweight material producing less waste. This approach addresses the first R in the 3Rs hierarchy by reducing packaging, in some cases, by over 75%.
- Packaging can be reduced through the reformulation of a product, such as concentration, requiring less packaging per use of product. This has been done extensively in the laundry, home care and personal care product categories.

Redesign

- Plastic packaging can be created with new technology that delivers the same strength and performance but requires less resin. This can be achieved through the use of "micro-bubbles" incorporated into the plastic. This reduces the density of the resin but does not impact performance – an approach to packaging reduction that is often invisible to the consumer.
- Research and development is also being directed at incorporating other materials into product packaging primarily replacing plastic resin with renewable materials. To minimize plastic use, the redesigned package incorporates fibres such as bamboo, sugarcane and bulrush. Research and market testing has shown that incorporation of these different materials delivers packaging that stays strong under compression and consumer use (opening and closing) and transportation. In some cases the bamboo sugarcane and/ or bulrush has replaced the use of polyvinyl chloride, which is a contaminant if mixed with other types of plastic.
- Several non-food manufacturers have invested in research and development allowing them to utilize 100% post-consumer recycled resin in their plastic packaging.

 Companies are making commitments to sustainable sourcing of their paper-based packaging. Some companies have committed to purchasing only Forest Stewardship Council certified paper. Others are committing to source paper products only from managed forests and are involved in the replanting of those forests to ensure ongoing regeneration.

The producers that are members of MMBC will contribute to eliminating or reducing the environmental impacts of packaging or printed paper through innovations that affect the stages of its life cycle *after* it reaches the consumer. The following are examples of activities that have been imiplemented.

Recyclability

- Companies are redesigning packaging so that it is more easily recycled by, for example: harmonizing the plastic resin of a cap with its bottle; providing a removable barrier between the packaging and the product to reduce contamination; or, in the case of paperboard packaging, reducing or removing a coating from the carton making it more easily recylable.
- Companies are redesigning packaging and closures to allow consumers to get every last drop of the product out of the package. This provides better value to the consumer and results in less contamination in the recycling system.

Implementation of the PPP Stewardship Plan will manage PPP after a resident has placed it into the PPP collection system through recycling, and where recycling options are not available, through recovery or disposal.

MMBC, through implementation of the PPP Stewardship Plan, and the PPP producers that are its members will continue to strive to eliminate or reduce the environmental impacts of PPP supplied to residents in BC throughout the products' life cycle. Information on PPP end-of-life management compiled by MMBC during implementation of the PPP Stewardship Plan will be an additional source of information for PPP producers as they consider opportunities to reduce the quantity of PPP supplied as well as design PPP with the environment and recyclability in mind.

5.4 Pollution Prevention Hierarchy

Section 5(1)(c)(viii) of the Recycling Regulation requires that a stewardship plan adequately provide for the management of the product in adherence to the order of preference in the pollution prevention hierarchy.

The PPP Stewardship Plan will adhere to the pollution prevention hierarchy through the following activities:

Pollution Prevention Hierarchy	Activity
Reduce the environmental impact of producing the product by eliminating toxic components and increasing energy and resource efficiency	 Initiatives undertaken by individual producers PPP Stewardship Plan encourages reduction through cost allocation which rewards companies which reduce the weight of PPP sold into the market
Redesign the product to improve reusability or recyclability	 Initiatives undertaken by individual producers PPP Stewardship Plan encourages redesign through cost allocation MMBC will provide guidance to producers on design for recyclability
Eliminate or reduce the generation of unused portions of a product that is consumable	Not applicable a packaging and printed paper are not consumable
Reuse the product	 Initiatives undertaken by individual producers PPP Stewardship Plan encourages reuse through cost allocation
Recycle the product	 PPP Stewardship Plan utilizes payments to service providers to encourage collection of PPP and processing of PPP to meet recycling end- market requirements MMBC will provide guidance to producers on design for recyclability
Recover material or energy from the product	Primary and downstream processors will be encouraged to further process system residues to meet recovery end-market requirements and minimize the amount of residue sent to landfill
Otherwise dispose of the waste from the product in compliance with the Act	Primary and downstream processors will be required to manage residue in compliance with the Act

5.5 Reporting

During implementation of the PPP Stewardship Plan, MMBC will compile data in order to report on the following indicators:

- Accessibility indicators to describe access to PPP collection services in the province of BC such as:
 - Single-family and multi-family households receiving household collection service;

- Number and location of depots accepting PPP;
- Operational effectiveness indicators characterizing program performance such as:
 - Tonnes of PPP collected within each regional district;
 - Kilograms per capita of PPP collected within each regional district;
 - Tonnes of PPP recycled and recovered for the province;
 - Kilograms per capita of PPP recycled and recovered for the province;
 - Recovery rate expressed as a percentage for the province;
- Management of collected PPP in relation to the pollution prevention hierarchy
 - Tonnes of PPP managed by recycling;
 - Tonnes of PPP managed by recovery;
 - Tonnes of PPP managed by disposal;
- Operational efficiency indicators reflecting program performance in financial terms such as:
 - Total program cost per tonne recovered;
 - Total program cost per household;
- Environmental impact measures to characterize actions intended to reduce the environmental impacts of packaging and printed paper by producers who are members of MMBC and by MMBC; and
- Resident awareness indicators to assess public awareness and engagement such as:
 - Percentage of residents aware of PPP stewardship program;
 - Percentage of residents reporting use of available collection services; and
 - Visits to the 'resident' section of MMBC website.

MMBC will report on the performance of the PPP program in an annual report submitted to the BC MOE and posted on its website by July 1st each year. MMBC will include a reasonable assurance opinion of the accessibility indicators and operational effectiveness indicators by a third-party in its annual report.

The MOE requires that a stewardship agency provide third-party audited financial statements prepared in accordance with generally accepted auditing standards if fees are applied at the point of sale to fund the stewardship plan. It is anticipated that producers that choose to be members of MMBC will not apply a fee at the point of sale of products in packaging and printed paper. Should this be the case, MMBC would not be obligated to provide third-party audited financial statements as part of its annual reporting but reserves the right to choose to do so.

Appendix A – Glossary

Collector

Entity providing services for collection of PPP from households or from streetscapes under contract with MMBC.

Depot

Facility where residents can drop off PPP under contract to MMBC.

Market Clearing Price

Payment available to collection service providers (subject to executing an agreement to provide the collection service, comply with the collector qualification standard on a continuous basis, report specified data on a defined schedule) designed to stimulate collection activities and act as a market clearing mechanism.

ICI

Industrial, commercial and institutional.

Processing

Manual or mechanical sorting and quality control of PPP for the purpose of shipping to recycling end-markets.

Primary Processor

First receivers of collected PPP that market at least some types of processed PPP directly to end markets. Primary processors may engage downstream processors that can more efficiently or effectively sort, process and market some types of PPP.

Qualification Standard

Minimum operating standard that a service provider must meet on a continuous basis in order to be eligible to provide collection, depot operation and/or processing services under a contract with MMBC.

Recovery Rate

Calculated as a percentage with the numerator representing the quantity of PPP recycled or recovered and the denominator representing the quantity of PPP available for collection.

Recovery Rate
$$\% = \frac{\text{Recovered (material utilization)}}{\text{Available for Collection}} \times 100$$

Service Provider

Entity that collects PPP from single-family or multi-family households or streetscapes, operates a depot or provide post-collection services under contract with MMBC.

Appendix B - Producer Members of MMBC

A total of 215 producers have signed Letters of Intent with MMBC as of submission of the PPP Stewardship Plan. Based on the draft definitions of obligated producer and PPP developed pursuant to the BC Recycling Regulation and Environmental Management Act, these companies have indicated that they intend to join the MMBC PPP Stewardship Plan once it is approved. Producer companies that signed Letters of Intent fall into the following sector categories:

- Food and consumer products
- Retailers (grocers, mass/general merchandisers, hardware/housewares, drug stores and specialty merchandisers)
- Electronic manufacturers/brand owners
- Horticulture and agriculture
- Media and printed paper
- Quick service / take-out restaurants
- Paint and chemical products
- Other/miscellaneous

A list is included below.

MMBC believes that a PPP program that includes all obligated producers, each paying their proportionate share of costs, is the best way to achieve a sustainable PPP program for British Columbia residents that is based on the principles of fairness and a level-playing field. Recruitment efforts will continue past the stewardship plan submission date.

Producers are invited to consult the producer section of the MMBC website at www.multimaterialbc.ca for information related to who is an obligated producer and what constitutes obligated packaging and printed paper. A list of frequently asked questions (FAQs) is also provided on the website. Letters of Intent can be downloaded and, when executed, can be sent via email to producers@multimaterialbc.ca.

MMBC will respond to queries directed to producers@multimaterialbc.ca and will arrange telephone consultations with those producers who have questions about the PPP Stewardship Plan and their obligations under the BC Recycling Regulation.

MMBC Producers

3M Dare

2 Brilliant Media (The Upper Canadian Darvondan Nurseries Magazine) Dell Canada Inc.

Advance Nursery Co. Discovery Islands Organics

Agropur Disticor Direct Retailer Services Inc Akzo Nobel DLM Foods

Amway Canada Dollarama
Apple Dominos

ASUS Computer International Dream Wave Publishing Inc.
Avalon Dairy Dutch Heritage Greenhouse

Baum Publications East Richmond Nurseries Inc.
BC Transit Eco-Parent Magazine

Bed Bath & Beyond Eddi's Wholesale Garden Supplies

Behr Process Corporation Epson

Bell Estee Lauder Company
Benjamin Moore Exemplar Horticulture

Best Buy Federated Co-operatives Limited BIV Media Limited Partnership Ferrero

Black Press Group Ltd. Ford Motor Company of Canada

Border Crossings Magazine Fort Nelson News
Boulevard Lifestyles Inc. Four Corner Publishing

British Columbia Historical Federation,

British Columbia Lottery Corporation

Gabriola Sounder Weekly

Garden Making

(BCLC) Geez Magazine

Bron and Sons Nursery Inc.

Burnbrae Farms

Geist

General Mills

Canada Dry Mott's General Motors of Canada Canada Wide Media Limited Giant Tiger Stores Ltd.
Canada's History Society Glacier Media Group

Canadian Dimension Globe and Mail
Canadian Tire Corporation Golden Valley Foods Ltd.

Canadian Tire Corporation

Canon

Golden Valley Foods Ltd.

Greenhouse Delight Foods Inc.

Cedarrim Hains Celestial CGA Magazine HBC

Clearview Horticultural products Inc Headlands Garden Plants Limited

Clorox Heinz
Clover Leaf Henkel Consumer Goods

Cloverdale Paint Hershey

Coca Cola Refreshments Canada Highliner Foods
Colgate Palmolive Home Depot
Columbia Valley Pioneer Home Hardware

ConAgra Foods Canada Horse Community Journals
Costco Wholesale Canada Ltd Horse Country Magazine

Costco Wholesale Canada Ltd. Horse Country Magazine
Cott Beverages Hewlett Packard

Cottage Life Media ICBC
CY Growers Ikea
Dance Media Group Indigo

Danone Inside Track Communications

Irving Consumer Products
Jac van Klaveren Limited (JVK)

JELD-WEN

Johnson & Johnson

Kao Kellogg

Kilipi Road Greenhouses

Kimberley Clark Kleen Flo Tumbler

Kraft Kruger Inc.

La Cie McCormick Canada Co.

Lenovo LG

LMPI (a division of HDS Canada)

Loblaws London Drugs Lucerne

Maple Leaf Foods Inc. (including Canada

Bread)

McCain Foods

Meadowfresh Dairy Corp

Michael's Microsoft Modern Dog Inc. Momentum Magazine Mondelez International Montecristo Magazine

MTY Group

Neo-opsis Science Fiction Magazine

Nestle

Nestle Purina Pet Care Canada

Nintendo of Canada Ltd.

Nokia

Northern Gold Foods Ltd.
Northwest Landscape Supply

Nuvo Magazine Observer Publications Ocean Spray International

Okanagan Valley Newspaper Group

Old Dutch
Oliver Chronicle
Olympic Dairy
Opera Canada
Osoyoos Times
Outpost Magazine

Overwaitea Owlkids P&G

Pacific Newspaper Group

Pacific West Perennial Growers

Pageone Publishing

Panasonic

Pepsi Bottling Group (Pepsico Beverage)

PepsiCo Foods Pet Connection Plantronics

Poetry Is Dead Magazine Society

Powell River Living Magazine (Southcott

Communications

PPG Architectural Coatings

Premier Tech
PRISM International
Purdy's Chocolates
Purple Springs Nursery

Quilter's Connection Magazine

Readers Digest Magazines Canada Limited

Reckitt Benckiser Reinhardt Food

Rexall

Rocky Mountain Goat News

RONA

Rogers Communications Partnership

Rogers Publishing Room Magazine Royal BC Museum Sad Magazine Safeway Samsung Saputo SC Johnston

Scott's Canada

Sears

September House Publishing Sharp Electronics of Canada

Sherwin Williams Shopper's Drug Mart

Shopping Channel (division of Rogers

Broadcasting) Smucker's Snow Farms Sobey's Sony

Southern Tip Publishing

St Joseph Media

Starbucks Coffee Canada

Storck

Studies in Canadian Literature

Studio Magazine Sun Products Canada

Taisuco Canada Agricultural Corp

Target Canada

Techni-Gro Greenhouses Inc

TerraLink Horticulture Inc.

The Brick

The Capilano Review

The Natural Gardener

The Pampered Chef

The Social Justice Committee of Montreal

The Source

The TDL Group Corp.

The Upper Canada Antiques Showcase

Thrifty Foods

TJX Canada

Toshiba

Toys "R" Canada

Transcontinental Inc.

Unilever

Van Belle Nursery

Vancouver 24 Hours (division of Sun Media)

Vitalis Nutrition

Walmart Canada

Watershed Sentinel

YellowPages Group Corp

ZoomerMedia Limited