

# **Major Appliance Recycling Roundtable 2018 Annual Report to the Director**

**Submitted to:** Director, Extended Producer Responsibility Programs  
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## Message from MARR's Executive Director

2018 was a year of significant change for MARR. A further revision to the program plan was submitted on January 12, 2018 after extensive one-on-one consultations with industry stakeholders. The program plan received the approval of the Ministry of Environment and Climate Change Strategy (MOECCS) on August 7, 2018. MARR also began a pilot program in February where for the first time MARR paid incentives to local governments and private industry collectors for the recycling of end-of-life major appliances and the removal of Ozone Depleting Substances and Other Halocarbons (ODS). We have increased our communications efforts to enhance consumer awareness of the program. We continued to work with First Nations and remote communities to facilitate the collection, removal and recycling of end-of-life appliances. MARR continues its commitment to sustain the viability of the market-driven system that already existed in the province and the local government and private sector entities that operate within it.

Some of the key achievements of the MARR program in 2018 include:

- Following consultation with our key stakeholders, MARR submitted a revised program plan on January 12, 2018 to the MOECCS in which MARR committed to support the existing market driven supply chain by committing to fund and ensure the safe removal of ozone depleting substances and other halocarbons from refrigerated appliances and to ensure that our collection partners receive funding on a cost-recovery basis where required. The program plan was approved on August 7, 2018.
- MARR launched a pilot program in the first quarter of 2018 and signed up collectors under a Memorandum of Understanding (MOU) and began to pay collectors for their administrative costs as well as for the cost of the removal of ozone depleting substances and other halocarbons. By the end of 2018, the pilot program consisted of 58 sites and had collected some 68,067 appliances. By the fourth quarter of 2018, MARR had written and implemented a collection agreement to replace the MOU to begin signing up new collectors and those already involved under the pilot program to a contract extending to December 31, 2022.
- MARR assisted the Regional District of Bulkley Nechako following the forest fire season in 2018 by paying for the cost of recycling the appliances removed from the affected homes.
- MARR implemented a comprehensive communications strategy that included radio campaigns, Google Search Ads, Google Display Ads, new rack cards, a Canada Post mail campaign, advertising in local government recycling guides, and produced flyers to be distributed at collection events. MARR has also conduct its own consumer awareness study to measure year over year improvements in consumer awareness.
- MARR supported the First Nation Initiative and hired a coordinator in conjunction with eight other stewardship agencies to promote and reach out to First Nations to conduct collection events and to inform them how to collect end-of-life appliances. We participated in remote collection events in Fort St. James with the Nakazdli First Nation and the Village of Valemount.

Once again, we thank those producers, obligated under B.C.'s Recycling Regulation, who choose to entrust MARR with the fulfillment of their responsibilities for management of end-of-life products.

Michael Zarbl,  
Executive Director

## 1 Executive Summary

|                             |   |
|-----------------------------|---|
| <b>Products within plan</b> | <p>The Major Appliance Recycling Roundtable (MARR) program plan includes major household appliances powered either by 120 volt or 240 volt input power that have been designed for use in residential homes, including those that use natural gas or propane for heating purposes. Appliances used in or sold for industrial, commercial and/or institutional (IC&amp;I) applications that have the same essential design characteristics as major household appliances, as defined above, are also included.</p> <p><b>Major product types include:</b></p> <ul style="list-style-type: none"> <li>• Refrigerators, wine coolers and beverage centers</li> <li>• Freezers</li> <li>• Portable, room and window air conditioners</li> <li>• Portable dehumidifiers</li> <li>• Clothes washers and dryers</li> <li>• Ranges, built-in ovens and surface cooking units</li> <li>• Built-in and over the range microwave ovens</li> <li>• Range hoods and downdrafts</li> <li>• Dishwashers</li> <li>• Food waste disposers and trash compactors</li> <li>• Electric water dispensers</li> </ul> <p>For a detailed list of included products and relevant definitions, please refer to the MARR website at <a href="http://www.marrbc.ca">www.marrbc.ca</a>.</p> |
| <b>Program website</b>      | <a href="http://www.marrbc.ca">www.marrbc.ca</a>  |

| Recycling Regulation Reference | Topic   | Summary Report   |
|--------------------------------|---|--|
| Part 2, section 8(2)(a)        | <a href="#">Public Education Materials and Strategies</a> | <ul style="list-style-type: none"> <li>• Two meetings of MARR - Local Government Advisory Committee.</li> <li>• Maintained collection site locator on <a href="http://www.marrbc.ca">www.marrbc.ca</a>.</li> <li>• Participated in the Recycling Council of British Columbia (RCBC) Hotline and Recyclepedia website.</li> <li>• Made rack cards available to retailers and collection sites.</li> <li>• Ran radio ads in 21 BC communities</li> <li>• Sent direct mailouts to 64,065 BC residences</li> <li>• Ran Google search and display ads receiving 9,159,655 impressions and 14,895 clicks through to the website</li> <li>• Participated in First Nations Recycling Initiative</li> </ul> |

| Recycling Regulation Reference | Topic   | Summary Report  |
|--------------------------------|---|---|
| Part 2, section 8(2)(b)        | <a href="#">Collection System and Facilities</a>                                      | <ul style="list-style-type: none"> <li>Existing comprehensive collection network available through market-driven system.</li> <li>293 locations in the province that accept major appliances</li> <li>Implemented pilot incentive program for collectors, which converted to a formal program in December 2018. 58 sites registered with the program by end of 2018.</li> </ul>   |
| Part 2, section 8(2)(c)        | <a href="#">Product Environmental Impact Reduction, Reusability and Recyclability</a> | <ul style="list-style-type: none"> <li>Design for Environment efforts continued to focus on:               <ul style="list-style-type: none"> <li>Materials reduction</li> <li>Incorporating new low-to-no Global Warming Potential (GWP) refrigerant technology</li> <li>Increasing energy and water efficiency, and</li> <li>Developing home appliance product sustainability standards</li> </ul> </li> <li>Under the pilot incentive program, 1,507kg of ozone depleting substances and other halocarbons were removed from 22,082 refrigerating units in 2018</li> </ul> |
| Part 2, section 8(2)(d)        | <a href="#">Pollution Prevention Hierarchy and Product / Component Management</a>     | <ul style="list-style-type: none"> <li>Under new incentive program, MARR will be able to report out on actual units collected in future years.</li> <li>Based on interim methodology, an estimated 597,025 units of major appliances were collected with a 91% capture rate</li> </ul>  |
| Part 2, section 8(2)(e)        | <a href="#">Product Sold and Collected and Recovery Rate</a>                          | <ul style="list-style-type: none"> <li>122 producers were registered with the MARR Program and reported sales as of 31 December 2018.</li> </ul>  |
| Part 2, section 8(2)(e.1)      |   | <ul style="list-style-type: none"> <li>1,085,194 units of program product were reported sold in BC</li> <li>.</li> </ul>  |
| Part 2, section 8(2)(f)        | <a href="#">Summary of Deposits, Refunds, Revenues and Expenses</a>                   | <ul style="list-style-type: none"> <li>See <b>Appendix K: 2018 MARR Financial Statements</b> for independently audited financial statements.</li> </ul>   |

| Comparison of Key Performance Targets  |  |  |   |
|--|--|--|---|
| Part 2 section 8(2)(g); See full list of targets in <a href="#">Plan Performance</a> . |  |  |   |
| Performance Measure  | Target   | 2018 Results   | Remediation Strategies  |
| Capture rate   | Achieve a capture rate of more than 90 percent for major appliances in BC.   | 91% of consumers who disposed of a major appliance in the past two years managed the product responsibly at end of life. | 2018 was a transition year as the program plan was only approved in August 2018. Capture rate calculations were based on partial data under the new claims system. Capture rate calculations will improve in 2019 as more collection sites begin to report. |
| Collection Accessibility   | Achieve accessibility to free drop-off locations for more than 90 percent of the BC population to which the Stewardship Agencies of BC Standard applies.                       | To be initiated in 2019 once contracted collection network has been established and stabilized.                          |   |
| Consumer Awareness   | MARR will target continuous improvement with respect to consumer awareness, aiming to achieve a consumer awareness target over 2016 baseline values over the term of the plan. | First consumer awareness survey under the new program plan to be conducted in 2019.                                      |   |

## 2 Program Outline

The Major Appliance Recycling Roundtable (MARR) is a not-for-profit stewardship agency created to implement and operate a stewardship plan for End-of-Life (EoL) major household appliances in the province of British Columbia (BC) on behalf of the major appliance “producers” who are obligated under the [BC Recycling Regulation](#) (“Regulation”). The original [BC Major Appliance Stewardship Plan](#), developed jointly by the Association of Home Appliance Manufacturers Canada (AHAM Canada) and Retail Council of Canada (RCC), received the approval of the Ministry of Environment & Climate Change Strategy (MOECCS) on June 29, 2012. A revised stewardship plan was submitted to the MOECCS in January 2018 and received MOECCS approval on August 7, 2018 (“MARR Stewardship Plan”). This annual report addresses the performance of the Program in relation to the recently approved stewardship plan. All references to “MARR Stewardship Plan” refer to the stewardship plan approved on August 7, 2018, unless otherwise indicated.

The MARR Stewardship Plan is fundamentally unique compared to many other BC product stewardship programs as there exists a long-standing and effective market-based system for recycling EoL major appliances. In a broad view, this market-based system exists largely because major household appliances, unlike most other electronic or electrical equipment, have a financial value at EoL. As such, the MARR Stewardship Plan is focused on enhancing the performance and transparency of the existing market-based system of collecting and recycling major household appliances in BC, rather than supplanting or replacing this system with a traditional stewardship model.

In particular, the MARR Stewardship Plan includes commitments to:

- Work with collectors and recyclers to research and promote best practices that ensure on-going system performance and improvement;
- Work with industry stakeholders to ensure the safe removal of ozone depleting substances and other halocarbons from EoL refrigerated appliances and adherence to the MARR voluntary processing standard.
- Create a branding and communications strategy to encourage market participation in the MARR program; and
- Conduct pilot studies to enhance the operation and performance of the market-driven recycling system in 2018 to implement the changes in the MARR Stewardship Plan submitted to the MOECCS in January 2018.

Product Care Association of Canada (PCA) was contracted in early 2013 by MARR to provide program management services and to assist in implementing the MARR Stewardship Plan in BC. In the third quarter of 2018, MARR issued a Negotiated Request For Proposal (NRFP) for the management services and reached an agreement with Encorp Pacific to take over these services beginning in January of 2019.

Some of the highlights of 2018 for MARR included:

- Submitting a new stewardship plan pursuant to the BC Recycling Regulation and receiving Ministry approval.
- Continuing active recruitment of obligated parties as program participants;

- Implementing a pilot claims program to subsidize collection sites of MARR program products for the removal of ozone depleting substances and other halocarbons (refrigerant) and collection of MARR products, which included developing agreements, requiring mandatory compliance with MARR's Processing Standard, reporting units collected and ozone depleting substances and other halocarbons collected.
- Participating in efforts to enhance access for First Nations communities undertaken by a First Nations Initiative Coordinator in partnership with other stewardship organizations.

MARR is governed by a board of directors with representation from major appliance manufacturers and retailers. A list of directors as of 31 December 2018 is provided in Appendix A, which also identifies changes to the board's composition in 2018.

The MARR - Local Government Advisory Council (MARR-LGAC) was created in 2013 to provide a forum for local governments to deliver their unique perspective and advice to MARR, and for MARR to better understand municipal and regional needs, capabilities and capacities. MARR-LGAC met in 2018 to discuss a number of topics, including stewardship plan renewal and claims system implementation.

### 3 Public Education Materials and Strategies

As with all aspects of the program, MARR undertook a number of significant initiatives to bring consumer awareness to program changes.

#### Website

MARR continued to maintain its informational website at [www.marrbc.ca](http://www.marrbc.ca), which included a list of accepted program products, program documents and other resources for program participants and consumers.

MARR introduced a new collection site finder on its website that lists all scrap metal recycling facilities in the province, while differentiating between those that have contracted with MARR to provide free collection and those that charge for accepting program products. An estimated 16,761 unique visitors utilized MARR's website during the 2018 calendar year.

#### Print Collateral

Informational point of sale rack cards for existing retailers and wholesalers were replenished upon request free of charge. See **Appendix B: Educational Materials** for an example.

#### Partnerships

MARR remained a member of the Coast Waste Management Association and the Recycling Council of British Columbia (RCBC). With regard to RCBC, MARR continued its participation in a joint service agreement with other stewardship programs through Stewardship Association of BC (SABC) to provide the public with information about MARR through RCBC's hotline and Recyclepedia app. RCBC is a trusted public information resource used by consumers to learn about the recycling options available in their community. In 2018, RCBC hotline and Recyclepedia app received more than 215,816 inquiries about recycling from residents across B.C., including over 4,463 web / app searches and phone calls for MARR program products. Product Care staff also responded to numerous consumer phone calls and email inquiries on behalf of MARR. All consumer concerns and questions were dealt with in a timely manner.

In 2018, MARR continued its partnership with a group of other stewardship organizations to support the First Nations Recycling Initiative. The position, coordinated through Recycle BC (formerly MMBC), worked to inform indigenous communities about product stewardship programs and enhance collection access for First Nations communities. During the year, the First Nations Field Services Specialist visited 45 First Nations communities in 12 regional districts and documented collection activities in each community in 2018.

### **Advertising**

MARR ran radio advertisements to educate the public that major appliances are recyclable in 21 communities across British Columbia: Port Hardy/Port Alice, Duncan, Powell River, Campbell River/Gold River, Courtenay/Comox Valley, Nanaimo/Sechelt, Quesnel, Smithers/Houston, 100 Mile House, Prince George, Williams Lake, Castlegar, Grand Forks, Nelson, and Creston. Radio ads resulted in more than 2.6 million impressions between September 17 and December 2, 2018.

MARR also sent direct mail outs to educate the public that major appliances are recyclable in 16 communities in BC: New Westminster, Maple Ridge, Richmond, Penticton, Fernie, Sparwood, Victoria, Port Renfrew, Salmon Arm, Williams Lake, 100 Mile House, Lone Butte, New Hazelton, Cedarvale, Woodcock, and Lac La Hache. Direct mail was sent to a total of 64,065 apartments, houses, and farms in British Columbia between September 17 and 28, 2018. See **Appendix B: Educational Materials** for an example.

MARR ran both Google search and display ads using a combination of broad awareness messaging (aka “recycle your major appliances with MARR”) as well as specific product messaging (aka “Recycle your fridge with MARR”), with an emphasis on most commonly recycled MARR products. Google ads resulted in a total of 9,159,655 impressions and 14,895 clicks through to the website, marrbc.ca. See **Appendix B: Educational Materials** for examples.

### **Processing Standard and Certification Program**

In 2015, MARR developed a standard for collectors for the decommissioning of all appliances. Signatories to the standard agree to have the appliances they collect decommissioned in accordance with the standard, or require their processors to whom they sell or provide their appliances to be certified against the standard.

MARR initially approached collectors to obtain agreement with such a standard in 2015, but received little response. As a result, MARR introduced the Voluntary Processing Standard in 2016. As of December 31, 2017, 27 facilities had adopted the Voluntary Processing Standard. See Appendix F for a list of the signatories.

With the introduction of a claims program for removal of ozone depleting substances and other halocarbons in 2018, the terms of the Processing Standard have now been enshrined in the claims agreement signed by collection sites in order to receive subsidies.

## **4 Collection System and Facilities**

As described in the MARR Program Plan, there is an existing recycling system for major appliances that has been in place in BC for decades, driven by the positive financial value of these products at EoL. This system is comprised of a variety of collectors, including retailers, local governments, utilities and private companies, which accept major appliances and then channel those products to scrap metal consolidators and processors. As part of the much larger commodities market, these scrap metal companies process the products to recover metal components, which are sold to end markets, such as steel mills, for recycling.

In 2017, MARR released a study to assess the economic parameters underlying the collection and processing of EoL major appliances in BC. The study on the economics of major appliance recycling commissioned by MARR (*Study of Major Appliance Recycling, Pricewaterhouse Coopers (PwC), February 17, 2017*) identified that some stakeholders involved in the existing collection system are not recouping their costs related to the collection and management of products covered under the stewardship plan that exceed the revenues associated with the sale of end-of-life materials. The final report is available on MARR's website at <http://www.marrbc.ca/collectors/enhancing>. Consequently, MARR's new Program Plan approved by the MOECCES committed to introduce a pilot compensation program for qualified collectors that continues to support the private scrap metal collection system already in place while adhering to two central program commitments:

1. To enhance the performance of the current system by providing incentives for the management and collection of ozone depleting substances and other halocarbons from products within the product category through a network of approved collectors.
2. To reasonable and free consumer access to collection facilities. This will be accomplished by providing incentives for administrative costs and transportation costs as required by region on a cost recovery basis

Under the pilot compensation program, collectors must contract with MARR. The terms of the contract require collectors to adhere to terms and conditions set out in MARR's collection site agreement, which include complying with MARR's Processing Standard, offering to accept all program products from consumers at no charge, as well as tracking and reporting on units collected and the volume of ozone depleting substances (refrigerant) removed from appliances. In return, contracted collectors receive compensation for costs associated with removal of ozone depleting substances and other halocarbons from refrigerating products, as well as administrative costs for tracking and reporting program products. MARR also offers financial assistance with respect to transportation costs where the commodity value from the sale of the program products by the collector is insufficient to pay for the cost of transportation to market.

### **Drop-Off Collection Sites**

As of December 31, 2018, MARR had identified 293 locations in the province that accept major appliances (see Table 1 below). MARR focused much of its efforts in 2018 on obtaining agreements with collection sites to provide compensation and obtain reporting of units collected. As of December 31, 2018, 58 sites had contracted with MARR (see Appendix C: **MARR Contracted Collection Sites** for list). A further 68 sites that were not contracted with MARR reported providing free drop off for all major appliances (see Appendix D for a list of these sites), resulting in a total of 126 confirmed locations offering free drop off of major appliances for consumers. One hundred and sixty-seven (167) collection sites that are not yet contracted with MARR indicated they charged consumers to drop off program products in 2018 (see Appendix E for a list of these sites). Table 1 provides an estimate of the

breakdown of the different types of locations that accepted major appliances across the Province.<sup>1</sup> Appendix I: Number of Collection Sites that Accept Major Appliances by Regional District provides the number of collection sites that accepted major appliances by Regional District.

**Table 1: Collection Site Distribution (as of 31 December 2018)**

|  |     |
|--|-----|
| MARR contracted collection sites   | 58  |
| Non-contracted collection sites that do not charge to drop of major appliances | 68  |
| Non-contracted collection sites that charge to drop off major appliances       | 167 |

As of December 31, 2018, MARR was in the process of negotiating contracts with 85 collection sites and is actively pursuing agreements with all collection sites across the province that currently collect major appliances.

**Pick-up Services**

Many retailers offer a delivery / take-back option when a consumer buys a new appliance. MARR surveyed 24 major appliance retailers regarding their delivery and pick-up services. Of the 7 retailers that responded to the survey, five indicated they deliver products to customers, while three offered pick-up of an old appliance. After pick-up, the old appliances were generally delivered to a drop-off site, although some retailers reported that appliances might have also gone to a refurbisher.

**Bounty Programs**

Of the two utilities in BC, the majority of the Province is serviced by BC Hydro. A smaller company, Fortis BC services an area in the Okanagan with electricity and natural gas, and other parts of the province with only natural gas. The objective of bounty programs is to save energy by reducing the number of secondary refrigerators in households, and to prevent the reuse of less energy-efficient models. A BC Hydro representative reported that bounty programs were originally introduced to support energy demand management objectives and have essentially been discontinued for the past three years as this is no longer an issue. Rather they are focusing resources on providing consumer incentives to purchase energy efficient appliances. BC Hydro did run two short-term (3 month) bounty programs in 2018 in the municipalities of Kent and Hope, BC.

**Accessibility**

According to a Geographic Information System (GIS) analysis completed in 2014 as a part of the System Study, 98.5% of British Columbians had convenient access to a drop-off location for major appliance products. Accessibility to free drop-off locations for BC residents was estimated at 93.6%.<sup>2</sup>

As noted, as of 31 December 2018, MARR was aware of 293 locations in the province that accepted major appliances. Under the pilot version of the claims program, 58 of those locations contracted with MARR to accept program products at no cost in 2018. With the approval of MARR’s program plan, the

<sup>1</sup> The list of non-contracted collectors provided is based on reports of which sites were accepting major appliances and represents the best available information as of April 2018. This list is not exhaustive, nor guaranteed to be current, due to ongoing changes in business operations. The list only includes local government and private/non-profit collector drop off sites, and does not include the numerous collection options that may be offered through retailers, utility bounty programs or other possible pick up options.

<sup>2</sup> The SABC defines accessibility as a 30-minute drive or less for those within urban areas, and a 45-minute drive or less for those in rural areas of the province.

claims program was formally implemented at the beginning of 2019 and MARR is actively contracting with collection sites across the province, thereby ensuring those locations are offering consumers the ability to recycle their used major appliances at no charge. MARR will be conducting an accessibility study in 2019 to assess accessibility rates for contracted sites.

### **First Nations Collection Events**

MARR also continued its efforts in 2018 to provide collection services to remote First Nations communities (see discussion under section 3 – Public Education Materials and Strategies). In addition MARR conducted a collection event at the Nak’azdli Depot (November 9-10)

The following First Nations received access to free recycling with the addition of the Kitwanga and Hazelton Depots to the MARR collection network:

- Gitanyow
- Gitwangak
- Gitsegukla
- Witset (Moricetown)
- Gitanmaax
- Kispiox
- Glen Vowell
- Hagwilget

We also conducted a collection event for the Village of Valemount

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

### **Product Environmental Impact Reduction, Reusability and Recyclability**

#### **Design for the Environment**

Major appliance manufacturers continue to focus significant attention on incorporating Design for the Environment (DfE) principles into the manufacturing of home appliances, specifically:

- Reducing the amount of materials used in the manufacture of the products,
- Incorporating new low-to-no Global Warming Potential (GWP) refrigerant technology such as hydrofluorolefins (HFOs)<sup>3</sup> or hydrocarbon refrigerants like isobutane (r600a) and foam blowing agents,
- Increasing energy and water efficiency, and
- AHAM, in conjunction with the Canadian Standards Association (CSA) and Underwriters Laboratories (UL), has published and continues to work on developing home appliance product sustainability standards.

Manufacturers continue to explore ways to reduce the amount and weight of material used in the manufacturing of appliances, as well as its packaging. Light-weighting of products results in lower transportation costs (both in the outbound supply chain and in the EoL supply chain), as well as improvements in greenhouse gas (GHG) emissions. Efforts to improve the amount and weight of

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<sup>3</sup> Honeywell Fluorine Products. *Honeywell HFO-1234ze Blowing Agent*. Retrieved from: [https://www51.honeywell.com/sm/lgwp-fr/common/documents/FP\\_LGWP\\_FR\\_Honeywell-HFO-1234ze\\_Literature\\_document.pdf](https://www51.honeywell.com/sm/lgwp-fr/common/documents/FP_LGWP_FR_Honeywell-HFO-1234ze_Literature_document.pdf)

material used in the manufacturing of appliances must always be balanced against ensuring consumer safety and the overall protection and lifespan of the product.

Significant changes have and will continue to be made in the types of refrigerants and foam blowing agents used in refrigerators and freezers as manufacturers incorporate refrigerants and insulation with lower GHG impacts as mandated by new regulations in accordance with the Montreal Protocol along with U.S. and Canadian law. In 2017, Canada ratified the Kigali Amendment to the Montreal Protocol, committing Canada to phase down the production and usage of hydrofluorocarbons (HFCs) a class of potent GHG. To support Canada's efforts to phase down the use of HFC's Environment and Climate Change Canada amended the *Ozone-depleting Substances and Halocarbon Alternatives Regulations*. The amendments essentially ban the use of HFCs in home refrigeration products. In particular, the regulation will prohibit the use of HFC gases with a GWP of greater than 150, including imports. HFC gases with a GWP greater than 150 will be prohibited as an insulation foam-blowing agent as of January 1, 2021, and refrigerants with a GWP greater than 150 will be prohibited as of January 1, 2025. U.S. states such as California, Washington, and New York either have enacted or will shortly be enacting legislation that will also eliminate the use of HFCs as foam blowing agents and refrigerants. In these states, the foam blowing prohibition will commence in 2020, and HFC refrigerants will be removed in a stepwise manner for compact, full size, and built-in refrigerators, as of 2021, 2022, and 2023 respectively. Since appliances are typically manufactured for the North American Market these HFC prohibitions will effectively eliminate the use of HFC in the home appliance refrigerators and freezers segments. Manufacturers of home refrigeration products have already started this transition and HFC-free refrigeration products are already being sold in the Canadian market. These regulatory efforts build on a history of environmental stewardship by the home appliance industry that includes significant gains in energy efficiency and the phasing out of ozone-depleting substances without losing efficiency gains.<sup>4</sup> Additionally, the State of California, under their Short-Lived Climate Pollutant Strategy, has also begun regulatory rule making on stationary air conditioning products that would limit the GWP of refrigerants used in window-room and portable air conditioners to 750.

Manufacturers have been able to reduce water consumption through design changes to dishwashers and innovations such as front-load and high efficiency top-load clothes washers. These reductions in water consumption also significantly reduce energy demand as there is less water to heat to perform the same cleaning task.

Significant gains in energy efficiency have also been made over the past 20 years. The average energy consumption of the typical set of major household appliances has declined by 50% since 1990. Since 2016, Natural Resources Canada (NRCan) has published Amendments 13, 14, 15 and 16 to the Energy Efficiency Regulations that established more stringent energy efficiency standards for all major appliances and will align Canada's energy efficiency regulations with the U.S. Department of Energy's more stringent standards. As calculated by NRCan, all product Amendments in 13 through 16 will result in annual reductions in energy consumption associated with the Amendments to be 8.83 petajoules (PJ) in 2020 and increasing to 47.51 PJ in 2030 as the sale of more efficient equipment steadily replaces the pre-regulation stock. Additionally, these more stringent energy efficiency standards will result in annual GHG emission reductions. These annual reductions are estimated to be 0.75 Mega Tons (Mt) in 2020, increasing to 3.49 Mt in 2030. Natural Resources Canada's (NRCan) Office of Energy Efficiency has developed and published its Forward Regulatory Plan for 2018-20 which includes updates or new

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<sup>4</sup> [Home Appliance Industry Sets Goal to Eliminate use of HFC Refrigerants](http://www.aham.org) (February 9, 2016), available at [www.aham.org](http://www.aham.org).

minimum energy performance standards (MEPS) for dehumidifiers, microwave ovens, electric ranges, wine chillers and other miscellaneous refrigeration products, clothes dryers and portable air conditioners.

The ENERGY STAR program continues to be an important influence on appliance efficiency, with product specification amendments for vent fans and window/room air conditioners being released in 2018. In 2019 the Energy Star Program is set to work on updating the specifications for dishwashers and has planned amendments and test method activity for clothes washers and dryers. Additionally, the development of new product categories in 2019 will include microwave ovens, wine chillers, and other miscellaneous refrigeration products.

In addition to the above DfE activities, AHAM is engaged in the development of Sustainability Standards for household appliances. In conjunction with CSA Group and UL Environment, sustainability standards for household refrigeration, cooking, clothes washers, clothes dryers, room air conditioners, portable and floor care appliances, microwave ovens, and dehumidifiers have all been published.

The sustainability standards are based on a lifecycle approach for identifying the environmental impacts of home appliance products in areas such as: energy, materials, EoL, performance and manufacturing. These sustainability standards use a broad multi-attribute approach that draws on life cycle assessment and hot button analysis as well as other key factors that influence product environmental performance. In use by manufacturers, governments, retailers, and others to identify environmentally responsible products, the standards serve as an objective and practical tool to assist in evaluating the environmental sustainability of home appliances. These appliance sustainability standards are published jointly by CSA Group, UL Environment and AHAM.

### **Ozone Depleting Substances Removal**

While the major appliance industry continues to make advances in methods for providing refrigeration that are less environmental harmful, refrigerant in current refrigerating appliances are ozone depleting substances and other halocarbons and must be evacuated and managed responsibly according to regulations when a refrigerating appliance reaches end-of-life. MARR's Processing Standard requires that all contracted collection sites adhere to provincial regulations for the handling of ozone depleting substances and other halocarbons, as well as used "approved persons" as defined by regulation to track and report out on the amount of refrigerant or ozone depleting substances and other halocarbons evacuated from decommissioned refrigerating units. MARR's program plan commits to report out on the total volume of ozone depleting substances and other halocarbons collected following one year of operating under the qualified collector framework.

Prior to program plan approval, MARR initiated a pilot claims program that required collectors who contracted with the program to use "approved persons" to track and report ozone depleting substances and other halocarbons evacuated from refrigerating units as a requirement to receive compensation. Under the program, collectors had their ozone depleting substances and other halocarbon removal service providers complete and sign off on tracking forms documenting each unit evacuated and the amount of ozone depleting substances and other halocarbons removed. These forms were submitted to MARR for verification prior to awarding compensation to the collector. For 2018, only partial data was

available based on claims submitted by contracted collection sites under the pilot claims program. Accordingly, 201 claims were submitted as part of the pilot claims program in 2018 that included refrigerating units. Those claims reported 1,507kg of ozone depleting substances and other halocarbons were removed from 22,082 refrigerating units, while an additional 1,912 refrigerating units were received with the refrigerant already evacuated.

## 6 Pollution Prevention Hierarchy and Product / Component Management

The following information is based on the understanding of the free market system, as well as findings from the System Study completed by MARR in 2014 reflecting the 2013 fiscal year. The System Study involved surveying industry participants with regard to collection volumes and product management practices. No further due diligence was performed on the information in terms of site visits or other investigations and therefore there is some degree of uncertainty surrounding the end fate of the products.

MARR strives to promote the principles of the pollution prevention hierarchy as much as possible, including design considerations and environmental impact initiatives outlined above in Section 5. According to research conducted for the System Study, 99.9% of major appliances have a lifespan of between 10 and 20 years.<sup>5</sup> This long life often results in a product having many different owners over its lifetime, usually facilitated by a used appliance retailer or refurbisher. Refurbishers are organizations involved in appliance reuse or the reuse of parts. They generally receive used major appliances from commercial generators or through retailers. The main goal of the refurbisher is to resell the unit into the second hand market, or at least use some of the parts for appliance repair.

Once an appliance is retired, or reaches EoL, it enters the collection system described above in Section 4. Major appliances are primarily metal (both ferrous and non-ferrous) with smaller amounts of other materials like glass, rubber, foam, paper, electronics, refrigerants, oils and other substances where applicable. Currently there are two mechanical processing facilities that receive EoL materials from BC that utilize shredders to break up scrap metal, including major appliances. The shredded material is then sorted and ferrous and non-ferrous metals are separated from other materials, such as plastic and foam.

The material composition of major appliances is reported to be approximately 75% metal. Of this metal, processors report that 98% of ferrous and non-ferrous metal that enters the shredder is recovered and recycled back into the commodities market.<sup>6</sup>

Prior to shredding, products undergo decommissioning to remove refrigerant and to look for any other substances of concern. In order to receive compensation from the MARR program, collectors must provide documentation showing that an Approved Person (as defined under the *BC Ozone Depleting Substances and Other Halocarbons Regulation*) has removed the ozone depleting substances and other halocarbons from the appliance, recorded the units serviced and the amount of ozone depleting

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<sup>5</sup> Based on findings from a 2005 report produced by R.W. Beck and Weston for the Association of Home Appliance Manufacturers titled “Recycling, Waste Stream Management and Material Composition of Major Home Appliances” referenced in MARR’s “Study on the Operations and Effectiveness of the Major Appliance Collection and Recycling System in British Columbia”. The study also included weighted average composition for new and old appliances.

<sup>6</sup> Based on survey responses from the two processors in BC currently operating shredders.

substances and other halocarbons removed, and provide a certificate of destruction showing the ozone depleting substances and other halocarbons have been managed appropriately.

Very few appliances reaching EoL contain mercury switches or PCBs though some contain heavy metals (e.g., circuit boards), mercury (i.e., fluorescent lights), compressor oil and polyurethane foam (i.e., insulation).

Table 2 illustrates the downstream management process for each material stream as identified in the System Study.

**Table 2: Downstream Management Process of Materials Streams**

| Material Commodity | Recycled | Landfilled | Safely Destroyed |
|--------------------|----------|------------|------------------|
| Ferrous Metal      | X        |            |                  |
| Non Ferrous Metal  | X        |            |                  |
| Plastic            |          | X          |                  |
| Refrigerant        | X        |            | X                |
| Other              |          | X          |                  |

It is estimated that 74% of materials are recycled (mostly ferrous and non-ferrous metal). The remaining 26%, including plastic, glass, rubber and foam, does not undergo further processing, and is currently sent to landfill.<sup>7</sup> MARR continues to examine the management of shredder residue and identify opportunities for achieving higher end uses of residual materials.

## 7 Product Sold, Collected and Capture Rate

### Products Sold

Registered participants of MARR (i.e., producers that have appointed MARR as their “agent” under the Regulation) are required to report their sales and remit Administrative Program Fees (APFs) to MARR. 122 producers were registered with the MARR Program and reported sales as of 31 December 2018. According to reports submitted by program participants, 1,085,194 units of program product were sold in BC between January 1 and December 31, 2018. Table 3 displays the number of major appliance units sold in BC by product category.

**Table 3: Total Units of Major Appliances Sold in BC (2018)**

| Product Category   | Total Units Sold |
|--|------------------|
| 1. Full-Size Refrigerators & Wine Coolers / Beverage Centres | 163,804          |
| 2. Compact Refrigerators & Wine Coolers / Beverage Centres   | 63,494           |

<sup>7</sup> Based on personal observations of MARR staff at processor locations and survey responses from the two processors currently receiving the majority of major appliances in BC.

| Product Category                              | Total Units Sold |
|---|------------------|
| 3. Freezers                                   | 58,133           |
| 4. Room Air Conditioners                      | 20,950           |
| 5. Portable Air Conditioners                  | 71,403           |
| 6. Dehumidifiers                              | 11,322           |
| 7. Clothes Washers                            | 135,674          |
| 8. Clothes Dryers                             | 107,268          |
| 9. Ranges                                     | 109,158          |
| 10. Range Hoods & Downdrafts                  | 86,729           |
| 11. Built-In Ovens                            | 24,942           |
| 12. Built-In & Over the range Microwave Ovens | 44,865           |
| 13. Surface Cooking Units                     | 20,315           |
| 14. Dishwashers                               | 131,926          |
| 15. Food Waste Disposers                      | 28,093           |
| 16. Trash Compactors                          | 79               |
| 17. Electric Water Dispensers                 | 7,039            |
| <b>Total</b>                                  | <b>1,085,194</b> |

### Products Collected

Since program inception, MARR has relied on a study of the BC market driven system for major appliance recycling to estimate the quantities of major appliances recycled in BC. *The Study on the Operations and Effectiveness of the Major Appliance Collection and Recycling System in British Columbia, May 8, 2014* report (“System Study”)<sup>8</sup> examined the operation and performance of the existing collection and recycling system, including estimations of total weights collected based on an extrapolation of weights reported voluntarily by a select number of collection sites throughout the province.

MARR’s program plan approved in 2018 commits to reporting on the total amount of the producer’s product collected and units collected per capita across the province and by regional district, as well as the varying collection performance for the sub-categories of products and the actions that will be taken to increase the collection of these products (see Table 4 below). With the introduction of MARR’s claims program in 2018, contracted collection sites are now required to report the exact number of units collected. However, 2018 was a transition year with only a percentage of all collection sites contracted with MARR under the pilot program and reporting units collected. In an effort to fill in collection units for regional districts and private collectors that had yet to register with MARR and start reporting units collected, MARR requested them to provide the total number of units of major appliances collected in

<sup>8</sup> A copy of the System Study is available at <http://www.marrbc.ca/collectors/studies>

the year voluntarily. However, data was only received from some collection sites and was therefore not complete.

Consequently, the program employed a different methodology for 2018 using consumer behaviour data as a proxy for a capture rate. In MARR’s 2018 consumer awareness survey, respondents who had recently disposed of a major appliance were asked what disposal method they used. Survey results found that 91% of respondents managed the appliance in a responsible manner (see Table 4). The assumption is that 91% of major appliances would have been recovered in 2018 since 91% of respondents indicated they recycled their major appliances in one manner or another. This value is in line with historic studies estimating the number of major appliance units recycled.<sup>9</sup>

**Table 4: How Consumers Managed Major Appliances at End of Life (2018)**

| Response Option                   | Percentage |
|-----------------------------------|------------|
| Retailer took it back             | 26%        |
| Returned to recycling facility    | 24%        |
| Junk removal company took it      | 13%        |
| Took to landfill/transfer station | 11%        |
| City/district pickup              | 1%         |
| Donated it                        | 11%        |
| Stored at home                    | 5%         |
| <b>Total<sup>10</sup></b>         | <b>91%</b> |

In order to estimate the units collected, the formula for calculating capture rate was inverted to estimate units collected (units collected = units available to collect x capture rate). As in previous years, the units available to collect was determined by an independent consultant utilizing a sophisticated model that considers historic annual sales and the lifespans for each product category. Table 5 shows the units available to collect for each product category and the estimated units collected based on a 91% capture rate.

**Table 5: Estimated Units of Major Appliances Collected by Product Category (2018)**

| Product Category  | Available to Collect | Units Collected |
|---|----------------------|-----------------|
| Full-Size Refrigerators & Wine Coolers/Beverage Centres | 106,108              | 96,558          |
| Compact Refrigerators & Wine Coolers/Beverage Centres   | 38,978               | 35,470          |
| Freezers  | 31,113               | 28,313          |
| Room Air Conditioners                                   | 32,526               | 29,598          |
| Portable Air Conditioners                               | 32,526               | 29,598          |

<sup>9</sup> See market studies completed by the Canadian Appliance Manufacturers Association and American Home Appliance Manufacturers that determined collection rates between 95% and 99%, and overall diversion rates between 83% and 89%. Hansen Research (2005), *Generation and Diversion of White Goods from Residential Sources in Canada* (prepared for Government of Canada Action Plan 2000 on Climate Change – Enhanced Recycling Program); SBR International Inc. (2009) *White Goods Assessment – Ontario*.

<sup>10</sup> The remaining respondents indicated they put the appliance in the alley/curbside (4%) or used it in another location (6%).

| Product Category                          | Available to Collect | Units Collected |
|---|----------------------|-----------------|
| Dehumidifiers                             | 15,283               | 13,908          |
| Clothes Washer                            | 61,551               | 56,012          |
| Clothes Dryers/Steam Cleaners             | 67,093               | 61,054          |
| Ranges                                    | 74,231               | 67,550          |
| Range Hoods & Downdrafts                  | 11,452               | 10,421          |
| Built-In Ovens                            | 58,051               | 52,827          |
| Built-In & Over the range Microwave Ovens | 24,799               | 22,567          |
| Surface Cooking Units                     | 4,212                | 3,833           |
| Dishwashers                               | 79,578               | 72,416          |
| Food Waste Disposers                      | 14,489               | 13,185          |
| Trash Compactors                          | 946                  | 861             |
| Electric Beverage Dispensers              | 3,136                | 2,853           |
| <b>Total</b>                              | <b>656,071</b>       | <b>597,025</b>  |

Using this approach, it is estimated that 597,025 units were collected in 2018.

MARR will be able to report units collected with greater accuracy in future years as more scrap metal collection facilities contract with the program.

The quantities listed by regional district reflect the combined units of major appliances collected by local government, non-profit and private sector collectors, bounty programs, and retailers.

In 2018, 56 collection sites from 10 regional districts filed 399 claims. Collection sites joined the program at different points throughout the year and were permitted to report at a frequency of their choosing, which presented challenges in attempting to extrapolate total units collected on an annualized basis. In some cases, only a subset of all collection sites in a regional district were contracted with the program and reporting units, making it equally challenging to extrapolate total units collected on a regional level. In 2019, the number of contracted collection sites will increase and collection sites will report on a monthly basis allowing for more accurate extrapolating, if required.

**Table 6: Estimated Total and Per Capita Major Appliances Collected by Regional District and for BC (2018)**

| Region and Collector Type | Estimated Units Collected | Estimated Units Collected per Capita |
|---------------------------|---------------------------|--------------------------------------|
| Alberni - Clayoquot       | 3,979                     | 0.1284                               |
| Bulkley - Nechako         | 4,868                     | 0.1284                               |
| Capital                   | 49,241                    | 0.1284                               |
| Cariboo                   | 7,962                     | 0.1284                               |
| Central Coast             | 426                       | 0.1284                               |

| Region and Collector Type | Estimated Units Collected | Estimated Units Collected per Capita |
|---------------------------|---------------------------|--------------------------------------|
| Central Kootenay          | 7,645                     | 0.1284                               |
| Central Okanagan          | 25,032                    | 0.1284                               |
| Columbia - Shuswap        | 6,598                     | 0.1284                               |
| Comox                     | 8,545                     | 0.1284                               |
| Cowichan Valley           | 10,756                    | 0.1284                               |
| East Kootenay             | 7,763                     | 0.1284                               |
| Fraser - Fort George      | 12,139                    | 0.1284                               |
| Fraser Valley             | 38,012                    | 0.1284                               |
| GVRD (Metro Vancouver)    | 316,418                   | 0.1284                               |
| Kitimat-Stikine           | 4,895                     | 0.1284                               |
| Kootenay Boundary         | 4,039                     | 0.1284                               |
| Mt. Waddington            | 1,417                     | 0.1284                               |
| Nanaimo                   | 19,999                    | 0.1284                               |
| North Coast               | 2,329                     | 0.1284                               |
| North Okanagan            | 10,835                    | 0.1284                               |
| Northern Rockies          | 693                       | 0.1284                               |
| Okanagan - Similkameen    | 10,664                    | 0.1284                               |
| Peace River               | 8,085                     | 0.1284                               |
| Quathet (Powell River)    | 2,578                     | 0.1284                               |
| Squamish - Lillooet       | 5,480                     | 0.1284                               |
| Strathcona                | 5,738                     | 0.1284                               |
| Sunshine Coast            | 3,850                     | 0.1284                               |
| Thompson - Nicola         | 17,040                    | 0.1284                               |
| <b>TOTAL</b>              | <b>597,025</b>            | <b>0.1284</b>                        |

### Capture Rate:

The “capture rate” reflects the amount of products collected as a function of the amount of products “available to collect”. MARR estimates the number of units available to collect using the lifespan model developed to produce theoretical estimates of the quantity entering life annually. The lifespan model combines historical unit sales data for MARR’s 17 product categories with lifespan data and historic unit

sales data by product category to estimate the number of units and the total tonnage of MARR products at EoL each year.

As noted above, MARR used consumer behaviour metrics as a proxy for capture rate in 2018. 91% of consumers indicated they managed their unwanted major appliances in a responsible manner in 2018, exceeding the program’s capture rate target of 90%. This result is consistent with research completed in other jurisdictions, where it was estimated that the market-driven collection and recycling system for EoL appliances achieved a capture rate of over 90%.<sup>11</sup>

The 2018 MARR non-financial audit report can be found in Appendix J.

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

MARR is funded by APFs, which are remitted to MARR by its participants based on the volume of sales of new major appliances sold in BC. The APF fee rates were set by MARR in consultation with industry and retailers. Retailers have the option to recover the fees from consumers as a separate visible environmental handling fee or to include it in the product’s price. Program revenues are applied to the management of the program, including education, outreach and administration. Table 7 sets out the APF rates for program products effective since August 1, 2013. New APF rates have been announced to take effect April 1, 2019 reflecting the changes in the program’s operations.

A copy of MARR’s audited financial statement can be found in Appendix K.

**Table 7: Administrative Program Fees for Major Appliances by Product Category**

| Product Category   | APF Per Unit |
|--|--------------|
| <b>Refrigerant Appliances</b>                                |              |
| 1. Full-Size Refrigerators & Wine Coolers / Beverage Centres | \$1.25       |
| 2. Compact Refrigerators & Wine Coolers / Beverage Centres   | \$1.25       |
| 3. Freezers  | \$1.25       |
| 4. Room Air Conditioners                                     | \$1.25       |
| 5. Portable Air Conditioners                                 | \$1.25       |
| 6. Dehumidifiers   | \$1.25       |
| <b>Non-Refrigerant Appliances</b>                            |              |

<sup>11</sup> Studies include “*Generation and Diversion of White Goods from Residential Sources in Canada*” (2005) by Canadian Appliance Manufacturers Association, Hansen Research and Communication and Hikene International Policy, “*Recycling, Waste Stream Management and Material Composition of Major Home Appliances*” (2005) by RW Beck and Weston Solutions and “*White Goods Assessment – Ontario*” (2009) by SBR International Inc.

| Product Category                              | APF Per Unit |
|---|--------------|
| 7. Clothes Washers                            | \$1.10       |
| 8. Clothes Dryers                             | \$1.10       |
| 9. Ranges                                     | \$1.10       |
| 10. Range Hoods & Downdrafts                  | \$1.10       |
| 11. Built-In Ovens                            | \$1.10       |
| 12. Built-In & Over the range Microwave Ovens | \$1.10       |
| 13. Surface Cooking Units                     | \$1.10       |
| 14. Dishwashers                               | \$1.10       |
| 15. Food Waste Disposers                      | \$1.10       |
| 16. Trash Compactors                          | \$1.10       |
| 17. Electric Water Dispensers                 | \$1.10       |

## 9 Plan Performance

Table 8 details the program’s targets as set out in the Program Plan approved August 7, 2018, as well as program performance results for 2018. As noted, 2018 represented a year of significant transition for the program. While the program made great strides in 2018 to implement the desired changes to the program, not all targets were achieved in 2018 because operational modifications to the program were only fully implemented near the end of 2018 following program plan approval.

**Table 8: Plan Performance Measures and Results**

| Performance Measure | Target   | Results   | Remediation Strategies  |
|---------------------|--|---|---|
| Capture rate        | Achieve a capture rate of more than 90 percent for major appliances in BC.   | 91% of consumers who disposed of a major appliance in the past two years managed the product responsibly at end of life.  | Capture rate will be calculated based on actual units collected as all collection sites register with MARR and begin to report units collected. |
| Accessibility       | Achieve accessibility to free drop-off locations for more than 90 percent of the BC population to which the Stewardship Agencies | In process of actively contracting with collection sites across the province. Accessibility study to be conducted in 2019 once recruitment is completed and collection network is stabilized. | Continue to contract with other collection sites throughout the province.   |

| Performance Measure  | Target   | Results   | Remediation Strategies  |
|--|--|---|---|
|  | of BC Standard applies.  |   |   |
| Consumer Awareness   | MARR will target continuous improvement with respect to consumer awareness, aiming to achieve a consumer awareness target over 2016 baseline values over the term of the plan.                                       | In 2016 MARR participated in consumer awareness studies as part of the SABC. The 2016 awareness baseline was 66%. In a similar SABC survey conducted in 2018 the consumer awareness was 64%. As this survey was conducted jointly with the other stewards as part of SABC, MARR decided to conduct its own survey in 2018, which resulted in a consumer awareness of 48%. | As suspected the initial results were inflated in the 2016 and 2018 surveys, likely due to respondents being asked about several stewardship plans at the same time. MARR will continue to conduct its own consumer awareness studies on an annual basis to track performance. MARR has developed a comprehensive consumer education plan for 2019 which we will include in our revised plan which will be submitted no later than 18 months from the date of our August 7, 2018 approval letter. |
| Environmental Management: Ozone Depleting Substances and Other Halocarbons (ODS) Removal | Following one year of operating under the qualified collector framework, MARR will report out on the total volume of ODS collected. A performance target will be determined once an initial baseline is established. | MARR collected 1,507kgs of ODS refrigerant in the 2018 pilot program.   | MARR will continue to report out on the amount of ODS collected in 2019 and will set removal targets for the year 2020 to meet the requirement of the August 7 2018 approval letter to set targets within 18 months.  |
| Environmental Management: MARR Processing Standard                                       | Collectors will be required to adopt the MARR Processing Standard for Recyclers of Major Appliances in order to become Qualified Collectors and be eligible to receive incentives.                                   | All 58 contracted collection sites are required to adhere to MARR's processing standard.  | Continue to contract with other collection sites throughout the province.   |
| Financial Management   | A performance target will be determined once an initial baseline is established.   | MARR continued to operate within its operational budget and has maintained adequate reserves to fund the 2018 pilot program and meet all of its financial obligations.  | MARR has developed a budget for 2019 that accounts for the expansion of the collection network, and is in the process of updating its reserve policy to ensure its financial  |

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| Performance Measure | Target | Results | Remediation Strategies   |
|---------------------|--------|---------|--|
|                     |        |         | stability. MARR will submit an updated financial target prior to August 7, 2019 as per the plan approval letter. |

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## Appendix A: MARR Board of Directors

|                             |  |
|-----------------------------|--|
| Warrington Ellacott (Chair) | Whirlpool Canada LP                                |
| Jeffrey Van Damme           | Samsung Electronics Canada Inc.                    |
| Bruce Rebel                 | Association of Home Appliance Manufacturers Canada |
| Kimberlee Johnson           | Danby Appliances                                   |
| Grant Garrard               | The Home Depot Canada                              |
| Jordane Ferron              | Lowe's of Canada                                   |
| Greg Wilson                 | Retail Council of Canada                           |
| Julie Yan                   | Hudson's Bay Company                               |

Julie Yan and Jordane Ferron joined the board in February 2018. Norm McNeil left the board in June 2018. Kimberlee Johnson joined in September 2018.

## Appendix B: Educational Materials

### Rack Card

# Recycle your large appliances for free!



DISHWASHER



OVENS



WASHERS/  
DRYERS



RANGE HOODS



AIR  
CONDITIONERS



FRIDGES/  
FREEZERS

Visit [marrbc.ca](http://marrbc.ca) to find a free drop-off location near you.



**Which major appliances are accepted for recycling?**

Recyclable products include fridges, dishwashers, ovens, washers/dryers, range hoods, and more. Collected appliances will have refrigerant removed responsibly prior to recycling.



**Find a free drop-off location and a full list of accepted products at [marrbc.ca](http://marrbc.ca)**

**Who is MARR?**

MARR (the Major Appliance Recycling Roundtable) is a not-for-profit industry association developed in response to the BC Recycling Regulation. MARR strives to improve the performance and transparency of the existing collection and recycling system for major appliances in BC.

**How is MARR funded?**

MARR is funded by Administrative Program Fees (APFs) applied to the sale of new major appliances in BC. APFs may be included in a product's price or displayed separately.

1-800-667-4321

[marrbc.ca](http://marrbc.ca)

**Google display ad**



**Google search ad**

[Recycle Your Fridge | Find Drop-Off Sites Across BC](#)

[www.marrbc.ca](http://www.marrbc.ca)

Keep your refrigerator out of landfill so its parts can be recycled.

## Direct Mail



**Recycle your large appliances for free!**

Visit [marrbc.ca](http://marrbc.ca) or call 1-800-667-4321 to find a free drop-off location near you.

**Which large appliances are recyclable?**  
 Recyclable products include both refrigerated and non-refrigerated appliances, such as fridges, freezers, dishwashers, ovens, washers/dryers, range hoods, and more. For a full list of accepted products, visit [marrbc.ca](http://marrbc.ca).



**How do I recycle my large appliances?**  
 There are drop-off recycling locations near you that accept large appliances for recycling for free!



Find a free drop-off location and a full list of accepted products at [marrbc.ca](http://marrbc.ca).



Collected appliances will have refrigerant removed responsibly prior to recycling.



## Appendix C: MARR Contracted Collection Sites

Table 9 below list of 58 sites that have contracted with MARR as of December 31, 2018 grouped by regional district.

**Table 9: MARR Contracted Collection Sites by Regional District**

| Collection Site                                   | City           | Regional District  | Type              |
|---|----------------|--------------------|-------------------|
| Hartland Landfill & Recycling Centre              | Victoria       | Capital            | Regional District |
| Port Renfrew Transfer Station and Recycling Depot | Port Renfrew   | Capital            | Regional District |
| Trail Appliances - Victoria                       | Langford       | Capital            | Retailer          |
| 150 Mile House Transfer Station                   | Williams Lake  | Cariboo            | Regional District |
| Forest Grove Transfer Station                     | Forest Grove   | Cariboo            | Regional District |
| Frost Creek Transfer Station                      | Williams Lake  | Cariboo            | Regional District |
| Interlakes Landfill                               | Sheridan Lake  | Cariboo            | Regional District |
| Lac La Hache Transfer Station                     | Lac La Hache   | Cariboo            | Regional District |
| South Cariboo Landfill                            | 100 Mile House | Cariboo            | Regional District |
| Watch Lake Landfill                               | Watch Lake     | Cariboo            | Regional District |
| Wildwood Transfer Station                         | Wildwood       | Cariboo            | Regional District |
| Planet Earth Recycling                            | West Kelowna   | Central Okanagan   | Private           |
| Trail Appliances - Kelowna                        | Kelowna        | Central Okanagan   | Retailer          |
| Falkland Transfer Station                         | Falkland       | Columbia - Shuswap | Regional District |
| Glenemma Transfer Station                         | Salmon Arm     | Columbia - Shuswap | Regional District |
| Golden Landfill                                   | Golden         | Columbia - Shuswap | Regional District |
| Malakwa Transfer Station                          | Malakwa        | Columbia - Shuswap | Regional District |
| Parson Transfer Station                           | Skookumchuck   | Columbia - Shuswap | Regional District |
| Revelstoke Landfill                               | Revelstoke     | Columbia - Shuswap | Regional District |
| Salmon Arm Landfill                               | Salmon Arm     | Columbia - Shuswap | Regional District |
| Scotch Creek Transfer Station                     | Scotch Creek   | Columbia - Shuswap | Regional District |
| Scrappy's Metal Recycling                         | Salmon Arm     | Columbia - Shuswap | Private           |
| Seymour Arm Transfer Station                      | Seymour Arm    | Columbia - Shuswap | Regional District |
| Sicamous Landfill                                 | Sicamous       | Columbia - Shuswap | Regional District |
| Skimikin Transfer Station                         | Chase          | Columbia - Shuswap | Regional District |
| Trout Lake Transfer Station                       | Trout lake     | Columbia - Shuswap | Regional District |
| Brisco Transfer Station                           | Brisco         | East Kootenay      | Regional District |
| Canal Flats Transfer Station                      | Canal Flats    | East Kootenay      | Regional District |
| Central Subregion Landfill                        | Fort Steele    | East Kootenay      | Regional District |
| Columbia Valley Landfill                          | Windermere     | East Kootenay      | Regional District |
| Cranbrook Transfer Station                        | Cranbrook      | East Kootenay      | Regional District |
| Edgewater Transfer Station                        | Edgewater      | East Kootenay      | Regional District |

| Collection Site                                     | City            | Regional District      | Type              |
|---|-----------------|------------------------|-------------------|
| Elkford Transfer Station                            | Elkford         | East Kootenay          | Regional District |
| Fairmont Transfer Station                           | Fairmont        | East Kootenay          | Regional District |
| Fernie Transfer Station                             | Fernie          | East Kootenay          | Regional District |
| Kimberley Transfer Station                          | Kimberley       | East Kootenay          | Regional District |
| Sheep Creek Transfer Station                        | Sheep Creek     | East Kootenay          | Regional District |
| Sparwood Transfer Station                           | Sparwood        | East Kootenay          | Regional District |
| Tie Lake Transfer Station                           | Tie Lake        | East Kootenay          | Regional District |
| Wasa Transfer Station                               | Wasa            | East Kootenay          | Regional District |
| Everclear Metal Recycling                           | Mission         | Fraser Valley          | Private           |
| Mattress Recycling TM                               | Hope            | Fraser Valley          | Private           |
| Regional Recycling Abbotsford                       | Abbotsford      | Fraser Valley          | Private           |
| Hazelton Waste Management Facility                  | New Hazelton    | Kitimat - Stikine      | Regional District |
| Kitwanga Transfer Station                           | Kitawanga       | Kitimat - Stikine      | Regional District |
| Allied Salvage & Metals                             | Richmond        | Metro Vancouver        | Private           |
| New Westminster Recycling Depot                     | New Westminster | Metro Vancouver        | Municipal         |
| North Shore Transfer Station (Wastech Services Ltd) | North Vancouver | Metro Vancouver        | Municipal         |
| Regional Recycling Richmond                         | Richmond        | Metro Vancouver        | Private           |
| Regional Recycling Vancouver                        | Vancouver       | Metro Vancouver        | Private           |
| Richmond Recycling Depot                            | Richmond        | Metro Vancouver        | Municipal         |
| Ridge Meadows Recycling Society                     | Maple Ridge     | Metro Vancouver        | Private           |
| Schnitzer Steel - Surrey                            | Surrey          | Metro Vancouver        | Private           |
| Trail Appliances - Annacis                          | Delta           | Metro Vancouver        | Retailer          |
| Vancouver Landfill                                  | Delta           | Metro Vancouver        | Municipal         |
| Vancouver Zero Waste Centre                         | Vancouver       | Metro Vancouver        | Municipal         |
| West Coast Metal Recycling LLP                      | Langley         | Metro Vancouver        | Private           |
| Campbell Mountain Landfill                          | Penticton       | Okanagan - Similkameen | Municipal         |

## Appendix D: Additional Collection Sites that Accept MARR Products at No Charge

The following 68 collection sites not contracted with MARR accepted all MARR products at no charge to consumers.

| Site Name  | City                 | Regional District    | Type      |
|--|----------------------|----------------------|-----------|
| Alberni Foundry Ltd.                                   | Port Alberni         | Alberni - Clayoquot  | Private   |
| Sandy's Auto Wreckers                                  | Langford             | Capital              | Private   |
| Alexis Creek Transfer Station                          | Alexis Creek         | Cariboo              | Municipal |
| Baker Creek Transfer Station                           | Quesnel              | Cariboo              | Municipal |
| Big Lake Landfill                                      | Big Lake             | Cariboo              | Municipal |
| Cochin Lake Landfill                                   | Cochin Lake          | Cariboo              | Municipal |
| Horsefly Transfer Station                              | 150 Mile House       | Cariboo              | Municipal |
| Kleena Kleene Landfill                                 | Kleena Kleene        | Cariboo              | Municipal |
| Likely Landfill  | Likely               | Cariboo              | Municipal |
| McLeese Lake Transfer Station                          | McLeese Lake         | Cariboo              | Municipal |
| Nazko Landfill   | Nazko                | Cariboo              | Municipal |
| Nemaiah Valley Landfill                                | Nemaiah Valley       | Cariboo              | Municipal |
| Puntzi Lake Refuse Site                                | Puntzi Lake / Puntzi | Cariboo              | Municipal |
| Quesnel Landfill (Carson Pit)                          | Quesnel              | Cariboo              | Municipal |
| Riske Creek Transfer Station                           | Williams Lake        | Cariboo              | Municipal |
| Tatla Lake Landfill                                    | Tatla Lake           | Cariboo              | Municipal |
| Wells Transfer Station                                 | Wells                | Cariboo              | Municipal |
| West Chilcotin Landfill                                | West Chilcotin       | Cariboo              | Municipal |
| Williams Lake Scrap Metal Recycling / BJ Trucking      | Williams Lake        | Cariboo              | Private   |
| Earls Towing   | Creston              | Central Kootenay     | Private   |
| ABC Metals Recycling - Kelowna                         | Kelowna              | Central Okanagan     | Private   |
| Eric's Refrigeration & Appliances                      | Kelowna              | Central Okanagan     | Private   |
| Westside Residential Waste Disposal & Recycling Centre | West Kelowna         | Central Okanagan     | Municipal |
| Bings Creek Solid Waste Management Complex             | Duncan               | Cowichan Valley      | Municipal |
| Malahat Metal Recycling                                | Malahat              | Cowichan Valley      | Private   |
| Meade Creek Recycling Drop-Off Depot                   | Lake Cowichan        | Cowichan Valley      | Municipal |
| Peerless Road Recycling Dropoff Depot                  | Ladysmith            | Cowichan Valley      | Municipal |
| Columbia Recycle Ltd.                                  | Kimberley            | East Kootenay        | Private   |
| ABC Metals Recycling - Prince George                   | Prince George        | Fraser - Fort George | Private   |
| Salvation Army   | Prince George        | Fraser - Fort George | Private   |
| Capt'n Crunch Auto Wrecking Ltd.                       | Abbotsford           | Fraser Valley        | Private   |

| Site Name  | City            | Regional District      | Type      |
|--|-----------------|------------------------|-----------|
| Chaumox Landfill                                     | Boston Bar      | Fraser Valley          | Municipal |
| District of Hope Landfill                            | Hope            | Fraser Valley          | Municipal |
| Fraser Valley Metal                                  | Abbotsford      | Fraser Valley          | Private   |
| Goodies Trading Ltd.                                 | Chilliwack      | Fraser Valley          | Private   |
| McNeils DBA Ideal U Pick                             | Chilliwack      | Fraser Valley          | Private   |
| Mission Landfill (Minnie's Pit)                      | Mission         | Fraser Valley          | Municipal |
| Sunshine Valley Transfer Station                     | Cawston         | Fraser Valley          | Municipal |
| ABC Metals Recycling - Terrace                       | Terrace         | Kitimat - Stikine      | Private   |
| Thornhill Transfer Station                           | Thornhill       | Kitimat - Stikine      | Municipal |
| ABC Metals Recycling - Surrey                        | Surrey          | Metro Vancouver        | Private   |
| ABC Recycling  | Burnaby         | Metro Vancouver        | Private   |
| City of Burnaby Eco-Centre (Burnaby Recycling Depot) | Burnaby         | Metro Vancouver        | Municipal |
| Coquitlam Transfer Station (Wastech Services Ltd.)   | Coquitlam       | Metro Vancouver        | Municipal |
| Fraser Valley Metal Exchange                         | Maple Ridge     | Metro Vancouver        | Private   |
| Langley Transfer Station                             | Aldergrove      | Metro Vancouver        | Municipal |
| Mac's Traders Inc.                                   | Langley         | Metro Vancouver        | Private   |
| Parsons Scrap Metal                                  | Surrey          | Metro Vancouver        | Private   |
| Surrey Transfer Station (Wastech Services Ltd.)      | Surrey          | Metro Vancouver        | Municipal |
| 7 Mile Landfill & Recycling Centre                   | Black Creek     | Mount Waddington       | Municipal |
| Fox's Disposal Services Ltd                          | Port Hardy      | Mount Waddington       | Private   |
| Malcolm Island Transfer Station                      | Sointula        | Mount Waddington       | Municipal |
| Woss Transfer Station                                | Woss            | Mount Waddington       | Municipal |
| Bellevue Trade Centre                                | Parksville      | Nanaimo                | Private   |
| Carl's Metal Salvage                                 | Nanaimo         | Nanaimo                | Private   |
| DBL Disposal and Recycling                           | Nanaimo         | Nanaimo                | Private   |
| Parksville Bottle and Recycling Depot                | Parksville      | Nanaimo                | Private   |
| Schnitzer Steel - Cassidy                            | Cassidy         | Nanaimo                | Private   |
| Dead Or Alive Auto & Metals Recycling                | Vernon          | North Okanagan         | Private   |
| Oliver Recycling & Salvage                           | Oliver          | Okanagan - Similkameen | Private   |
| Summerland Landfill Recycling Depot                  | Summerland      | Okanagan - Similkameen | Municipal |
| Hudson's Hope Landfill                               | Hudson's Hope   | Peace River            | Municipal |
| Recycle-It Resource Recovery                         | Fort St. John   | Peace River            | Private   |
| Blackpoint Auto Recyclers                            | Powell River    | Powell River           | Private   |
| Lasqueti Island Landfill and Transfer Site           | Lasqueti Island | Powell River           | Municipal |
| Pemberton Recycling Centre                           | Pemberton       | Squamish - Lillooet    | Private   |
| Schnitzer Steel - Campbell River                     | Campbell River  | Strathcona             | Private   |
| Cariboo Salvage                                      | Clinton         | Thompson - Nicola      | Private   |

## Appendix E: Additional Collection Sites that Accept MARR Products at For A Fee

The following 167 collection sites either did not accept one or more categories of MARR products and/or charged a fee to consumers to drop off MARR products.

| Site Name                              | City           | Regional District      | Type      |
|--|----------------|------------------------|-----------|
| 70 Mile House Eco-Depot                | 70 Mile House  | Thompson - Nicola      | Municipal |
| Abbotsford Community Services          | Abbotsford     | Fraser Valley          | Municipal |
| Abbotsford Mission Recycling           |                |                        | Private   |
| ABC Metals Recycling - Burnaby         | Burnaby        | Metro Vancouver        | Private   |
| ABC Metals Recycling - Campbell River  | Campbell River | Strathcona             | Private   |
| ABC Metals Recycling - Fort St. John   | Fort St. John  | Peace River            | Private   |
| ACA Metal Recycle                      | Richmond       | Metro Vancouver        | Private   |
| Action Salvage & Recycling (Action     | Penticton      | Okanagan - Similkameen | Private   |
| Alberni Valley Landfill                | Port Alberni   | Alberni - Clayoquot    | Municipal |
| Alberni-Clayoquot                      |                | Alberni-Clayoquot      | Regional  |
| Allen's Scrap & Salvage Ltd.           | Prince George  | Fraser - Fort George   | Private   |
| Alpine Disposal & Recycling            | Langford       | Capital                | Private   |
| Area 'D' Fraser Lake Transfer Station  | Fraser Lake    | Bulkley - Nechako      | Municipal |
| Armstrong/Spallumcheen Recycling       | Armstrong      | North Okanagan         | Regional  |
| ASM Squamish Scrap Metal Ltd.          | Squamish       | Squamish - Lillooet    | Private   |
| Augusta Recyclers (PLRD)               | Powell River   | Powell River           | Private   |
| Bailey Sanitary Landfill - City of     | Chilliwack     | Fraser Valley          | Municipal |
| Balfour Towing and Salvage             | Balfour        | Central Kootenay       | Private   |
| Balfour Transfer Station               | Balfour        | Central Kootenay       | Municipal |
| Barnhartvale Landfill                  | Kamloops       | Thompson - Nicola      | Municipal |
| Bear Lake Regional Transfer Station    | Bear Lake      | Fraser - Fort George   | Municipal |
| Bessborough Landfill                   | Dawson Creek   | Peace River            | Municipal |
| Blue River Transfer Station            | Blue River     | Thompson - Nicola      | Municipal |
| Boswell Transfer Station               | Boswell        | Central Kootenay       | Municipal |
| Brentwood Auto and Metal Recyclers     | Saanichton     | Capital                | Private   |
| Burns Lake Transfer Station            | Burns Lake     | Bulkley - Nechako      | Municipal |
| Burton Transfer Station                | Burton         | Central Kootenay       | Municipal |
| By-Pass Truck & Equipment Recyclers    | Gibsons        | Sunshine Coast         | Private   |
| Cache Creek Refuse Transfer Station    | Cache Creek    | Thompson - Nicola      | Municipal |
| Campbell River Waste Management        | Campbell River | Strathcona             | Municipal |
| Capital Salvage Company                | Vancouver      | Metro Vancouver        | Private   |
| Cecil Lake Transfer Station            | Fort St. John  | Peace River            | Municipal |
| Central Landfill                       | Salmo          | Central Kootenay       | Municipal |
| Cherryville & Area E Regional Disposal | Cherryville    | North Okanagan         | Regional  |
| Chetwynd Landfill                      | Chetwynd       | Peace River            | Municipal |

| Site Name                              | City           | Regional District      | Type      |
|--|----------------|------------------------|-----------|
| Christina Lake Transfer Station        | Christina Lake | Kootenay Boundary      | Municipal |
| Church Road Transfer Station           | Parksville     | Nanaimo                | Municipal |
| Clearwater Eco Depot                   | Clearwater     | Thompson - Nicola      | Municipal |
| Clearwater Towing Ltd.                 | Clearwater     | Thompson - Nicola      | Private   |
| Clinton Eco-Depot                      | Clinton        | Thompson - Nicola      | Municipal |
| Comox Valley                           |                | Comox Valley           | Municipal |
| Comox Valley Waste Management          | Cumberland     | Comox Valley           | Municipal |
| Cormorant Island Recycling Depot       | Alert Bay      | Mount Waddington       | Municipal |
| Cortes Island Recycling Centre         | Cortes Island  | Strathcona             | Municipal |
| Courtenay Return-It Depot              | Courtenay      | Comox Valley           | Private   |
| Crawford Bay Transfer Station          | Crawford Bay   | Central Kootenay       | Municipal |
| Creston Landfill                       | Creston        | Central Kootenay       | Municipal |
| Cummings Road Transfer Station         | Prince George  | Fraser - Fort George   | Municipal |
| Davis Trading                          | Vancouver      | Metro Vancouver        | Private   |
| Dawson Creek Transfer Station          | Dawson Creek   | Peace River            | Municipal |
| Ecowaste Industries Ltd.               | Richmond       | Metro Vancouver        | Private   |
| Edgewood Transfer Station              | Edgewood       | Central Kootenay       | Municipal |
| Ellice Recycle Ltd.                    | Victoria       | Capital                | Private   |
| Ernest A. Maxwell Enterprises Ltd.     | Mill Bay       | Cowichan Valley        | Private   |
| First Class Transfer Station           | Abbotsford     | Fraser Valley          | Private   |
| Foothills Boulevard Regional Landfill  | Prince George  | Fraser - Fort George   | Municipal |
| Fort St. James Transfer Station        | Fort St James  | Bulkley - Nechako      | Municipal |
| Fort St. John Landfill (North Peace    | Fort St. John  | Peace River            | Municipal |
| Gabriola Island Recycling Organization | Gabriola       | Nanaimo                | Municipal |
| Galiano Island Recycling and           | Galiano Island | Capital                | Municipal |
| Gibsons Recycling Depot                | Gibsons        | Sunshine Coast         | Private   |
| Glenmore Landfill                      | Kelowna        | Central Okanagan       | Municipal |
| Gold Bridge Transfer Station           | Gold Bridge    | Squamish - Lillooet    | Municipal |
| Grand Forks Landfill                   | Grand Forks    | Kootenay Boundary      | Municipal |
| Granisle Transfer Station              | Granisle       | Bulkley - Nechako      | Municipal |
| Greater Vernon Recycling and Disposal  | Vernon         | North Okanagan         | Regional  |
| Grohman Narrows Transfer Station       | Nelson         | Central Kootenay       | Municipal |
| Happy Stan's Recycling Services Ltd.   | Port Coquitlam | Metro Vancouver        | Private   |
| Heffley Creek Eco-Depot                | Heffley Creek  | Thompson - Nicola      | Municipal |
| Hixon Transfer Station                 | Hixon          | Fraser - Fort George   | Municipal |
| Hornby Island Recycling Depot          | Hornby Island  | Comox Valley           | Municipal |
| Islands Solid Waste Landfill           | Port Clements  | North Coast Regional   | Municipal |
| Kamloops (City Of)                     |                |                        | Municipal |
| Kaslo Transfer Station                 | Kaslo          | Central Kootenay       | Municipal |
| Kelly Lake Transfer Station            | Tomslake       | Peace River            | Municipal |
| Keremeos Transfer Station              | Keremos        | Okanagan - Similkameen | Municipal |
| Kingfisher Transfer Station            | Kingfisher-    | North Okanagan         | Regional  |
| Knockholt Sub-Regional Landfill        | Houston        | Bulkley - Nechako      | Municipal |

| Site Name                             | City           | Regional District      | Type      |
|---------------------------------------|----------------|------------------------|-----------|
| Knox Mountain Metals                  | Kelowna        | Central Okanagan       | Private   |
| Knutsford Eco-Depot                   | Knutsford      | Thompson - Nicola      | Municipal |
| Lillooet Landfill & Recycling Centre  | Lillooet       | Squamish - Lillooet    | Municipal |
| Logan Lake Eco-Depot                  | Logan Lake     | Thompson - Nicola      | Municipal |
| Loon Lake                             | Clinton        | Thompson - Nicola      | Municipal |
| Louis Creek Eco Depot                 | Barriere       | Thompson - Nicola      | Municipal |
| Lower Nicola Eco-Depot                | Merrit         | Thompson - Nicola      | Municipal |
| Lumby and Area D Regional Disposal    | Lumby          | North Okanagan         | Regional  |
| Lytton Eco-Depot                      | Lytton         | Thompson - Nicola      | Municipal |
| Mackenzie Regional Landfill           | Mackenzie      | Fraser - Fort George   | Municipal |
| Marblehead Transfer Station           | Meadow Creek   | Central Kootenay       | Municipal |
| Masset Transfer Station               | Masset         | North Coast Regional   | Municipal |
| McBride Transfer Station              | McBride        | Fraser - Fort George   | Municipal |
| Metro Metal Recycling aka JG          | Delta          | Metro Vancouver        | Private   |
| Mission Flats Landfill                | Kamloops       | Thompson - Nicola      | Municipal |
| Mission Recycling Depot               | Mission        | Fraser Valley          | Municipal |
| Nakusp Landfill                       | Nakusp         | Central Kootenay       | Municipal |
| Noreen's Reuse It and Recycle It      | Cache Creek    | Thompson - Nicola      | Private   |
| North Star Metal Recycling            | Vancouver      | Metro Vancouver        | Private   |
| North West Metal Recycling / Central  | Kamloops       | Thompson - Nicola      | Private   |
| Northern Rockies Regional             | Fort Nelson    | Northern Rockies       | Municipal |
| Okanagan Falls Landfill               | Okanagan Falls | Okanagan - Similkameen | Municipal |
| Oliver Landfill                       | Oliver         | Okanagan - Similkameen | Municipal |
| Ootischenia Landfill                  | Castlegar      | Central Kootenay       | Municipal |
| Osoyoos & District Sanitary Landfill  | Osoyoos        | Okanagan - Similkameen | Municipal |
| Paul Lake Transfer Station            | Kamloops       | Thompson - Nicola      | Municipal |
| Pemberton Transfer Station            | Pemberton      | Squamish - Lillooet    | Municipal |
| Pender Harbour Transfer Station       | Garden Bay     | Sunshine Coast         | Municipal |
| Pender Island Recycling Depot         | Pender Island  | Capital                | Municipal |
| Port Alice Transfer Station           | Port Alice     | Mount Waddington       | Municipal |
| Prespatou Transfer Station            | Prespatou      | Peace River            | Municipal |
| Princeton Landfill                    | Princeton      | Okanagan - Similkameen | Municipal |
| Pritchard/South Thompson Eco Depot    | Chase          | Thompson - Nicola      | Municipal |
| Puds Auto Wrecking Ltd.               | Osoyoos        | Okanagan - Similkameen | Private   |
| Quinn Street Recycling Station        | Prince George  | Fraser - Fort George   | Municipal |
| Regional District of Kootenay         |                | Kootenay Boundary      | Municipal |
| Regional District of Mount            |                | Mount Waddington       | Regional  |
| Regional District of Nanaimo Landfill | Nanaimo        | Nanaimo                | Municipal |
| Regional Recycling - Whistler         | Whistler       | Squamish - Lillooet    | Private   |
| Resort Municipality of Whistler       |                |                        | Municipal |
| Richmond Steel Recycling - Fort St.   | Fort St. John  | Peace River            | Private   |
| Richmond Steel Recycling - Kamloops   | Kamloops       | Thompson - Nicola      | Private   |
| Richmond Steel Recycling - Prince     | Prince George  | Fraser - Fort George   | Private   |

| Site Name                               | City               | Regional District    | Type      |
|---|--------------------|----------------------|-----------|
| Richmond Steel Recycling - Richmond     | Richmond           | Metro Vancouver      | Private   |
| Rock Creek Transfer Station             | Rock Creek         | Kootenay Boundary    | Municipal |
| Rose Prairie Transfer Station           | Rose Prairie       | Peace River          | Municipal |
| Rosebery Transfer Station               | New Denver         | Central Kootenay     | Municipal |
| Salt Spring Garbage                     | Salt Spring Island | Capital              | Private   |
| Salt Spring Island Recycling Depot      | Salt Spring Island | Capital              | Municipal |
| Sandspit Transfer Station               | Sandspit           | North Coast Regional | Municipal |
| Savona Transfer Station                 | Savona             | Thompson - Nicola    | Municipal |
| Schnitzer Steel - Victoria              | Victoria           | Capital              | Private   |
| Schnitzer Steel Pacific Recycling       | Duncan             | Cowichan Valley      | Private   |
| Scotty & Son Metal Recycling            | Surrey             | Metro Vancouver      | Private   |
| Scrap King Auto Wrecking & Towing       | Salmo              | Central Kootenay     | Private   |
| Sechelt Landfill                        | Sechelt            | Sunshine Coast       | Municipal |
| Shelley Regional Transfer Station       | Prince George      | Fraser - Fort George | Municipal |
| Sherwood Auto Parts                     | Port Alberni       | Alberni - Clayoquot  | Private   |
| Skeena - Queen Charlotte Regional       | Prince Rupert      | North Coast Regional | Municipal |
| Skidegate Transfer Station              | Haida              | North Coast Regional | Municipal |
| Slocan Transfer Station                 | Slocan             | Central Kootenay     | Municipal |
| Smithers - Telkwa Transfer Station      | Smithers           | Bulkley - Nechako    | Municipal |
| Smokey Creek Salvage Ltd.               | Nelson             | Central Kootenay     | Private   |
| Southside Transfer Station              | Grassy Plains      | Bulkley - Nechako    | Municipal |
| Spences Bridges Transfer Station        | Spences Bridge     | Thompson - Nicola    | Municipal |
| Squamish Landfill                       | Squamish           | Squamish - Lillooet  | Municipal |
| Squamish Lillooet                       |                    |                      | Regional  |
| Stewart Landfill                        | Stewart            | Kitimat - Stikine    | Municipal |
| Summerland District                     |                    |                      |           |
| Tervita Metals Recycling                | Trail              | Kootenay Boundary    | Private   |
| Texada Island Transfer Station          | Gillies Bay        | Powell River         | Municipal |
| Thorsen Creek Waste & Recycling         | Bella Coola        | Central Coast        | Municipal |
| Tomslake Transfer Station               | Tomslake           | Peace River          | Municipal |
| Valemount Transfer Station              | Valemount          | Fraser - Fort George | Municipal |
| Vanderhoof Transfer Station             | Vanderhoof         | Bulkley - Nechako    | Municipal |
| Vanway Transfer and Recycle Station     | Prince George      | Fraser - Fort George | Municipal |
| Village of Gold River Public Works Yard | Gold River         | Strathcona           | Municipal |
| Village of Zeballos Landfill            | Zeballos           | Strathcona           | Municipal |
| Wastech Services Ltd. - Clinton         | Clinton            | Thompson - Nicola    | Municipal |
| West Boundary (Greenwood) Landfill      | Greenwood          | Kootenay Boundary    | Municipal |
| West Coast Landfill                     | Ucluelet           | Alberni - Clayoquot  | Municipal |
| Western Auto Wreckers Ltd.              | Nelson             | Central Kootenay     | Private   |
| Westside Used Auto Parts                | Salmon Arm         | Columbia - Shuswap   | Private   |
| Westwold Eco-Depot                      | Westwold           | Thompson - Nicola    | Municipal |
| Whistler Waste Transfer Station         | Whistler           | Squamish - Lillooet  | Municipal |
| Williams Scrap Metal Recycling          | Victoria           | Capital              | Private   |

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| Site Name                               | City     | Regional District | Type      |
|---|----------|-------------------|-----------|
| Wonowon Transfer Station                | Wonowon  | Peace River       | Municipal |
| Zeballos Public Works Yard (Metal Pile) | Zeballos | Strathcona        | Municipal |
| Zeballos Recycling Depot                | Zeballos | Strathcona        | Municipal |

## Appendix F: Collection Facilities that are Signatories to the MARR Voluntary Processing Standard

Prior to the introduction of MARR’s claims program in 2018, MARR’s collectors were encouraged to sign on to MARR’s Voluntary Processing Standard. The Standard provided a set of minimum performance requirements. The Standard has since been incorporated as a mandatory requirement under MARR’s collector contract, which collectors must sign in order to participate in the claims program. Table 10 lists collectors that have signed onto the Voluntary Processing Standard.

**Table 10: Collection Facilities that are Signatories to the MARR Voluntary Processing Standard**

| Collection Facility                                       | City           |
|---|----------------|
| B-Line Appliance Recycling                                | Vancouver      |
| Fraser Valley Metal Exchange                              | Maple Ridge    |
| Regional Recycling – (Old Victoria Road)                  | Nanaimo        |
| Regional Recycling – (Hayes Road)                         | Nanaimo        |
| Happy Stan's Recycling Services Ltd.                      | Port Coquitlam |
| Everclear Recycling                                       | Mission        |
| Smokey Creek Salvage Ltd.                                 | Nelson         |
| Alberni Clayoquot Regional District (West Coast Landfill) | Ucluelet       |
| Alberni Valley Landfill                                   | Port Alberni   |
| Allied Salvage And Metals Ltd.                            | Richmond       |
| ASM Squamish Scrap Metal Ltd.                             | Squamish       |
| Thorsen Creek Waste & Recycling Depot                     | Bella Coola    |
| Capt'n Crunch Auto Wrecking Ltd.                          | Abbotsford     |
| ABC Metals Recycling                                      | Campbell River |
| ABC Metals Recycling                                      | Burnaby        |
| ABC Metals Recycling                                      | Prince George  |
| ABC Metals Recycling                                      | Surrey         |
| ABC Metals Recycling                                      | Kelowna        |
| ABC Metals Recycling                                      | Terrace        |
| ABC Metals Recycling                                      | Fort St. John  |
| ABC Metals Recycling                                      | Nanaimo        |
| Schnitzer Steel   | Cassidy        |
| Schnitzer Steel   | Campbell River |
| Schnitzer Steel   | Victoria       |
| Schnitzer Steel   | Surrey         |
| Schnitzer Steel   | Duncan         |
| Williams Scrap Metal Recycling                            | Victoria       |

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## Appendix G: Additions to MARR Contracted Collection Sites in 2018

Under the original program plan, MARR did not contract with collection sites. Collection sites operated independently and MARR made best efforts to track and report on changes to the collection network in its annual report. With the approval of the new program plan, MARR has initiated a claims program for collectors and is in the process of contracting with collection sites throughout the province.

Consequently, all collection sites that contracted with MARR in 2018 represent “additions” to MARR’s collection network (see Table 9 above). Any additions to the contracted network in future years will be reported here.

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## **Appendix H: Collection Sites that Stopped Contracting with the MARR Program**

Under the original program plan, MARR did not contract with collection sites. Collection sites operated independently and MARR made best efforts to track and report on changes to the collection network in its annual report. With the approval of the new program plan, MARR has initiated a claims program for collectors and is in the process of contracting with collection sites throughout the province. Any collection sites that terminate their contract with MARR in future years will be reported here.

## Appendix I: Number of Collection Sites that Accept Major Appliances by Regional District

**Table 11: Total Number of Collection Sites Accepting All MARR Program Product From Consumers at No Cost by Regional District**

| Regional District      | MARR Contracted Sites | Additional Sites Accepting MARR Program Products at No Cost | Total Compliant Sites |
|------------------------|-----------------------|---|-----------------------|
| Alberni - Clayoquot    | 0                     | 1   | 1                     |
| Bulkley - Nechako      | 0                     | 0   | 0                     |
| Capital                | 3                     | 1   | 4                     |
| Cariboo                | 8                     | 17  | 25                    |
| Central Coast          | 0                     | 0   | 0                     |
| Central Kootenay       | 0                     | 1   | 1                     |
| Central Okanagan       | 2                     | 3   | 5                     |
| Columbia - Shuswap     | 13                    | 0   | 13                    |
| Comox                  | 0                     | 0   | 0                     |
| Cowichan Valley        | 0                     | 1   | 1                     |
| East Kootenay          | 14                    | 1   | 15                    |
| Fraser - Fort George   | 0                     | 2   | 2                     |
| Fraser Valley          | 3                     | 8   | 11                    |
| GVRD (Metro Vancouver) | 2                     | 4   | 6                     |
| Kitimat - Stikine      | 0                     | 2   | 2                     |
| Kootenay Boundary      | 12                    | 0   | 12                    |
| Mt. Waddington         | 0                     | 4   | 4                     |
| Nanaimo                | 0                     | 4   | 4                     |
| North Coast            | 0                     | 0   | 0                     |
| North Okanagan         | 0                     | 1   | 1                     |
| Northern Rockies       | 1                     | 0   | 1                     |
| Okanagan - Similkameen | 0                     | 2   | 2                     |
| Peace River            | 0                     | 2   | 2                     |
| quathet (Powell River) | 0                     | 2   | 2                     |
| Squamish - Lillooet    | 0                     | 1   | 1                     |
| Strathcona             | 0                     | 0   | 0                     |
| Sunshine Coast         | 0                     | 0   | 0                     |
| Thompson - Nicola      | 0                     | 1   | 1                     |
| <b>TOTAL</b>           | <b>58</b>             | <b>58</b>   | <b>116</b>            |

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## Appendix J: 2018 MARR Non-Financial Audit

**MAJOR APPLIANCE RECYCLING ROUNDTABLE**

**INDEPENDENT REASONABLE ASSURANCE  
REPORT**

**31 DECEMBER 2018**



1500 – 1090 West Georgia Street  
Vancouver, B.C. V6E 3V7  
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E-mail: admin@rolfebenson.com

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## INDEPENDENT REASONABLE ASSURANCE REPORT

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To the Directors of  
Major Appliance Recycling Roundtable,

### Assurance Level and Selected Information

We have been engaged by Major Appliance Recycling Roundtable (“MARR”) to perform a reasonable assurance engagement in respect of the following information (the “Selected Information”), detailed in Appendix 1, and also included within MARR’s Annual Report to the Ministry of Environment and Climate Change Strategy for the year ended 31 December 2018:

- Section 4 - Collection System and Facilities and Appendix C, D and E - 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 BC Regulation 449/2004 (the “Recycling Regulation”);
- Section 6 - Pollution Prevention Hierarchy and Product/Component Management - the description of how the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation;
- Section 7 - Product Collected - the description of how total amounts of the producer’s product collected has been calculated in accordance with Section 8(2)(e) of the Recycling Regulation; and
- Section 9 - Plan Performance - the description of performance for the year in relation to targets in the approved stewardship plan under Section 8(2)(b), (d) and (e) of the Recycling Regulation.

Our reasonable assurance engagement does not constitute a legal determination on MARR’s compliance with Sections 8(2)(b), (d) and (e) of the Recycling Regulation.

### Responsibilities

Preparation and fair presentation of the Selected Information in accordance with the evaluation criteria as listed in Appendix 1 is the responsibility of MARR’s management. Management is also responsible for such internal control as management determines is necessary to enable the preparation of the Selected Information such that it is free from material misstatement. Furthermore management is responsible for preparation of suitable evaluation criteria in accordance with the Guide to Third Party Assurance Requirements for Non-Financial Information in Annual Reports – 2018 Reporting Year dated October 2018 as specified by the Director under section 8(2)(h) of the Recycling Regulation of the Province of British Columbia.



Our responsibility is to express an opinion on the Selected Information based on the procedures we have performed and the evidence we have obtained.

### **Evaluation Criteria**

The evaluation criteria presented in Appendix 1 are an integral part of the Selected Information and address the relevance, completeness, reliability, neutrality and understandability of the Selected Information.

### **Applicable Quality Control Requirements**

We apply Canadian Standard on Quality Control 1 and, accordingly, maintain a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### **Scope of the Reasonable Assurance Engagement**

We carried out our reasonable assurance engagement in accordance with the International Standard on Assurance Engagements 3000 (ISAE 3000) published by the International Federation of Accountants. This Standard requires that we comply with independence requirements and plan and perform the engagement to obtain reasonable assurance about whether the Selected Information is free of material misstatement.

A reasonable assurance engagement includes examining, on a test basis, evidence supporting the amounts and disclosures within the Selected Information. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement in the Selected Information due to omissions, misrepresentations and errors. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the Selected Information in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion on the effectiveness of the entity's internal control. A reasonable assurance engagement also includes assessing the evaluation criteria used and significant estimates made by management, as well as evaluating the overall presentation of the Selected Information. The main elements of our work were:

- Gain an understanding of the data collection, monitoring and reporting processes through inquiries of management;
- Evaluating the qualifications and independence of contractors used to help prepare certain components of the Selected Information;
- Testing the processes, documents and records on a sample basis;
- Re-calculating quantitative data on a sample basis as it pertains to the Selected Information; and
- Ensuring the Selected Information is presented consistently in the Annual Report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.



### **Inherent Limitations**

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the Selected Information and the methods used for determining and calculating such information. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgments. Furthermore, the nature and methods used to determine such information, as well the evaluation criteria and the precision thereof, may change over time. It is important to read our report in the context of evaluation criteria.

### **Conclusion**

In our opinion, the Selected Information within MARR's Annual Report for the year ended 31 December 2018 presents fairly, in all material respects, in accordance with the evaluation criteria listed in Appendix 1:

- 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 the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation;
- the description of how total amounts of the producer's product collected has been calculated in accordance with Section 8(2)(e) of the Recycling Program; and
- the description of performance for the year in relation to targets in the approved stewardship plan under Section 8(2)(b), (d) and (e) of the Recycling Regulation.

### **Emphasis of Matter**

Without qualifying our opinion, the following should be noted regarding the information contained in the Annual Report:

1. The Selected Information included in Section 6 - Pollution Prevention Hierarchy and Product / Component Management is based on information in the 2013 System Study. As such, there is uncertainty surrounding the information presented.
2. The Selected Information included in Section 7 – specifically relating to Products Collected has been estimated as described in Appendix 1. As such, there is uncertainty surrounding the information presented.
3. MARR does not present a recovery rate in the Annual Report. As such, the total amount of producer's products sold as presented on Table 3 - Total Sales of Major Appliances in BC (2018) has not been included in the Selected Information in accordance with the Guide to Third Party Assurance Requirements for Non-Financial Information in Annual Reports – 2018 Reporting Year dated October 2018 as specified by the Director under section 8(2)(h) of the Recycling Regulation of the Province of British Columbia.



**ROLFE, BENSON LLP**

CHARTERED PROFESSIONAL ACCOUNTANTS

**Other Matter**

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 MARR, and accordingly, we do not accept any responsibility for loss occasioned to any other party acting or refraining from acting based on this report.

*Rolfe, Benson LLP*

CHARTERED PROFESSIONAL ACCOUNTANTS

Vancouver, British Columbia  
4 June 2019

Appendix 1  
**Evaluation Criteria**  
**Collection facilities**

| <b>Specific disclosures in the annual stewardship report from Section 4 - Collection System and Facilities for which evaluation criteria were developed</b>   |   |
|---|---|
| <b>Disclosure per Annual Report</b>   | <b>Reference</b>  |
| Total number of collection sites – 293  | <p>Table 1 – Collection Site Distribution (as of 31 December 2018)</p> <p>Appendix C – Table 9 – MARR Contracted Collection Sites by Regional District</p> <p>Appendix D – Additional Collection Sites that accept MARR Products at No Charge</p> <p>Appendix E – Additional Collection Sites that Accept MARR Products for a Fee</p> |
| <p>“As of December 31, 2018, MARR had identified 293 locations in the province that accept major appliances.”</p> <p>“As of December 31, 2018, 58 sites had contracted with MARR”</p> <p>“A further 68 sites that were not contracted with MARR reported providing free drop off for all major appliances, resulting in a total of 126 confirmed locations offering free drop off of major appliances for consumers.”</p> <p>“One hundred and sixty-seven (167) collection sites that are not yet contracted with MARR indicated they charged consumers to drop off program products in 2018.”</p> <p>“The list of non-contracted collectors provided is based on reports of which sites were accepting major appliances and represents the best available information as of April 2018. This list is not exhaustive, nor guaranteed to be current, due to ongoing changes in business operation. The list only included local government and private/non-profit collector drop off sites, and does not include the numerous collection options that may be offered through retailers, utility bounty programs or other possible pick up options.”</p> <p>“...all collection sites that contracted with MARR in 2018 represent “additions” to MARR’s collection network.”</p> |   |

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:

- “Collection facilities” are either depots that have a signed contract with MARR for the collection of program materials free of charge, or non-contracted depots that collect program materials either free of charge or for a fee during the reporting period: 1 January – 31 December 2018.
- MARR maintains a listing of all contracted and known non-contracted collection facilities for the program, including the location of the collection facility, the total of which agrees to the number of collection facilities as disclosed in the Annual Report.
- The change in number of collection facilities is determined as the number of collection facilities that have signed a contract with MARR during the 2018 reporting year.

**Pollution prevention hierarchy**

**Specific disclosures in the annual stewardship report from Section 6 - Pollution Prevention Hierarchy and Product/Component Management for which evaluation criteria were developed**

| Disclosure per Annual Report               | Reference   |
|--|---|
| Ferrous Metal - Recycled                   | Table 2: Downstream Management Process of Materials Streams |
| Non Ferrous Metal - Recycled               |   |
| Plastic - Landfilled                       |   |
| Refrigerant - Recycled or Safely Destroyed |   |
| Other - Landfilled                         |   |

“The following information is based on the understanding of the free market system, as well as findings from the System Study completed by MARR in 2014 reflecting the 2013 fiscal year. The System Study involved surveying industry participants with regard to collection volumes and product management practices. No further due diligence was performed on the information in terms of site visits or other investigations and therefore there is some degree of uncertainty surrounding the end fate of the products.”

“The material composition of major appliances is reported to be approximately 75% metal. Of this metal, processors report that 98% of ferrous and non-ferrous metal that enters the shredder is recovered and recycled back into the commodities market.”

“Prior to shredding, products undergo decommissioning to remove refrigerant and to look for any other substances of concern. In order to receive compensation from the MARR program, collectors must provide documentation showing that an Approved Person (as defined under the *BC Ozone Depleting Substances and Other Halocarbons* Regulation) has removed the ozone depleting substances (ODS) from the appliance, recorded the units serviced and the amount of ODS removed, and provide a certificate of destruction showing the ODS has been managed appropriately.”

“Very few appliances reaching EoL contain mercury switches or PCBs though some contain heavy metals (e.g., circuit boards), mercury (i.e., fluorescent lights), compressor oil and polyurethane foam (i.e., insulation).”

“It is estimated that 74% of materials are recycled (mostly ferrous and non-ferrous metal). The remaining 26%, including plastic, glass, rubber and foam, does not undergo further processing, and is currently sent to landfill.”

The following evaluation criteria were applied to the assessment of how the recovered product is managed in accordance with the pollution prevention hierarchy in accordance with Section 8(2)(d) of the Recycling Regulation:

- The information on product management has been determined based on MARR’s general understanding of the free market collection system and by using the information included in *The Study on the Operations and Effectiveness of the Major Appliance Collection and Recycling System in British Columbia*, dated 8 May 2014 (“2013 System Study”) which was originally prepared for the 2013 fiscal year.
- The content of the 2013 System Study appears to be sufficient to meet the reporting requirements of MARR to the British Columbia Ministry of Environment with respect to the product management.
- The third party consultant involved in the 2013 System Study was independent from MARR and had no business relationship outside of the System Study. Their qualifications appeared sufficient to be able to prepare the report.

**Product collected**

**Specific disclosures in the annual stewardship report from Section 7 - Product Sold and Collected and Capture Rate for which evaluation criteria were developed**

| Disclosure per Annual Report  | Reference  |
|---|--|
| <p><b>Product collected</b><br/>Estimated units collected – 597,025</p>   | <p>Table 5: Estimated Units of Major Appliances Collected by Product Category (2018)</p> |
| <p>“With the introduction of MARR’s claims program in 2018, contracted collection sites are now required to report the exact number of units collected. However, 2018 was a transition year with only a percentage of all collection sites contracted with MARR under the pilot program and reporting units collected. In an effort to fill in collection units for regional districts and private collectors that had yet to register with MARR and start reporting units collected, MARR requested them to provide the total number of units of major appliances collected in the year voluntarily. However, data was only received from some collection sites and was therefore not complete.”</p> <p>“Consequently, the program employed a different methodology for 2018 using consumer behaviour data as a proxy for a capture rate. In MARR’s 2018 consumer awareness survey, respondents who had recently disposed of a major appliance were asked what disposal method they used. Survey results found that 91% of respondents managed the appliance in a responsible manner. The assumption is that 91% of major appliances would have been recovered in 2018 since 91% of respondents indicated they recycled their major appliances in one manner or another.”</p> <p>“In order to estimate the units collected, the formula for calculating capture rate was inverted to estimate units collected (units collected = units available to collect x capture rate). As in previous years, the units available to collect was determined by an independent consultant utilizing a sophisticated model that considers historic annual sales and the lifespans for each product category.”</p> |  |

The following evaluation criteria were applied to the assessment of the description of how total amounts of the producer’s product collected has been calculated in accordance with Section 8(2)(e) of the Recycling Regulation:

**Product Collected:**

- The estimated units collected is calculated by multiplying the estimated units available to collect during 2018 by the percentage of survey respondents who indicated that they had disposed of major appliances in a responsible manner.
- The estimated units of major appliances available to collect has been determined using the information included in the 2013 System Study which was originally prepared for the 2013 fiscal year and updated during 2015 to project the annual number of units available to collect up to the 2018 fiscal year.
- The third party consultant involved in the 2013 System Study and the update of the number of units available to collect performed in 2015 were independent from MARR and had no business relationship with MARR outside of these projects. Their qualifications appeared sufficient to be able to prepare the reports.
- The percentage of survey respondents who indicated that they had disposed of major appliances in a responsible manner was determined using the results of MARR’s 2018 consumer awareness survey which was performed by a professional market research organization that reported an overall margin of error of +/- 3.6% of their findings.

**Appendix K: 2018 MARR Financial Statements**

**MAJOR APPLIANCE RECYCLING ROUNDTABLE**

**FINANCIAL STATEMENTS**

**31 DECEMBER 2018**

## **MAJOR APPLIANCE RECYCLING ROUNDTABLE**

### **Financial Statements**

For the year ended 31 December 2018

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**ROLFE, BENSON LLP**

CHARTERED PROFESSIONAL ACCOUNTANTS

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## INDEPENDENT AUDITORS' REPORT

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To the Members,  
Major Appliance Recycling Roundtable

### Report on the Audit of the Financial Statements

#### Opinion

We have audited the financial statements of Major Appliance Recycling Roundtable ("MARR"), which comprise the statement of financial position as at 31 December 2018, and the statements of changes in net assets, operations and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of MARR as at 31 December 2018, and its results of operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

#### Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are independent of MARR in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Other Information

Management is responsible for the other information. The other information comprises information, other than the financial statements, our auditors' report thereon, and the independent reasonable assurance report, in MARR's Annual Report.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.



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## INDEPENDENT AUDITORS' REPORT

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We obtained the Annual Report prior to the date of this auditors' report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditors' report. We have nothing to report in this regard.

### **Responsibilities of Management and Those Charged with Governance for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing MARR's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate MARR or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the MARR's financial reporting process.

### **Auditors' Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of MARR's internal control.



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## INDEPENDENT AUDITORS' REPORT

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- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on MARR's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause MARR to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

*Rolfe, Benson LLP*

CHARTERED PROFESSIONAL ACCOUNTANTS

Vancouver, Canada  
4 June 2019



**MAJOR APPLIANCE RECYCLING ROUNDTABLE**  
**Statement of Changes in Net Assets**  
**For the year ended 31 December 2018**

|  | <b>Unrestricted</b> | <b>Internally<br/>Restricted<br/>Reserve</b> | <b>Total<br/>2018</b> | <b>Total<br/>2017</b> |
|--|---------------------|--|-----------------------|-----------------------|
| <b>Balance - beginning of year</b>               | \$ 1,836,040        | \$ 300,813                                   | \$ 2,136,853          | \$ 1,571,938          |
| Excess of revenues over expenses for<br>the year | 93,685              | -  | 93,685                | 564,915               |
| <b>Balance - end of year</b>                     | <b>\$ 1,929,725</b> | <b>\$ 300,813</b>                            | <b>\$ 2,230,538</b>   | <b>\$ 2,136,853</b>   |

The accompanying notes are an integral part of these financial statements.

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**MAJOR APPLIANCE RECYCLING ROUNDTABLE**

**Statement of Operations**

**For the year ended 31 December 2018**

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|  | 2018                | 2017                |
|--|---------------------|---------------------|
| <b>Revenues</b>                                      | <b>\$ 1,278,003</b> | <b>\$ 1,286,583</b> |
| <b>Expenses</b>                                      |                     |                     |
| Program administration                               | 656,481             | 600,485             |
| Collections  | 409,408             | -                   |
| Communications                                       | 97,621              | 32,458              |
| Research and studies                                 | 20,808              | 88,725              |
|  | <u>1,184,318</u>    | <u>721,668</u>      |
| <b>Excess of revenues over expenses for the year</b> | <b>\$ 93,685</b>    | <b>\$ 564,915</b>   |

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The accompanying notes are an integral part of these financial statements.

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## MAJOR APPLIANCE RECYCLING ROUNDTABLE

### Statement of Cash Flows For the year ended 31 December 2018

|  | <u>2018</u>                | <u>2017</u>                |
|--|----------------------------|----------------------------|
| <b>Cash provided by (used in):</b>                   |                            |                            |
| <b>Operating activities</b>                          |                            |                            |
| Excess of revenues over expenses for the year        | \$ 93,685                  | \$ 564,915                 |
| Item not involving cash                              |                            |                            |
| Amortization   | -                          | 1,097                      |
|  | <u>93,685</u>              | <u>566,012</u>             |
| Changes in non-cash working capital balances         |                            |                            |
| Accounts receivable                                  | 178,567                    | (211,464)                  |
| Prepaid expenses                                     | 17,998                     | (22,450)                   |
| GST  | (234,442)                  | 214,450                    |
| Accounts payable and accrued liabilities             | <u>192,535</u>             | <u>(20,156)</u>            |
| <b>Net increase in cash and cash equivalents</b>     | <b>248,343</b>             | <b>526,392</b>             |
| <b>Cash and cash equivalents - beginning of year</b> | <b><u>1,537,202</u></b>    | <b><u>1,010,810</u></b>    |
| <b>Cash and cash equivalents - end of year</b>       | <b><u>\$ 1,785,545</u></b> | <b><u>\$ 1,537,202</u></b> |
| <br><b>Cash and cash equivalents consists of:</b>    |                            |                            |
| Cash   | \$ 1,735,278               | \$ 1,487,164               |
| Term deposit   | <u>50,267</u>              | <u>50,038</u>              |
|  | <b><u>\$ 1,785,545</u></b> | <b><u>\$ 1,537,202</u></b> |

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The accompanying notes are an integral part of these financial statements.

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# MAJOR APPLIANCE RECYCLING ROUNDTABLE

## Notes to the Financial Statements

For the year ended 31 December 2018

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### 1. Incorporation

Major Appliance Recycling Roundtable ("MARR") was incorporated under the Canada Not-for-Profit Corporations Act on 17 July 2012 and commenced operations on 1 August 2013. MARR is a not-for-profit organization and it is not subject to income taxes providing certain requirements are met. MARR currently operates a stewardship program in the Province of British Columbia to assist the major appliance producers in discharging their obligation to establish end of life product collection and recycling programs under the British Columbia Recycling Regulations.

### 2. Summary of significant accounting policies

These financial statements are prepared in accordance with Canadian accounting standards for not-for-profit organizations. The significant policies are detailed as follows:

#### (a) Revenue recognition

Revenue from administrative program fees ("APF") is recognized at the time an APF applicable product is sold by a member of MARR, and the APF becomes due and payable. APF's are received from registered members which participate in MARR's programs. MARR recognizes these fees as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. APF revenues are recognized as individual members report and remit them as required by applicable provincial environmental legislation.

#### (b) Cash and cash equivalents

MARR's policy is to disclose bank balances under cash and cash equivalents, including bank overdrafts with balances that fluctuate frequently from being positive to overdrawn and term deposits with a maturity period of three months or less from the date of acquisition.

#### (c) Financial instruments

##### (i) Measurement of financial instruments

MARR initially measures its financial assets and liabilities at fair value and subsequently measures all of its financial assets and financial liabilities at amortized cost.

Financial assets measured at amortized cost include cash and cash equivalents, accounts receivable and the reserve fund.

Financial liabilities measured at amortized cost include accounts payable and accrued liabilities.

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**MAJOR APPLIANCE RECYCLING ROUNDTABLE**  
**Notes to the Financial Statements**  
**For the year ended 31 December 2018**

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**2. Summary of significant accounting policies - Continued**

(c) Financial instruments - Continued

(ii) Impairment

Financial assets measured at cost are tested for impairment when there are indicators of impairment. The amount of the write-down is recognized in the statement of operations. The previously recognized impairment loss may be reversed to the extent of the improvement, directly or by adjusting the allowance account, provided it is no greater than the amount that would have been reported at the date of the reversal had the impairment not been recognized previously. The amount of the reversal is recognized in the statement of operations.

(iii) Transaction costs

MARR recognizes its transaction costs in the statement of operations in the period incurred. However, financial instruments that will not be subsequently measured at fair value are adjusted by the transaction costs that are directly attributable to their origination, issuance or assumption.

(d) Use of estimates

The preparation of financial statements in accordance with Canadian accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, revenues and expenses and disclosure of contingencies at the date of statement of financial position. Accounts subject to estimates include accrued liabilities and revenue recognized for APF's receivable. Management believes that the estimates utilized in preparing the financial statements are prudent and reasonable; however, actual results could differ from these estimates.

**3. Financial instruments risks**

MARR is exposed to various risks through its financial instruments. The following analysis provides a measure of MARR's risk exposure and concentrations at the statement of financial position date, 31 December 2018.

(a) Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. MARR's main credit risks relate to its cash and cash equivalents and accounts receivable. Cash and cash equivalents is in place with major financial institutions. Concentrations of credit risk with respect to accounts receivable are limited due to the large number of members. MARR has evaluation and monitoring processes in place and writes off accounts when they are determined to be uncollectible. There has been no change to this risk exposure from the prior year.

**MAJOR APPLIANCE RECYCLING ROUNDTABLE**  
**Notes to the Financial Statements**  
For the year ended 31 December 2018

**3. Financial instruments risks - Continued**

(b) Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. MARR is exposed to this risk mainly in respect of its accounts payable and accrued liabilities. MARR maintains adequate cash to meet obligations as they become due. There has been no change to this risk exposure from the prior year.

(c) Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk. MARR is exposed to interest rate risk.

(d) Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. MARR is exposed to interest rate risk on its fixed and floating interest rate financial instruments. Fixed-rate instruments subject the Entity to a fair value risk while the floating-rate instruments subject it to a cash flow risk. There has been no change to this risk exposure from the prior year.

**4. Accounts receivable**

|                                 | 2018       | 2017       |
|---------------------------------|------------|------------|
| Accounts receivable             | \$ 360,226 | \$ 559,786 |
| Allowance for doubtful accounts | -          | (20,993)   |
|                                 | \$ 360,226 | \$ 538,793 |

**5. Reserve Fund**

In 2016, the Board of Directors passed a resolution to establish the Reserve Fund. The purposes of the Reserve Fund are as follows:

- (a) To assist in stabilizing eco fees by being available to manage year to year volume fluctuations;
- (b) To cover the costs of winding up the Program by the decision of the members or as a consequence of regulatory change, in an orderly manner, not to exceed one year;

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**MAJOR APPLIANCE RECYCLING ROUNDTABLE**  
**Notes to the Financial Statements**  
**For the year ended 31 December 2018**

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**5. Reserve Fund - Continued**

- (c) To cover any claims against the Program, Board of directors or staff in excess of the Program's insurance coverage;
- (d) To cover the cost of unanticipated or extraordinary items;
- (e) To make available interim funding for program expansion;

Transfers to the Reserve Fund are made upon resolutions passed by the Board of Directors. Total contributions to the Reserve Fund are not to exceed one year's operating expenses.

The Reserve Fund consists of an investment in a commercial savings account and is managed in accordance with MARR's investment policy. During the year, \$Nil (2017 - \$Nil) was transferred from unrestricted net assets to the Reserve Fund.