

# **Electronic Products Recycling Association**

## **Annual Report to the Director**

### **[2012 Calendar Year]**

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### 1. Executive Summary

*The table below should concisely summarize program performance for the section 8 annual reporting requirements such that ministry staff and the public can easily understand whether reporting requirements and stewardship plan targets have been met.*

|                      |  |
|----------------------|--|
| Products within plan | As outlined in Appendix B of our stewardship plan, EPRA covers a broad range of regulated electronic product categories, including IT, Audio/Video, Communication equipment, Medical and Control devices, etc. |
| Program website      | <a href="http://www.recyclemyelectronics.ca/bc">www.recyclemyelectronics.ca/bc</a>   |

| Recycling Regulation Reference | Topic   | Summary<br>(5-bullet maximum)  |
|--------------------------------|---|--|
| Part 2, section 8(2)(a)        | <a href="#">Public Education Materials and Strategies</a> | <p>EPRA has undertaken significant marketing initiatives focused on 3 key messages:</p> <ol style="list-style-type: none"> <li>1. Awareness of Collection location</li> <li>2. Knowledge of acceptable products</li> <li>3. The responsible way to recycle end-of-life electronics in BC</li> </ol> <p>EPRA uses several types of media to communicate the message including: television, radio, newspapers, internet, etc.</p> <p>EPRA participates in and co-sponsors in the RCBC Recyclepedia, hotline and depot locator app.</p> <p>In 2012, EPRA collaborated with other steward agencies on a joint marketing campaign to ensure consumer understanding and reduce confusion during the implementation of fees for Phase V products</p> <p>A public opinion survey conducted in October of 2012 showed that 75% of BC residents know where to take end-of-life electronics for recycling</p> |

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| Recycling Regulation Reference | Topic   | Summary<br>(5-bullet maximum)  |
|--------------------------------|---|--|
| Part 2, section 8(2)(b)        | <a href="#">Collection System and Facilities</a>                                      | <p>EPRA has a robust collection system designed to provide easy access not only to consumers but also the ICI sector particularly for Phase V products.</p> <p>Consumer return of end-of-life electronics is facilitated through our extensive depot network which consisted of 142 permanent collection depots at the end of 2012 (see: <a href="http://www.return-it.ca/electronics/locations/">http://www.return-it.ca/electronics/locations/</a>). This depot network in conjunction with 28 collection events provided excellent service coverage to 97% of the population to the standards outlined in our stewardship plan.</p> <p>As a supplement to our permanent depots and collection events, we have a number of Return-to-Retail options available throughout the province.</p> <p>For the Business-to-Business (B2B) sector (primarily related to Phase V material), we have implemented several programs to facilitate easy access to recycling of obligated material:</p> <ol style="list-style-type: none"> <li>1. Large volume generator program – Free pick up of material for generators meeting minimum volume requirements</li> <li>2. Processor incentive program – Generators can contract directly with approved recyclers for the pickup and processing of material. The recyclers are compensated by the program and there is no cost to the generator for the basic pick up and recycling of obligated material.</li> </ol> <p>Information on B2B options are available here:</p> <p><a href="https://www.return-it.ca/electronics/industry/b2b-options/">https://www.return-it.ca/electronics/industry/b2b-options/</a></p> |
| Part 2, section 8(2)(c)        | <a href="#">Product Environmental Impact Reduction, Reusability and Recyclability</a> | <p>Electronics Product Stewardship Canada (EPSC) represents major electronics and IT equipment brand owners in Canada on sustainability issues. EPSC issues its <i>Design for Environment (DfE) Report</i>, which highlights the industry’s progress related to design for the environment, along with the many technological advances that are creating change in electronics design. Developments in cloud computing, for example, are opening the door for smaller and lighter products. Eco-labelling programs challenge manufacturers to develop products that have a lower energy or materials footprint. This year’s report builds on previous reports, with a focus on building sustainability into new product design. EPRA will report annually on DfE issues as provided through this research. The report for 2012 is available at the link below:</p> <p><a href="http://www.epsc.ca/index.php?option=com_content&amp;view=article&amp;id=10&amp;Itemid=23&amp;lang=en">http://www.epsc.ca/index.php?option=com_content&amp;view=article&amp;id=10&amp;Itemid=23&amp;lang=en</a></p> <p>Reuse and Recycling are covered in detail in Section 5 below.</p>   |

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| Recycling Regulation Reference | Topic   | Summary<br>(5-bullet maximum)   |
|--------------------------------|---|---|
| Part 2, section 8(2)(d)        | <a href="#">Pollution Prevention Hierarchy and Product / Component Management</a> | Recycling end-of-life electronics diverts materials from landfills and prevents the shipment of these materials offshore to developing countries. Recycling also saves energy, as materials recovered can be used to create new useful products, ultimately reducing the energy demands associated with the extraction and processing of new raw material.<br>See Section 6 below for details |
| Part 2, section 8(2)(e)        | <a href="#">Product Sold and Collected and Recovery Rate</a>                      | In 2012, our stewards reported the supply of 7,981,099 regulated electronic products into the province. During 2012, we collected a total of 21,963 metric tonnes of end-of-life electronics.   |
| Part 2, section 8(2)(e.1)      |   | See Section 7 for breakdown per regional district   |
| Part 2, section 8(2)(f)        | <a href="#">Summary of Deposits, Refunds, Revenues and Expenses</a>               | Audited financial information is available in the 2012 EPRA Annual Report at <a href="http://eprassociation.ca/ar/en/2012/">http://eprassociation.ca/ar/en/2012/</a>  |

| Comparison of Key Performance Targets  |                        |                            |
|--|------------------------|----------------------------|
| Part 2 section 8(2)(g); See full list of targets in <a href="#">Plan Performance</a> |                        |                            |
| Priority Stewardship Plan Targets<br>(as agreed with ministry file lead)             | Performance            | Strategies for Improvement |
| 1. Total WEEE collected  | 21,963 Metric tonnes   | [N/A]                      |
| 2. Total WEEE collected per capita   | 4.8 kilos per capita   | [N/A]                      |
| 3. Per capita collected by RD  | See chart in Section 7 | [N/A]                      |
| 4. Total Collection Sites  | 142 depots             | [N/A]                      |
| 5. Total Collection Events   | 28 Collection Events   | [N/A]                      |
| 6. % of the population covered by collection sites                                   | 97%                    | [N/A]                      |
| 7. % of the population aware of the program  | 75%                    | [N/A]                      |
| 8. Total program costs per tonne   | \$1208/tonne           | [N/A]                      |
| 9. Operational costs per tonne   | \$1082/tonne           | [N/A]                      |
| 10. Administrative costs per tonne   | \$126/tonne            | [N/A]                      |

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### 2. Program Outline

*Provide a brief (1 page) overview of the stewardship agency/company and their members [website link], program inclusions, collection approach and any other high level information relative to the annual report e.g. studies completed, new targets set, consultations or surveys conducted.*

In the last decade, product stewardship programs have grown in popularity across Canada and around the world. A true partnership between industry, government and consumers, stewardship programs provide a sustainable model to divert and recover materials from the waste stream. They also improve recycling efforts within our communities as increasingly, consumers expect convenient, accessible and responsible recycling for their end-of-life products, including electronics.

The Electronic Products Recycling Association (EPRA) is the national organization tasked with promoting and managing end-of-life electronics recycling in Canada. EPRA is an industry-led, voluntary, not-for-profit environmental compliance program dedicated to responsible recycling of end-of-life electronics and providing secure, convenient recycling options in the provinces in which it operates.

Formerly known as the Electronics Stewardship Association of British Columbia (ESABC), EPRA (BC) transitioned into the national EPRA organization in June 2012. Being a part of a national EPRA organization has benefitted industry, consumers and other stakeholders by enabling our ability to further deliver best practices in industry-led electronics recycling.

The Phase V program expansion in July 2012 was EPRA BC's largest to date, and included a very broad range of electronic devices supplied into the province. EPRA has successfully integrated these new products into our existing collection network as well as providing new and innovative ways for businesses and institutions to recycle their end-of-life electronics.

2012 also saw a significant expansion to our Return to Retail program with two major national retailers agreeing to collect end-of-life electronics as part of our program. This provides consumers with yet another convenient option for recycling in BC.

EPRA is committed to ensuring responsible recycling of end-of-life electronics collected by EPRA programs through adherence to the Recycler Qualification Program (RQP). The RQP is a comprehensive process that ensures products and resulting materials are handled in an environmentally sound and socially acceptable manner that protects the environment and safeguards worker health and safety.

EPRA BC enables businesses and consumers to responsibly manage their end-of-life electronics, and assists obligated stewards in achieving regulatory compliance. Currently there are over 1,600 stewards\* registered with EPRA in British Columbia, over 140 permanent collection sites and 5 verified processors. In 2012, EPRA BC safely collected and responsibly recycled more than 21,000 tonnes of end-of-life electronics.

\*A list of stewards currently in the Program can be found at:

<http://www.esabc.ca/cfm/index.cfm?It=100&Id=52>

### 3. Public Education Materials and Strategies

*Provide a brief overview of the key materials and strategies used to promote awareness of the program. Identify the various types of outreach (i.e. face to face, social media, traditional media, etc.) utilized.*

In 2012, EPRA continued to reach consumers and raise awareness of the program through many types of media including television, radio, newspapers, internet, etc. Different types of media are used strategically to target specific audiences with a tailored message and the publishing and placement of each advertisement is carefully planned to ensure that the target audience is reading, listening or watching.

To maintain high levels of awareness, consumers need consistent messaging on a regular basis. As EPRA has matured, our consumer awareness message has become more strategic and targeted to reach the right people at

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the right time with a meaningful and motivating message. An example is a 2012 campaign targeted specifically to Lower Mainland consumers in response to concerns raised by Metro Vancouver about abandoned waste.

In addition, in 2012, significant resources were committed to the launch of Phase V and the associated products. In addition to our normal launch advertising to promote understanding and awareness, EPRA worked in conjunction with other BC stewards to ensure good understanding by the consumer of the various programs and specifically to ensure understanding and acceptance of the visible fees associated with these products. A copy of the joint brochure for consumers can be found here:

[http://www.bcstewards.com/media/Retailer\\_Collateral.pdf](http://www.bcstewards.com/media/Retailer_Collateral.pdf)

Moving forward, we plan to continue with our existing efforts to inform consumers of depot location, products accepted, fee structure, etc. However in addition, we plan to introduce a component to help British Columbians understand what happens to the products after they are dropped off for recycling. This is probably the most frequently asked question when we address the public about our program.

We will continue to work to reinforce consumer awareness, heighten the credibility of our brand and promote the BC product stewardship model as the best way to operate Extended Producer Responsibility programs.

Please refer to Section 1 above for key statistics related to Public Education and Awareness.

#### **4. Collection System and Facilities**

*Provide a brief overview of the way in which the stewardship agency collects the products from the consumer (i.e. depots, return to retailer, collection events, etc.). If available, list the number of collection facilities in each regional district and identify changes in the number, location, and method of collection from the previous year to the present year. If the list is extensive, consider including a summary and attaching a separate document or URL.*

Collection sites consist of a group of Encorp Return-It depots, regional government locations and non-profit organizations throughout the province. Since the launch of the program in August of 2007 through to the end of 2012, we have now actually doubled the number of depots from 70 to 142 (see attached list of depot locations.) This represents an increase of 17 depots in just one year up from 125 at the end of 2011.

The current EPRA collection network provides comprehensive coverage of both rural and urban locations throughout the province. EPRA has committed to continuously seek permanent collection sites in the few remaining rural areas needed to complete the provincial network. In the interim, we are working with community partners to conduct Drop-Off Events in these areas. In 2012, EPRA conducted 28 drop off events across the province (see attached list for locations.)

These combined collection activities provide coverage to 97% of the Province.

In addition to our regular collection depot network, we expanded our Return to Retail program to include 31 locations of a leading national electronics retailer across BC to further enhance consumer convenience.

The inclusion of some new Phase V material introduced the need for a more robust Business-to-Business (B2B) collection system and we have implemented several programs for businesses and other institutions to facilitate easy access to recycling of obligated material:

1. Large volume generator program – Free pick up of material for generators meeting minimum volume requirements

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2. Processor incentive program – Generators can contract directly with approved recyclers for the pickup and processing of material. The recyclers are compensated by the program and there is no cost to the generator for the basic pick up and recycling of obligated material.

Information on B2B options is available here: <https://www.return-it.ca/electronics/industry/b2b-options/>

### 5. Product Environmental Impact Reduction, Reusability and Recyclability

*Identify ways in which producers or the agency contributes to the reduction of environmental impact. For example, utilization of certified processors, R&D performed to improve recyclability / reuse of the product or components, examples of design for environment mechanisms used by producer members of the agency, reduction of greenhouse gas emissions. The producer may also wish to report on the status of any studies being undertaken to assist with the measurement of environmental impacts. Identifying successes is encouraged.*

EPRA supports the concept of the “3 Rs” of Reduce, Reuse and Recycle.

**Reduce:** The reduce component was addressed above in the executive summary.

**Reuse:** Reusing unwanted electronic products is promoted through the communications and public awareness program as the first option where markets and opportunities for reuse in-province exist. EPRA in cooperation with RCBC sponsors the BC Material Exchange website where the public can list usable electronics for exchange or sale free of charge. We also work with local charitable entities to explain the Electronics Reuse & Refurbishing Program (ERRP) and assist with their qualification. Obligated products that are used or refurbished will not attract an EHF. EPRA’s approach to reuse and refurbishment is consistent with the industry’s position that it be in compliance with Canada’s Basel Convention commitments and not allow end-of-life electronics management challenges to be passed on to less developed countries.

**Recycle:** Recycling or processing of unwanted and end-of-life electronics is promoted as the final option. Recycling, which diverts electronics waste from landfill and illegal export, will be a major focus of the EPRA program. Typically, recycling involves some form of “primary” or initial processing, which may include dismantling and sorting of material by hand or by more elaborate mechanical means. Further manual or mechanical separation of materials by another vendor or vendors is considered “downstream” processing. Material flows will be tracked to their “point of final processing” (i.e. where they are altered into a new product or state) or, for unrecyclable hazardous materials, to their point of disposal (i.e., where they are disposed of in an environmentally sound manner).

All recycling will be completed by contractors who meet the Electronics Recycling Standard (ERS) and who have successfully completed EPRA’s Recycler Qualification Program (RQP), both of which may be updated from time to time in order to ensure they meet the ongoing needs of the programs which have adopted them.

To ensure that all materials collected under an EPRA program will be responsibly recycled, EPRA has established the following criteria for service:

Service providers will successfully complete the RQP prior to receiving any collected EPRA program materials for processing; and

Service providers will be responsible for ensuring that any and all (downstream) processors needed for further/additional processing of program materials (after primary processing) have also successfully completed the RQP prior to receiving any collected EPRA program materials for processing.

The Recycle component including product management and outcomes is covered in detail in Section 6.

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### 6. Pollution Prevention Hierarchy and Product / Component Management

*Provide a brief overview of the way in which the collected product is managed and how those outcomes relate to the pollution prevention hierarchy. Provide breakdowns by weight or percentage of product managed at each level. Please also refer to third party assurance FAQs (original version dated November 22, 2012), distributed to stewardship programs by the Ministry.*

### Recycling

Recycling end-of-life electronics diverts materials and substances of concern from landfills and prevents the shipment of these materials offshore to developing countries. Recycling also saves energy, as materials recovered can be used to create new useful products, ultimately reducing the energy demands associated with the extraction and processing of new raw material.

#### Where Do the Recovered Materials Go?

| Material/Component                              | Process                         | Result                                    | Process Location |
|---|---------------------------------|---|------------------|
| Leaded Glass                                    | Hand Dismantle /Crushed/Smelted | Metal Recovery                            | Canada           |
| Glass   | Grind                           | Material Recovery                         | Canada           |
| Plastic   | Regrind/Smelted                 | Plastic/Energy Recovery                   | Canada           |
| Plastic   | Bailed/Ground                   | Plastic Commodity                         | US               |
| Metal (non-ferrous)                             | Ground/Smelted                  | Metal Recovery                            | Canada/US        |
| Metal (ferrous)                                 | Ground/Smelted                  | Metal Recovery                            | Canada/US        |
| Other Metals (Brass, Bronze & Fine Particles)   | Smelted                         | Metal Recovery                            | Canada           |
| Cables and Wires                                | Regrind                         | Metal Recovery                            | Canada           |
| High Grade Printed Wire Boards (Circuit Boards) | Smelted                         | Metal Recovery                            | Canada/Belgium   |
| Low Grade Printed Wire Boards (Circuit Boards)  | Smelted                         | Metal Recovery                            | Canada/Belgium   |
| Mercury Bulb                                    | Distilled                       | Mercury                                   | US               |
| Mercury Bulb                                    | Distilled                       | Phosphorus Recovery (Powder Reuse)        | US               |
| Batteries (non-rechargeable)                    | Smelted                         | Metal Recovery                            | Canada           |
| Batteries (rechargeable)                        | Smelted                         | Metal Recovery (Lithium, Nickel, Cadmium) | Canada/US        |

### Recycling Process by Commodity Type

Recycling of electronics involves processing to recover raw materials such as metals, glass and plastics. Electronics are usually separated into the following categories:

#### Non-Hazardous Materials

Ferrous and non-ferrous materials, including steel, aluminum, copper, wires and cables, other metals (brass, bronze, metal fines), plastics, wood and glass (non-leaded). These will be used for the production of raw materials.

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### Electronic Scrap

Cables and wires, printed circuit boards (high, medium and low grade), components including hard drives, chips and other electronic components.

### Commodity Recycling Challenges

With the challenges currently facing the global economy, there has been pressure placed on different recycling programs. With the decrease of commodity revenues, many of these programs have struggled. The EPRA recycling program was developed to make sure the responsible recycling of end-of life electronics is conducted according to high, internationally recognized standards, regardless of commodity revenues.

### Efficiencies Built into the Handling of Products

Products are palletized at different collection sites. Higher palletized weights for the products are optimal as this drives cost savings through the logistics chain. While making sure load weights are optimal, safety is of first importance. The program makes sure that products are packaged for safe transport to recyclers. Proper packaging of the end-of-life electronics prevents breakage. This is important given that a broken / smashed Cathode Ray Tube, for example, is considered hazardous waste. Not all of our recyclers process end-of-life electronics the same way. Below are the two processes currently undertaken by our recyclers:

#### Process 1

- Lead, zinc, cadmium, tin, germanium, indium and other elements that fume are captured and processed.
- Silica, iron, and aluminum remain in a slag which is further converted into value-added products for the construction/cement industry.
- Aluminum is also removed to be sent for further refining.
- Plastics, wood and other organics are used as fuel, providing heat to the furnace and being converted to steam. This steam is captured and used to heat process vessels.
- Copper and circuit boards are removed at shredding operations and are sold to specialty metal refiners.

#### Process 2

- Display devices, such as TVs and computer monitors, are hand-dismantled by removing the leaded glass Cathode Ray Tubes. Also, plastics, copper and circuit boards are hand-sorted in this process and sent to downstream recyclers.
- Computers, computer mice and keyboards are sent through shredding processes whereby plastics are machine sorted.
- Aluminum, copper and steel are sorted through a mix of hand-sorting and machine-sorting to be sent for further recycling.
- Plastics are machine-sorted and sent to downstream

Below is a Material Handling Summary indicating the output of our recycling process including percentage of material by category.

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### EPRA BC - MATERIAL HANDLING SUMMARY - 2012

| Material / Component                                 | % of Material Stream | Process  |
|--|----------------------|--|
| <b>Leaded Glass</b>                                  | 46.4%                | Tubes are manually and mechanically separated and either cleaned and processed into cullet for use in glass production, or smelted for reclaim of lead from the glass.   |
| <b>Plastic</b>                                       | 17.4%                | Plastics are manually and/or mechanically separated. Identifiable plastics are cleaned, sorted and pelletized for reuse; and unidentifiable plastics used as a fuel substitute in the process of metal smelting, or managed through an energy-from-waste recovery process. |
| <b>Steel</b>   | 9.9%                 | Metals are manually and/or mechanically separated and smelted for reclaim.   |
| <b>Circuit Boards</b>                                | 9.4%                 | Boards are manually and/or mechanically separated and smelted for reclaim of precious metals, while the plastics are used as a fuel substitute in the smelting process.  |
| <b>Mixed Metals</b>                                  | 4.8%                 | Metals are manually and/or mechanically separated and smelted for reclaim.   |
| <b>Wood</b>  | 3.0%                 | Materials are manually separated and managed through an energy-from-waste recovery process or landfilled.  |
| <b>Wires/Cables</b>                                  | 2.0%                 | Manually and/or mechanically separated and smelted for metal recovery.   |
| <b>Copper</b>  | 1.9%                 | Metals are manually and/or mechanically separated and smelted for reclaim.   |
| <b>Aluminum</b>                                      | 1.4%                 | Metals are manually and/or mechanically separated and smelted for reclaim.   |
| <b>Copper Yokes</b>                                  | 1.1%                 | Metals are manually and/or mechanically separated and smelted for reclaim.   |
| <b>Insulation, Leather, Cotton, and other Fibres</b> | 1.1%                 | Materials are manually separated and managed through an energy-from-waste recovery process or landfilled.  |
| <b>Batteries</b>                                     | 0.5%                 | Mechanically separated for recovery of metals.   |
| <b>Ink/Toner Cartridges</b>                          | 0.4%                 | Cartridges are cleaned and reconditioned for reuse or processed through an energy-from-waste recovery process.   |
| <b>Ethylene Glycol</b>                               | 0.3%                 | Glycol is manually drained from the light tubes and refined for further use.   |
| <b>Non-Leaded Glass</b>                              | 0.2%                 | Non-leaded glass is manually separated for recovery and further use, or introduced into the smelting process as a silica flux substitute.  |
| <b>Mercury Lamps</b>                                 | 0.0%                 | Lamps are mechanically processed and separated into glass, metal and phosphor powder material streams. Phosphor powder is further distilled for mercury recovery. Metal and glass are also reclaimed for further use.  |

| Type of Disposition | Average      |
|---------------------|--------------|
| Material Recovery   | <b>95.3%</b> |
| Energy Recovery     | <b>3.4%</b>  |
| Other Disposition   | <b>1.1%</b>  |

## Recycling Vendor Standards

The Recycler Qualification Office (RQO) was established by Electronics Products Stewardship Canada (EPSC) and industry-led provincial end-of-life electronics stewardship programs to ensure that environmentally sound electronics reuse and recycling standards are established, met, maintained and continually improved.

The RQO manages all recycler assessments and approvals on behalf of the provincial stewardship programs, to ensure assessments are undertaken in a timely manner, and results are objective, thorough, and sufficiently detailed to provide confidence in the results of the assessment.

All electronic products collected in the EPRA program are recycled by processors that meet the Electronics Recycling Standard (ERS) developed by the technical committee of EPSC in 2006. The standard is revised regularly (most recently in 2010) and incorporated into the Recycler Qualification Program (RQP) to ensure that it meets and reflects the unique needs of provincial stewardship programs and the electronics recycling industry. The RQP effectively prevents illegal export to developing countries and unnecessary landfilling of regulated electronic products. The standard goes beyond the provisions of ISO 14001 and addresses specific issues relating to the safe and responsible recycling of electronics. The RQP may be viewed on the RQO website at [www.rqp.ca](http://www.rqp.ca).

The RQP audit is conducted by an independent third party and takes up to eight to 12 months to complete. To be approved as an EPRA primary recycler, the RQP requires:

- Sound upstream practices – recyclers (primary and all downstreams) must handle the material they receive in an environmentally responsible manner.
- Disallowance of prison labour or shipping of end-of-life electronic scrap or products offshore to developing non-OECD (Organisation of Economic Co-operation and Development) countries.

To achieve this goal, the RQP establishes minimum standards that electronics recyclers must meet to be approved in the EPRA program, including:

- Enhanced requirements for environment, health and safety (EH&S);
- A prohibition on the use of prison labour;
- A prohibition on the shipping of end-of-life or scrap material to developing/non-OECD countries;
- Reinforcement of downstream accountability of materials.

As of December 31, 2012 the following were approved as EPRA primary processors:

**eCycle Solutions**

Chilliwack, BC  
[www.ecyclesolutions.com](http://www.ecyclesolutions.com)

**Global Electric Electronic Processing (GEEP)**

Edmonton, AB  
[www.geepglobal.com](http://www.geepglobal.com)

**Genesis Recycling Ltd.**

Aldergrove, BC  
[www.genesisrecycling.ca](http://www.genesisrecycling.ca)

**Teck**

Trail, BC  
[www.teck.com](http://www.teck.com)

**FCM Recycling**

Delta, BC  
[www.fcmrecycling.com](http://www.fcmrecycling.com)

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### 7. Product Sold and Collected and Recovery Rate

*Provide a summary of the total amount of product sold, collection volumes and, if applicable, recovery rates achieved by the program based on the approach included in the approved program plan. Also provide a summary of total product recovered by regional district.*

In 2012, our stewards reported the supply of 7,981,099 regulated electronic products into the province. During 2012, we collected a total of 21,963 metric tonnes of end-of-life electronics. The breakdown of the product recovered by regional district is summarized in the chart below.

Due to the nature of our products as durable goods, and their associated long life cycle, a recovery rate calculation is not practical. Instead our Stewardship Plan was approved based on reporting on a suite of measures as outlined in sections 1 and 9.

| Major Region                | Region                                     | 2012              |                  |                 | 2011              |                  |                 |
|-----------------------------|--|-------------------|------------------|-----------------|-------------------|------------------|-----------------|
|                             |  | Weight (kg)       | Population*      | Per Capita (kg) | Weight (kg)       | Population*      | Per Capita (kg) |
| Fraser Valley               | Fraser Valley                              | 1,578,296         | 288,819          | 5.5             | 1,481,371         | 286,981          | 5.2             |
| <b>Fraser Valley Total</b>  |  | <b>1,578,296</b>  | <b>288,819</b>   | <b>5.5</b>      | <b>1,481,371</b>  | <b>286,981</b>   | <b>5.2</b>      |
| Kootenays                   | Central Kootenay                           | 184,399           | 60,896           | 3.0             | 193,180           | 60,681           | 3.2             |
|                             | East Kootenay                              | 193,103           | 60,457           | 3.2             | 195,232           | 60,301           | 3.2             |
|                             | Kootenay Boundary                          | 255,062           | 31,887           | 8.0             | 230,485           | 31,851           | 7.2             |
| <b>KOOTENAYS Total</b>      |  | <b>632,563</b>    | <b>153,240</b>   | <b>4.1</b>      | <b>618,897</b>    | <b>152,833</b>   | <b>4.0</b>      |
| Lower Mainland              | Greater Vancouver                          | 11,099,794        | 2,443,744        | 4.5             | 11,044,555        | 2,404,911        | 4.6             |
|                             | Squamish - Lillooet                        | 219,378           | 42,425           | 5.2             | 197,062           | 41,379           | 4.8             |
| <b>LOWER MAINLAND Total</b> |  | <b>11,319,171</b> | <b>2,486,169</b> | <b>4.6</b>      | <b>11,241,617</b> | <b>2,446,290</b> | <b>4.6</b>      |
| North                       | Bulkley / Nechako                          | 80,408            | 39,319           | 2.0             | 58,303            | 39,371           | 1.5             |
|                             | Cariboo                                    | 137,789           | 65,759           | 2.1             | 127,870           | 65,847           | 1.9             |
|                             | Central Coast                              | 4,783             | 3,222            | 1.5             | 4,395             | 3,182            | 1.4             |
|                             | Fraser - Fort George                       | 302,983           | 97,449           | 3.1             | 291,239           | 96,928           | 3.0             |
|                             | Kitimat - Stikine                          | 102,758           | 40,300           | 2.5             | 110,609           | 40,283           | 2.7             |
|                             | Peace River<br>Skeena - Queen<br>Charlotte | 202,148           | 66,167           | 3.1             | 162,810           | 64,280           | 2.5             |
|                             | 55,181                                     | 19,375            | 2.8              | 56,907          | 19,482            | 2.9              |                 |
| <b>NORTH Total</b>          |  | <b>886,049</b>    | <b>331,591</b>   | <b>2.7</b>      | <b>812,133</b>    | <b>329,373</b>   | <b>2.5</b>      |
| Okanagan                    | Central Okanagan                           | 1,375,034         | 188,501          | 7.3             | 1,154,053         | 187,234          | 6.2             |
|                             | Columbia Shuswap                           | 280,852           | 53,603           | 5.2             | 238,706           | 53,748           | 4.4             |
|                             | North Okanagan                             | 502,571           | 83,319           | 6.0             | 486,046           | 83,052           | 5.9             |
|                             | Okanagan -<br>Similkameen                  | 376,530           | 82,908           | 4.5             | 358,967           | 82,644           | 4.3             |
|                             | Thompson - Nicola                          | 489,787           | 132,457          | 3.7             | 476,500           | 132,352          | 3.6             |
| <b>OKANAGAN Total</b>       |  | <b>3,024,775</b>  | <b>540,788</b>   | <b>5.6</b>      | <b>2,714,271</b>  | <b>539,030</b>   | <b>5.0</b>      |
| Sunshine Coast              | Powell River                               | 96,820            | 20,550           | 4.7             | 103,459           | 20,525           | 5.0             |
|                             | Sunshine Coast                             |                   |                  | 6.1             |                   |                  | 5.4             |

## EPRA [2012] Report to Director, Waste Management

|                               |   |            |           |     |            |           |     |
|-------------------------------|---|------------|-----------|-----|------------|-----------|-----|
|                               |   | 185,339    | 30,589    |     | 163,270    | 30,357    |     |
| <b>Sunshine Coast Total</b>   |   | 282,158    | 51,139    | 5.5 | 266,729    | 50,882    | 5.2 |
| Vancouver Island              | Alberni / Clayoquot Capital Regional District | 181,325    | 31,548    | 5.7 | 182,323    | 31,664    | 5.8 |
|                               | Comox-Strathcona                              | 2,140,907  | 376,422   | 5.7 | 2,104,526  | 374,675   | 5.6 |
|                               | Cowichan Valley                               | 518,381    | 109,641   | 4.7 | 465,729    | 64,805    | 7.2 |
|                               | Mount Waddington                              | 459,847    | 83,544    | 5.5 | 427,273    | 83,300    | 5.1 |
|                               | Nanaimo                                       | 55,543     | 11,776    | 4.7 | 53,441     | 12,034    | 4.4 |
| <b>VANCOUVER ISLAND Total</b> |   | 883,832    | 151,508   | 5.8 | 884,477    | 150,632   | 5.9 |
| <b>Total</b>                  |   | 4,239,836  | 764,439   | 5.5 | 4,117,769  | 717,110   | 5.7 |
| Northern Rockies              | Northern Rockies                              | 286        | 6,388     | 0.0 | 2,220      | 6,324     | 0.4 |
| <b>Grand Total</b>            |   | 21,963,135 | 4,622,573 | 4.8 | 21,255,006 | 4,528,823 | 4.7 |

### 8. Summary of Deposits, Refunds, Revenues and Expenditures

***For those programs that charge deposits only:***

*Include a summary of deposits received and refunds paid in British Columbia by the producers (by plan if agency manages more than one plan). Attach a copy of the current year's independently audited financial statements as an appendix.*

**N/A**

***For those programs that charge a visible ecofee only:***

*Include a summary of fees / rates charged by the agency and provide a summary of total revenues and expenses in British Columbia (by plan if agency manages more than one plan). Attach a copy of the current year's independently audited financial statements as an appendix.*

The Program is funded by a visible Environmental Handling Fee (EHF) paid by the consumer at the time of purchase of obligated electronic items. The EHF is used to fund the collection, transportation and recycling of the material as well as administrative costs and consumer awareness efforts.

A listing of obligated products and the associated fees is available at the link below:

<https://www.return-it.ca/electronics/products/>

The information on revenues and expenses is in the attached financial statement as well as in the EPRA 2012 Annual Report at the link below:

<http://eprassociation.ca/ar/en/2012/>

### 9. Plan Performance

## EPRA [2012] Report to Director, Waste Management

*Using the table below, provide a brief overview of the performance of the plan for the current year compared to the stated performance requirements and targets specified in the approved plan. If no specific targets have been set (e.g. new plans in first year of operation), specify baseline results, significant achievements and identify when targets will be set.*

| Plan Target  | 2012 Results         | Strategies for Improvement  |
|--|----------------------|---|
| 1. Total WEEE collected<br>18,000 metric tonnes              | 21,963 Metric tonnes | <i>Exceeded the 3 year average of 18,000 mt outline in our plan</i> |
| 2. Total WEEE per capita<br>4.0 kgs/capita                   | 4.8 kilos per capita | Exceeded the 4.0 kg/capita outlined in our plan                     |
| 3. 90 % of the population covered by collection sites        | 97% coverage         | Exceeded the 90% coverage outlined in our plan                      |
| 4. 65 % of the population aware of the program               | 75% awareness        | Exceeded the 90% awareness outlined in our plan                     |
| 5. See chart in section 1 for additional performance factors |                      |   |

### Attachments

- 2012 EPRA Financial Statements
- Third Party Assurance Statement for Non-Financial Information
- Excel file of Collections Depots comparing 2007 with 2012
- Excel file containing a list of Collection Events in 2012



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## **INDEPENDENT AUDITOR'S REPORT TO ELECTRONIC PRODUCTS RECYCLING ASSOCIATION**

We have audited the following selected information within the *Electronic Products Recycling Association Annual Report to the Director [2012 Calendar Year]*:

- Section 4 *Collection System and Facilities*:
  - 142 permanent collection depots as at the end of 2012 and 28 drop-off events during 2012.
- Section 7 *Product Sold and Collected and Recovery Rate*:
  - Supply of 7,981,099 units of regulated electronic products into BC in 2012; and,
  - 21,963 metric tonnes of end-of-life electronics collected in 2012;
- Section 9. *Plan Performance*:
  - EPRA's description of performance for the year in relation to the following targets associated with Section 8(2)(b) and (e) of BC Regulation 449/2004 (the Recycling Regulation) in the approved stewardship plan:
    - Maintain a three year rolling average of a minimum of 18,000 metric tonnes of program material collected per annum commencing with the year 2011 (Target #1);
    - Maintain the collection network and schedule of collection events to ensure the program achieves 90% coverage on a three year rolling average. (Target #3);

(together the "Subject Matter")

The objective of this Report is to disclose how EPRA management has discharged its responsibility to report on the Subject Matter in accordance with Sections 8(2)(b) and (e) of the Recycling Regulation.



The Subject Matter is the responsibility of EPRA management who have prepared the Subject Matter in accordance with the evaluation criteria which are an integral part of the Subject Matter. Our responsibility is to express an opinion on this Subject Matter based on our audit. Our audit does not constitute a legal determination on compliance with the Recycling Regulation.

#### **EVALUATION CRITERIA**

The suitability of the evaluation criteria is the responsibility of management. The evaluation criteria presented in Appendix 1 are an integral part of the Subject Matter and address the relevance, completeness, reliability, neutrality and understandability of the Subject Matter.

#### **SCOPE OF THE AUDIT**

Except as described in Note 1 below, we carried out our audit in accordance with the International Standard on Assurance Engagements 3000 (ISAE 3000) published by the International Federation of Accountants. This Standard requires, amongst others, that the assurance team possesses the specific knowledge, skills and professional competencies needed to understand and audit the information included within the Subject Matter, and that they comply with specific requirements to ensure their independence.

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures within the Subject Matter. An audit also includes assessing the evaluation criteria used and significant estimates made by management, as well as evaluating the overall presentation of the Subject Matter.

The main elements of our work were:

- Inquiries of relevant management, including walkthroughs, to gain an understanding of the Company's data collection, monitoring and reporting processes in relation to the Subject Matter included in the Annual Report;
- Comparison of the number of collection facilities disclosed to supporting collection contracts and collection records evidencing the existence of collection facilities.
- Comparison of sales and collection data included in the Annual Report to internal records and assessment of associated controls over supplied data where appropriate;



- Testing of internal records of collection data against invoiced weight received by processors.
- Comparison of reported performance against targets to internal records and calculations of performance.

## **OPINION**

In our opinion, except as described in 1. below, the Subject Matter within the EPRA Report for the year ended December 31, 2012 presents fairly in accordance with the evaluation criteria, in all material respects:

- the Location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation;
- the description of how total amounts of the producer's product sold and collected and, if applicable, the producer's recovery rate has been calculated in accordance with Section 8(2)(e) of the Recycling Regulation; and,
- the description of performance for the year in relation to targets in the approved stewardship plan under Section 8(2)(b) and (e) of the Recycling Regulation.

## **EXCEPTIONS**

1. This is the first audit of the EPRA Report in relation to the number and location of collection facilities. KPMG audited the number and location of collection facilities as at December 31, 2012. However, the scope of our work was limited in relation to disclosures regarding changes in the number and location of collection facilities since December 31, 2011 as the prior year information has not been subject to audit. As a result, we were unable to reach conclusions in relation to assertions regarding the change in the number and location of collection facilities between December 31, 2011 and December 31, 2012 in accordance with Section 8(2)(b) of the Recycling Regulation.



Our report has been prepared solely for the purposes of management's stewardship under the Recycling Regulation and is not intended to be and should not be used for any other purpose. Our duties in relation to this report are owed solely to EPRA, and accordingly, we do not accept any responsibility for loss occasioned to any other party acting or refraining from acting based on this report.

*KPMG LLP*

Vancouver, BC, Canada

June 28, 2013



## **Appendix 1 to the Auditor's Report**

### **Evaluation Criteria**

#### **COLLECTION FACILITIES**

The following evaluation criteria were applied to the assessment of the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation:

1. The number of collection facilities is determined based on the number of facilities with signed End-Of-Life Electronics agreements in place with Encorp for collection of EOLE.
2. The number of collection facilities reported in the annual report is reconciled to the total number of collection facilities accepting EOLE (End-of-life electronics) on Encorp Pacific (Canada)'s ("Encorp's") list of Authorized Depots as of December 31.
3. All collection facilities in Encorp's listing have signed End-Of-Life Electronics agreements in place with Encorp for collection of EOLE.
4. Changes in the number of collection facilities are determined based on notification of changes by individual facilities which are required to be made prior to the effective date of the change. These are recorded in new supplier/change forms which are reflected in updated collection facility listings each month.
5. One-off or intermittent collection events are excluded from the number of collection facilities.
6. The regional distribution of collection facilities is based on the address of the facility within the list of collection facilities which is categorized into one of eight regions within BC.

#### **PRODUCT SOLD AND COLLECTED**

The following evaluation criteria were applied to the assessment of the description of how total amounts of the producer's product sold and collected and, if applicable, the producer's recovery rate has been calculated in accordance with Section 8(2)(e);

1. Product Sold: Product sold is determined based on self-reporting by each steward of units sold by category on a monthly/quarterly basis.
2. Product Sold: Self-reported data is subjected to spot “reviews” of the completeness and accuracy of information on a sample basis covering approximately 150 stewards (of the 1,600 total) per year.
3. Product Collected: The weight of product collected is based on the weight of material shipped to processors by consolidation facilities as reported to Encorp on the documents accompanying the load (Movement Authorization forms (MAs)).
4. Product Collected: Product weights identified on processors’ invoices are reconciled against shipping weight from consolidation sites for the specific pallets shipped.
5. Product Collected: The number of pallets collected is reconciled against the number of pallets shipped to processors from consolidation sites.
6. Product Collected: Adjustments for in-transit material and material not yet invoiced by processors are made for annual reporting purposes.

## TARGETS

The following evaluation criteria were applied to the description of performance for the year in relation to the specific targets associated with Section 8(2)(b) and (e) of the Recycling Regulation in the approved stewardship plan:

1. Targets in the stewardship plan have been identified and reported on by management in the annual report; and
2. The description of progress against targets to date is supported by records of progress maintained by the Company.
3. Reporting on the “coverage” of the collection network is based on the percentage of BC residents living within 30min (urban areas) or 45min (rural areas) of a collection facility.