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THERMOSTAT RECYCLING

Annual Report to the Director

2022 Calendar Year

BRITISH COLUMBIA

Submitted to:

Director, Extended Producer Responsibility Programs
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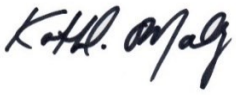
This annual report is issued by the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) in accordance with the British Columbia Recycling Regulation (Reg. 449/2004). The 2022 annual report documents the Thermostat Recovery Program's activities and results in British Columbia from January 1 to December 31, 2022.

Any questions or comments about this report as well as the Thermostat Recovery Program operations should be directed to HRAI at:



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Date: June 28, 2023

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1. EXECUTIVE SUMMARY

Products within plan	Thermostats (electronic and mercury-containing)
Program website	www.hrai.ca/trp*

Reference		Summary (5-bullet maximum)
Recycling Reg. 449/2004	TRP Annual Report 2022	
Part 2, Section 8(2)(a)	3. Public Education Materials and Strategies	• Print ads and e-blasts with the Municipal Leader and HPAC magazines; ads in regional district and municipal recycling calendars • Outreach through HRAI's Weekly Newsletter • Collaborations through Stewardship Agencies of BC (SABC) • Recycling Council of British Columbia (RCBC) hotline and Recyclepedia
Part 2, Section 8(2)(b)	4. Collection System and Facilities	• 395 total collection points • 10 new collection points (4 of which are designated drop-off locations) • 1 main collection facility (1 fully phased out by end 2017) • Collection points in 27 regional districts
Part 2, Section 8(2)(c)	5. Product Environmental Impact Reduction, Reusability and Recyclability	• 3,305 mercury-containing vessels collected† • 3,061 electronic thermostats recycled • 58 kilograms of metals recycled • 167 kilograms of plastics collected, but not recycled due to global market changes (See Section 6 for details). • 0 new mercury-containing thermostats sold into the market
Part 2, Section 8(2)(d)	6. Pollution Prevention Hierarchy and Product / Component Management	• Recovered thermostats are not suitable for reuse • New thermostat designs do not contain mercury, and are more energy efficient than older mercury-containing models • Over 99% of metal components are recycled with a high degree of certainty • In 2022, approximately 75% of all collected materials were not recycled due to global market changes, market demand, environmental concerns, or quality impurities (See Section 6 for details)

* In 2016, HRAI took full management of Scout Environmental's *Switch the 'Stat (S.T.S.)* program, fully re-branding it and renaming it Thermostat Recovery Program (TRP), website found at www.hrai.com/trp.

† Although mercury-containing thermostats can contain anywhere between 1 and 4 switches, a study conducted by Veolia on behalf of the U.S.'s Thermostat Recycling Corporation found the average number of mercury switches per thermostat to be 1.4. This continues to be the industry standard weight conversion factor used to estimate mercury-containing vessels collected as all thermostats manufactured since 2008 have not included mercury components in their designs.

Reference		Summary (5-bullet maximum)
Recycling Reg. 449/2004	TRP Annual Report 2022	
Part 2, Section 8(2)(e)	7. Product Sold and Collected and Recovery Rate‡	• Collected 2,705 mercury containing thermostats, 3,061 electronic thermostats, and 209 loose mercury vessels • Adjusted total: 2,705 mercury-containing thermostats and 3,061 electronic thermostats, for a total of 5,766 collected (16% decrease from 2021 collection results)
Part 2, Section 8(2)(e.1)	9. Plan Performance	See 9.2 for breakdown per regional district.
Part 2, Section 8(2)(f)	8. Summary of Deposits, Refunds, Revenues and Expenses	N/A
Part 2, Section 8(2)(g)	9. Plan Performance§	N/A

2. PROGRAM OUTLINE

The Thermostat Recovery Program (TRP) is the designated program for managing all types of thermostats, both electromechanical (mercury-containing) and electronic models, in British Columbia. The British Columbia Stewardship Plan for Thermostats is the unofficially approved five-year plan for recovering these products, and spans a timeline of July 1, 2015 to June 30, 2020.

- Electromechanical thermostats (also referred to as “mercury-containing thermostats”), which contain internal mercury switches (mercury in a sealed glass bulb) or snap switches to control the flow of electrical current; and
- Electronic thermostats (also referred to as “programmable thermostats”), which use sensors instead of switches to detect temperature levels and control the flow of electrical current.

The Thermostat Recovery Program is funded by thermostat manufacturers who have sold thermostats into Canada and a complete list of registered thermostat manufacturers is available online at www.hrai.ca/trp. The program is fully administered by the Heating, Refrigeration, and Air Conditioning Institute of Canada (HRAI) on behalf of the manufacturers, and supported by the Canadian Institute of Plumbing and Heating (CIPH).

In accordance with the program plan, the TRP collects thermostats in the province of British Columbia through one primary collection channel (HVAC contractors/wholesalers & municipal/regional district collection centres) and two secondary collection channels (drop-off locations and a send-back option). Based on estimates that 85 to 90% of thermostats sold in British Columbia are done through contractors and wholesalers in the HVAC industry, this group adopts the primary channel through which all types of thermostats are recovered.

‡ Thermostat Recovery Program does not report on Product Sold or Recovery Rate; see Section 7 for details.

§ Targets specified in the approved product stewardship plan are not applicable to the 2022 reporting year, therefore program performance will not be reported in relation to targets throughout this annual report.

The collection process for 2022 remained the same as 2021. The program registration process is completely automated into a short online form on the TRP's website. This allows registrants to click a checkbox to read and agree to the terms of the *Transportation of Mercury-containing Thermostat Agreement*. All participants have the option to register as a public drop-off location, an option often used by wholesalers, recycling centres, regional districts, and municipal depots. The TRP website offers an up-to-date public drop-off location lookup directory, which lists all participating TRP drop-off locations within a 50 km radius of a Canadian postal code.

Upon registering as a Collection Point or a Public Drop-Off Location, participants receive a 5.0-gallon collection pail and pre-paid Purolator return shipping waybill delivered to their location for thermostat collections. Once returned for recycling, these participants automatically receive replacement materials for continued collections. Those who register under the program's Send-it Back option (often residents and consumers unable to reach a Public Drop-Off Location) receive a smaller 1.25-gallon collection pail and pre-paid Purolator return waybill to be used to return a small amount of thermostats on a one-time basis. Together, these channels comprise all of the programs participants, or collection points, as they shall be referred to throughout this report (see Section 4 for term definitions).

As per the requirements under the British Columbia Recycling Regulation, this report has been prepared to summarize the program activities undertaken during the calendar year of 2022, and will be posted on the program website at www.hrai.ca/trp.

3. PUBLIC EDUCATION MATERIALS AND STRATEGIES

3.1. Initiatives

Thermostat Recovery Program operates by collecting thermostats through existing businesses and infrastructure, referred to in the program plan as "collection channels." As described in Section 2, the program uses one main collection channel (HVAC contractors/wholesalers) and two secondary collection channels (drop-off locations and send-back option) to recover end-of-life mercury-containing and electronic thermostats.

Continuing to build on the foundation laid since 2011, in 2022 the TRP team began closely collaborating with HRAI's Director of Marketing & Communications to develop a 2022 TRP Marketing Plan. This strategic plan identifies challenges and areas of improvement in current marketing and outreach initiatives, and details a project management plan and critical path with the goal of lifting the visibility and awareness of the program while promoting uptake and engagement with manufacturers and participating collection points. Key areas of focus in 2022 were:

- To strengthen communication efforts with registered participants, maintaining commitment to the program and increasing thermostat collections;
- To broaden the reach and variety of communication channels used, improving program accessibility and raising awareness on responsible thermostat;
- To engage thermostat manufacturers to commit to building visibility to their audience for their involvement with the TRP;
- To extend outreach efforts to the general public, encouraging new participants to register and further expanding program reach and awareness, in turn diverting more thermostats from landfill.

To achieve these goals, the following initiatives were undertaken:

Initiative	Details	Audience/ Channel	Type of Outreach
Ongoing outreach with HRAI National Office	HRAI's Spring and Fall review magazines, as well as several editions of the bi-weekly newsletter featured TRP program updates and information to register and participate	Contractors, Wholesalers	Industry outreach (print)
BC Stewards **Stewardship Agencies of BC (SABC)**	Formalized association of all BC stewardship associations, allowing stewards to present a united front and communicate collaboratively with various stakeholder groups • BC Recycles website provides an overview of each product stewardship organization (including TRP) • Recycling Handbook, provides an overview of each product stewardship organization (including TRP) • Action Plan developed by SABC to ensure the success of all programs, investigate potential gaps, and address feedback from BC Ministry of the Environment	General Public	Print media (Online)
Recycling Council of BC (RCBC)	Info about the program (materials accepted at nearest drop-off locations) made available to the public through a hotline, website and online tool (the Recyclepedia app). In 2022: • 46 phone hotline inquiries • 282 website searches • 158 app searches	BC Waste Management Industry General Public	Online & Phone
Regional District/Local Gov't Media	• Regional District of Central Okanagan lists the TRP with a link on their Recycle Coach app and website. • TRP ad and link to drop off locations included in the Regional District of Central Okanagan, City of Mission and City of Penticton. • TRP participated in the City of McBride's Recycling Round Up event	HPAC Magazine	Print Media (Online)
Industry Magazines	• TRP advertisements included in the Summer and Winter issues of the Municipal Leader Magazine • TRP advertisements included in the February and March issues of HPAC Magazine	HVAC Industry General Public	Print Media (Online)

In addition to the efforts listed above, the program is promoted through various voluntary channels. The outcomes of the program's outreach initiatives will be used along with collection trends to inform future program performance targets. For examples of outreach initiatives, please refer to Appendix A.

3.2. Resources

To support these initiatives, many of the program's promotional and educational materials were redesigned to further guide and support program participants. These materials are described below.

1. **Program Website:** The program's website www.hrai.ca/trp continues to be one of the primary educational tools, featuring content designed to educate contractors, wholesalers, and the

general public. The site features a program overview, a description of mercury and its associated impacts, an online program registration form, and more. Other noteworthy features on the website are the Public Drop-off Locations lookup tool and an up-to-date cumulative collections counter that indicates the total thermostats and mercury vessels collected, as well as the weight of mercury recovered, in kilograms.

2. **Program Information Documents:** The program information document used in 2022 was an updated version of that used in previous years, containing the pertinent information for new registrants; next steps and collection guidelines. Upon registering, participants receive a *Welcome Letter* via email, including the *Program Information Document* attached, confirming receipt of their registration form and the order of their program collection kit. This letter helps new registrants manage expectations, address program inquiries and develop commitment to the program.

3. **Posters**: Newly-registered participants designated as drop-off locations are automatically sent a poster upon registration, along with their collection kits. These colourful, eye-catching promotional posters are available to all participants for on-site display.

4. **Brochures:** Printed promotional brochures are automatically sent to new participants upon registration, based on their collection type and market audience, i.e. consumer-facing brochures for contractors, municipal and public recycling depots, and industry-facing brochures for wholesalers and recycling centres. These are available at request for distribution to participants, and include facts about the hazards of mercury and the Thermostat Recovery Program, with instructions on how to participate.

5. **Collection Container Labels:** All of the TRP's collection pails are labeled with the program logo and branding, with warnings to restrict collections to intact thermostats only and not to dispose of with regular waste. This serves as a visual reminder for participants and helps ensure compliance with program goals.

6. **E-Newsletter Sweeps:** During the 2022 calendar year, the TRP sent an e-blast on April 21 via Mailchimp celebrating Earth Day with an eye-catching campaign urging program participants to continue collection efforts and a call to action for participants to return collection pails that are more than half full.

4. COLLECTION SYSTEM AND FACILITIES

4.1. Collection System Overview

The Thermostat Recovery Program collection system is comprised of the following:

1. Collection points (program participants)
    - Comprised of the aforementioned 3 collection channels (details in Section 4.1.2.)
    - Participants collect thermostats in program-provided pails before returning them to the collection facility
2. Collection facilities
    - Aevitas Inc. continues to be the program's sole collection facility, receiving and processing the contents of thermostat collection pails from all participants

3. Consolidation points
    - In the past, the program had a secondary consolidation point (Tri-Arrow Industrial Recovery), however this has not been the case since 2016
    - All mercury-containing vessels are shipped to a retort facility at least once a year
4. Retort facility
    - Final processing site of Hg vessels
    - Bethlehem Apparatus Co., Inc. located in PA, USA

The relationship between these facilities is demonstrated in the flow chart below:

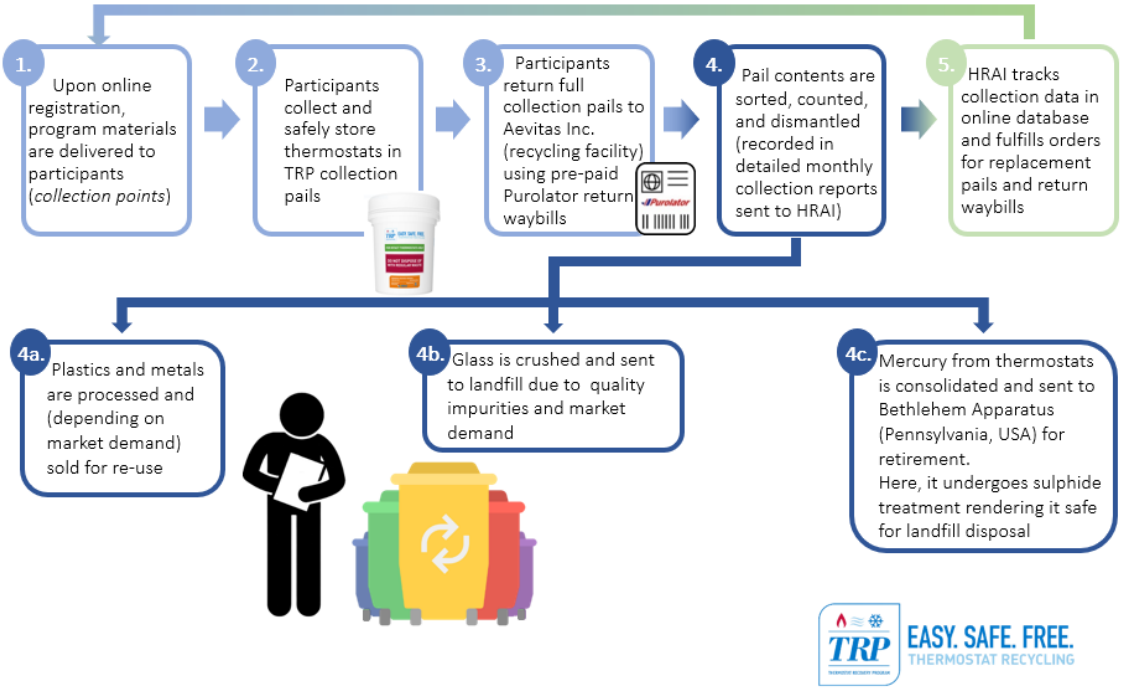


Figure 1. Thermostat Recovery Program collection process in Canada (incl. British Columbia)

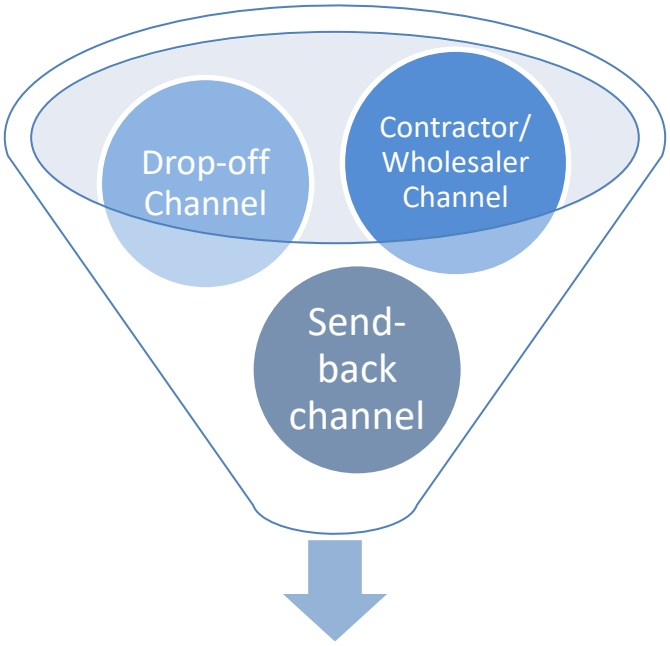
4.1.1. Collection Facilities

In 2022, Aevitas Inc. located in Ayr, Ontario continued to serve as the TRP's sole consolidation point for all thermostat collections from BC, housing Canada's only approved mercury retort facility (Aevitas' website). Upon receiving collection pails from participants across the country, Aevitas processes the materials returned, keeping detailed monthly records of the pail contents and properties. These reports include the source company and contact as indicated on the return waybill, the total number of thermostats in each pail (including a breakdown by type and brand-holder), the number of mercury vessels, number of batteries, the weight of plastic and metal components, as well as any off-spec materials included in the pails. These monthly collection reports are reviewed and uploaded into the TRP's database for record keeping and performance tracking.

4.1.2. Collection Points

The Thermostat Recovery Program uses three collection channels: the contractor/wholesaler channel, public drop-off locations, and the send-back channel. Individual program participants in each of the channels are referred to as "collection points" or "participants". These participants play an integral role in the program's collection operations, accumulating end-of-life thermostats in TRP-provided collection

containers until they are full, at which point they use their pre-paid Purolator return waybill to return their thermostats to Aevitas Inc. This process is illustrated below:



The total number of registered participants in 2022 was 395, across all collection channels. As outlined in the stewardship plan, the program has a goal of 420 registered collection points by 2030. Through the outreach initiatives described above, 10 new businesses registered as collection points for end-of-life thermostats in 2022, 4 of which elected to act as drop-off locations. Two participating collection points were no longer active as of December 31, 2022. BC's registered participants are made up of 312 contractors/wholesalers, representing 79% of all BC participants, and 81 regional district/municipal collection sites, representing approximately 21% of all BC participants.

The following table lists the collection points registered in 2022, indicating the type of business, whether they opted to be a drop-off location and the city where the business is located.

Company Name	Type	Drop Off?	City
Utility Trench Box Rentals	Consumer	No	Lake Country
Bartle & Gibson	Wholesaler	No	Surrey
Andrew Sheret Ltd.	Wholesaler	Yes	Surrey
City of Richmond	Municipal	Yes	Richmond
Regional District of Kitimat Stikine	Recycling Centre	Yes	Terrace
P&E Lumber for Apex Mountain Resort	Consumer	No	Penticton
Regional District of Fraser-Fort George	Municipal	No	Prince George
Tempco Heating & Cooling Specialists	Contractor	No	Powel River
Reliance Home Comfort	Contractor	No	Kelowna
Emterra Environmental	Recycling Centre	Yes	Surrey

4.2. Coverage in Regional Districts

During 2022 database housekeeping practices, the TRP team identified program participants that are no longer actively collecting/returning thermostats for various reasons (e.g. no longer in business, new ownership, etc.), flagging their participant profiles as "inactive". This helps maintain an accurate list of collection points and drop-off locations that are actively participating in the program. Combining new participants with existing collection points as of December 31, 2022 there were active 395 collection points in British Columbia.

The breakdown of collection points per regional district is as follows:

Region	Number of Collection Points
Alberni–Clayoquot Regional District	2
Capital Regional District	44
Cariboo Regional District	5
Columbia–Shuswap Regional District	19
Comox Valley Regional District	12
Cowichan Valley Regional District	13
Fraser Valley Regional District	34
Metro Vancouver Regional District	127
Northern Rockies Regional District	1
Peace River Regional District	12
qathet (Powell River) Regional District	4
Regional District of Bulkley–Nechako	6
Regional District of Central Kootenay	5
Regional District of Central Okanagan	18
Regional District of East Kootenay	7
Regional District of Fraser – Fort George	11
Regional District of Kitimat–Stikine	7
Regional District of Kootenay Boundary	5
Regional District of Mount Waddington	2
Regional District of Nanaimo	11
Regional District of North Okanagan	9
Regional District of Okanagan–Similkameen	11
North Coast (Queen Charlotte) Regional District	3
Squamish–Lillooet Regional District	4
Strathcona Regional District	6
Sunshine Coast Regional District	7
Thompson–Nicola Regional District	10
Total	**395**

As demonstrated in this table, TRP collection points are currently present in 27 of British Columbia's 29 regions. The regions in which we do not yet have participants are: Central Coast Regional District and Stikine Region. We will continue to make efforts to register participants in the remaining 2 regional districts. Nonetheless, the TRP is accessible to all residents of the province of BC through the use our free send-back channel, if they are unable to reach a registered collection point.

5. PRODUCT ENVIRONMENTAL IMPACT REDUCTION, REUSABILITY AND RECYCLABILITY

Historically, all components recovered through the Thermostat Recovery Program have been recycled, including the plastics, metals, glass, and any electronics associated with the thermostat. While plastics recovered through the program during the 2022 calendar year were not recycled due to the Chinese National Sword Policy banning solid waste imports (see below for more details), all other components, except glass, collected through the program were recycled as per the approved plan.

The breakdown of materials recovered from the province of British Columbia during 2022 included:

- 3,305 mercury-containing vessels (there can be anywhere between 1 to 4 mercury vessels contained in each thermostat)
- 3,061 electronic thermostats
- 8 kg of mercury (calculated based on 2.5 grams of Hg per vessel)
- 3 kg of glass (calculated based on 1 gram of glass per vessel) (not recycled)
- 58 kg of metals
- 167 kg of plastics (not recycled)
- 589 batteries

The recyclability of mercury-containing thermostats cannot be improved, nor can the reusability of these obsolete products. New electronic programmable thermostats are more eco-conscious as they do not contain mercury and demonstrate higher energy efficiency than its mechanical mercury-bearing predecessor. Furthermore, there are dangers associated with the reuse of mercury-containing thermostats due to incompatibility with some new HVAC systems. For this reason, responsibly recycling older thermostats and replacing them with newer electronic models continues to be the best practice to reduce environmental impacts in program operations.

TRP will continue to participate in ongoing discussions with recycling and waste processing facilities, as well as other stewardship organizations, in hopes to derive a joint solution to divert e-plastics from landfill. Investigations into potential solutions will consider all developments within the plastics market, along with any government developments directly affecting the Chinese National Sword Policy, with current research underway into the viability of solutions in Malaysia.

The batteries are sent to Port Colborne, ON for recycling.

Efforts to continually reduce environmental impacts within the scope of the program have centered on improving the program's collection processes. To avoid collecting non-thermostat materials through the program, all of the TRP's collection pails are labeled with the program logo and branding, with warnings to restrict collections to intact thermostats only (as described in Section 3), and participants are routinely reminded to limit collections to thermostats and related materials. In addition, the TRP team sends a monthly "Unaccepted Collections Notice" via email to those participants that returned collection pails containing one or more item(s) that the TRP does not accept in our recovery stream (including thermometers, barometers, batteries, CFL bulbs, liquid/elemental mercury, etc.).

As the Thermostat Recovery Program extends and matures, additional practices to reduce environmental impacts will be explored to ensure the program delivers positive outcomes for the environment and British Columbia's citizens.

6. POLLUTION PREVENTION HIERARCHY AND PRODUCT / COMPONENT MANAGEMENT

As per the stewardship plan for thermostats, pollution prevention efforts have continued to focus on recycling, rather than reduction/redesign or reuse. The breakdown as to why recycling is the preferred management technique out of the four "Rs" is provided below.

Reduce/redesign: The main environmental concern with thermostats is the mercury contained in many older models. While many of these thermostats remain in use, the last known date of manufacture for these models in Canada is 2008 and they are no longer sold in Canada. New thermostats have been redesigned to eliminate the mercury component and improve energy efficiency.

Reuse: The plan does not encourage the reuse of old thermostats collected through this program for the following reasons:

- Our primary goal is to collect old mercury-containing thermostats and ensure that the mercury and other components are properly recovered from the environment and managed responsibly, not to see them in continued use;
- Old non-mercury-containing thermostats may not meet the technical/safety specifications of new HVAC systems and consume more energy than electronic programmable models.

Recycle: As per the program plan, the thermostats recovered from the Province of British Columbia are counted, documented, dismantled, and recycled where possible. The thermostat components are handled as follows:

- The metals collected are a mix of iron, nickel and aluminum, all holding high reuse/recycling value. Metals collected are consolidated with like materials at the collection facility and sent to recycling and reuse within Canada.

- The glass vials containing the mercury are consolidated with others from Canada and shipped to Bethlehem Apparatus located in PA, USA, at least once per year, where the glass and mercury are separated.
    - The glass is crushed and sent to landfill due to quality impurities and low market demand.
    - The mercury undergoes a stabilizing treatment process, converting elemental mercury to mercury sulphide, rendering it safe for disposal in specially engineered landfills in the United States. The mercury recovered from thermostats and other manufactured products are no longer processed for reuse in new product manufacturing due environmental concerns.

- The plastic components recovered through the program are deemed "e-waste plastics" and are comprised of mixed types. Until the end of 2017, when received by Aevitas Inc., the plastics were baled together and sent to be prepared for resale at one of the program's downstream recycling processors, either Durham Shred and Recycle or West Coast Plastics. Since the 2018 ban on imported global waste plastics in China, no amount of plastics recovered through TRP were sent for recycling. This ban significantly limits the types of plastics accepted by recycling facilities, stripping e-waste plastics of economic viability. Therefore, until an appropriate alternative solution is made available, Aevitas, along with other waste processing facilities, have been disposing of collected e-plastics in landfill.

TRP will continue to participate in ongoing discussions with recycling and waste processing facilities, as well as other stewardship organizations, in hopes to derive a joint solution to divert e-plastics from landfill. Investigations into potential solutions will consider all developments within the plastics market, along with any government developments directly affecting the Chinese National Sword Policy, with current research underway into the viability of solutions in Malaysia.

The following table describes the acceptable end fates for each of the components of a thermostat:

Component	Reuse	Recycle	Energy Recovery	Landfill	Other
Plastics	X	Preferred	X	X	See comments below
Metals	X	Preferred	X	X	N/A
Mercury Vessels (glass)	X	Preferred	X	X	N/A
Mercury Vessels (mercury)	No	X	X	X	See comments below

Greater than 99% of all collected metal components are recyclable, and were managed in accordance with the program plan and principles of pollution prevention in 2022. Although collected, plastic components were not recycled, solutions to rectify this issue are continually being pursued.

The following table describes processing pathways and criteria used to assess product end fate by product component:

Nature of Processing	Component (% sold or transferred for processing)			Basis of evidence for product treatment
	Plastics	Metals	Hg Vessels (incl. glass)	
Transfer to direct processor (BC or ON)	**During 2022: 0%**	**>99%**	0%	• Due diligence process for supplier selection (incl. detailed qualification of downstream suppliers by Aevitas) • Detailed contracts with collection facility • Monthly reporting from collection facility • Annual site visit to review processes at local collection facility (not during 2021 and 2022) • Official shipping manifest with product weights • Certificate of Destruction/ Recycling provided by retort facility
Transfer to direct processor elsewhere in North America	0%	0%	0%	
Transfer to direct processor outside of North America	0%	0%	0%	
Multi-step processing (BC or ON)	0%	0%	0%	
Multi-step processing elsewhere in North America	0%	0%	**100%**	
Multi-step processing outside of North America	0%	0%	0%	

7. PRODUCT SOLD AND COLLECTED AND RECOVERY RATE

Mercury-containing thermostats are no longer sold into the Canadian market and with no sales to report, the amount of product sold is not currently tracked. With respect to newer programmable models, thermostat sales are neither tracked on a provincial, nor federal level, therefore insufficient data is available to report on the matter. Although thermostats can have a life-span of 20-30 years, renovations

can reduce this lifespan by roughly 7-10 years. This further challenges the process of determining any correlation between the amount of product sold and that recovered.

For the reasons stated above, the TRP does not use recovery rate as a metric for program performance, but rather measures the total amount of product collected against targets set in the approved program stewardship plan (see Section 9).

8. SUMMARY OF DEPOSITS, REFUNDS, REVENUES AND EXPENDITURES

As the Thermostat Recovery Program does not charge deposits, this section does not apply.

9. PLAN PERFORMANCE

Typically, the Thermostat Recovery Program measures performance and communication efforts for a given year against targets set out in the approved product stewardship plan for that calendar year. Since the most current approved stewardship plan for thermostats does not include targets for the 2022 reporting year, the TRP will not be reporting progress made towards approved targets.

9.1. Progress toward Collection Targets

The following table depicts program performance results during the period of January 1 to December 31, 2022, compared to results from the same period in 2021.

Metrics	Program Results		Percent Change from 2021
Collection Metrics	**2021**	**2022**	
Adjusted Total Mercury-Containing Thermostats	3,828	2,854	-25 %
Intact Hg Vessels	3,470	3,096	-11 %
Loose Hg Vessels	501	209	-58%
Electronic Thermostats	3,050	3,061	+0.4 %
Collection points	387	395	+2%
Communication Metrics	**2021**	**2022**	**Percent Change from 2021**
Program Website Visits	3,179	3,696	+16%
Printed Brochures Distributed	45	227	+404%
Printed Drop-Off Posters Distributed	5	5	0%
Industry-Facing Ads	7	4	-43%

All participants are instructed to return only intact thermostats, however loose mercury vessels are occasionally returned as well. Using the industry-accepted standard of 1.4 switches per thermostat, the number of loose switches returned in 2022 is equivalent to roughly 149 thermostats. The adjusted total number of thermostats collected in 2022 is then 2,854. Continued efforts will be made in 2023 to increase program awareness and education to ensure participants understand and follow program instructions.

Dedicated to continuous improvement, in 2022, the TRP endeavored to continue achieving successful performance outcomes and providing Canadians with an easy, safe and free solution for the collection and recycling of thermostats. In 2022, to achieve desired outcomes, the TRP performed a strategic review of the TRP's marketing and outreach initiatives, and improved the program's performance tracking tools.

Notably expanding HRAI's team to include regional support across Canadian provinces, with the addition of staff located in British Columbia, the TRP will continue exploring new ways to improve program participation and engagement in 2023. Through ongoing efforts and improvements, HRAI is confident that the program will remain successful in the coming years.

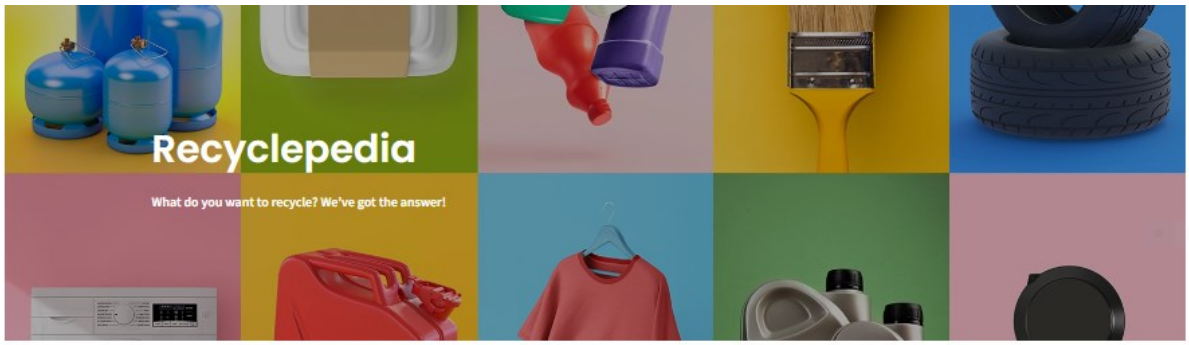
9.2. Amount Collected by Regional District

The following table demonstrates the number of thermostats collected in each regional district in 2022.

Region	Thermostats	Electronic Thermostats	Loose Vessels
Alberni-Clayoquot Regional District	74	31	32
Capital Regional District	354	967	12
Columbia-Shuswap Regional District	63	0	0
Comox Valley Regional District	2	19	0
Cowichan Valley Regional District	34	140	1
Fraser Valley Regional District	136	189	4
Metro Vancouver Regional District	1616	1586	149
Peace River Regional District	35	26	0
qathet (Powell River) Regional District	36	5	0
Regional District of Central Okanagan	160	14	9
Regional District of North Okanagan	56	1	2
Regional District of Okanagan-Similkameen	2	0	0
Sunshine Coast Regional District	19	57	0
Thompson-Nicola Regional District	118	26	0
TOTAL	**2,705**	**3,061**	**209**

APPENDIX A – EARNED MEDIA

RCBC Recyclepedia



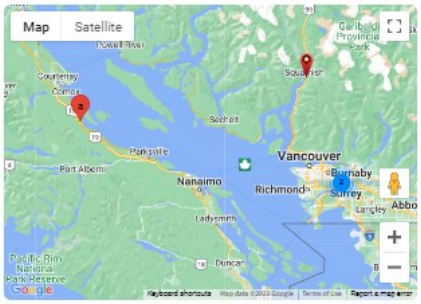
What are you recycling?

Mercury-containing Thermostat

Where are you recycling?

Vancouver

Find Locations



Found 3 locations near Vancouver

▾ Mercury-containing Thermostat

Electromechanical (mercury-containing) and electronic thermostats are collected through the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI)'s province-wide Thermostat Recovery Program (TRP). They are accepted free-of-charge at TRP depots provided that they are fully intact.

For areas without a permanent drop-off depot, a free mail-in option exists. For additional information on the program and to locate the nearest drop-off depot, please visit HRAI website or call the RCBC Recycling Hotline.

a HRAI's Thermostat Recovery Program (TRP)

▸ See what other materials this depot also accepts

Phone: (800) 267-2231

Address: Province-wide

Website: https://www.hrai.ca/public-drop-off-locations

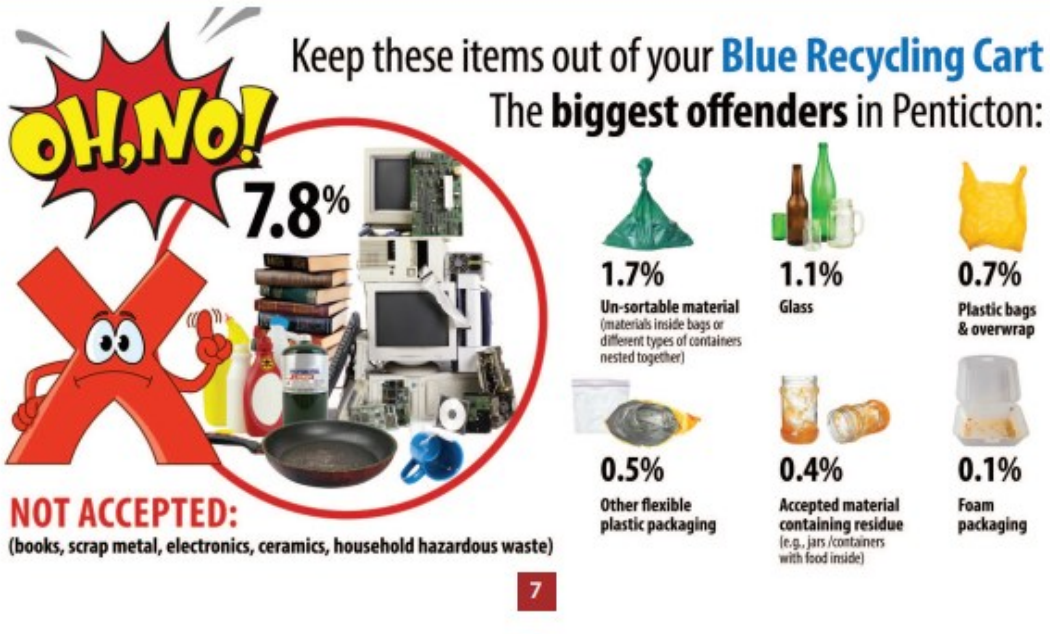
Hours: Varies by location. See website.

Notes: Residents can drop off intact household thermostats to various locations throughout the province. Please log onto the website to find your closest location. A mail in option is available for more remote areas. Call for details.

City of Penticton Collection Calendar

B.C. Product Stewardship Programs 2022-2023

PRODUCT	STEWARD	PROGRAM	For more details and depot locations
Batteries and Cellphones 	call2recycle	Bring your household single-use and rechargeable batteries and cellphones for safe recycling and disposal. Includes cell phones and batteries under 5kg (alkaline, NiCd, lithium, etc); batteries from cell and cordless phones, power tools, laptops, etc. Excludes car batteries.	call2recycle.ca/british-columbia or 1-888-224-9764.
Major Appliances 	Return-It | MARR	Responsibly recycle your old, major appliances including ovens, dishwashers, washers/dryers, range hoods, and more - including appliances with refrigerants like fridges, freezers, and air conditioners. Find a free, certified collection site near you plus a full list of accepted products at **return-it.ca/large-appliances**	For more details and depot locations: **return-it.ca/large-appliances/locations** or **1-888-252-4621**
Thermostats 	TRP	Bring your thermostat in for safe recycling and disposal to keep all its components, especially mercury, out of the waste stream. Includes all mercury-containing, electronic and mechanical thermostats.	To participate in the program or find Public Drop-Off locations near you, please visit **hrai.ca/trp** or contact the TRP Team at **1-800-267-2231 x108** or **905-602-4710** or send an email to trp@hrai.ca



City of Mission Collection Calender

Going To The Depot?

Here's How To Enhance The Experience

- **Make your trip worthwhile**. Adding to traffic and lineups to drop off one spent toaster and a light bulb is not a good idea.
- **Sort your load at home**. Sorting recyclables at the counter takes time and holds up other depot customers.
- **Follow depot staff's direction**, they are there to keep things running and safe.
- **Direct program-related questions to the City** (engineering@mission.ca or 604-820-3736).

Sorting Recyclables For Drop-off

Sort your clean, dry, everyday recyclables into the following categories at home:

- **Paper products** (newspaper, flyers, magazines, office paper, envelopes & cardboard)
- **Rigid retail containers** (soup & pet food cans, metal lids, plastic cups, tubs, pails & jugs, dairy cartons, plastic clam shells, tin takeout trays)
- **Retail container glass** (jam & pickle jars, marinade & ketchup bottles)
- **Styrofoam™** (trays & boards, sorted into white and coloured) - no flexible foam or "peanuts"
- **Stretchy plastic film** (shopping & bread bags, case lot overwrap) - no Saran™ wrap
- **Other plastic film products** (chip & dry pasta bags, pet food bags, candy wrappers, produce netting, Ziploc™ bags, and Saran™ wrap)

Other Recyclables

For a list of other recyclables accepted at the Mission Recycling Depot or elsewhere, please consult the guide on page 5 of this calendar.

McBride Recycling Round-Up Event

Items Accepted:

- Tires Passenger & Light Truck (PLT)
- Lights
- Paint
- Smoke & CO Alarms
- Thermostats
- Batteries automotive & household
- Electronics TVs, computers, musical instruments etc.
- Household Hazardous Waste gasoline, pesticides

call2recycle Leading the charge for recycling
productcare RECYCLING
TIRE Stewardship BC
Return-It Electronics
McBRIDE B.C.
CANADIAN ENERGY
TRP
REGIONAL DISTRICT of Fraser-Fort George

Regional District of Central Okanagan – Recycle Coach App

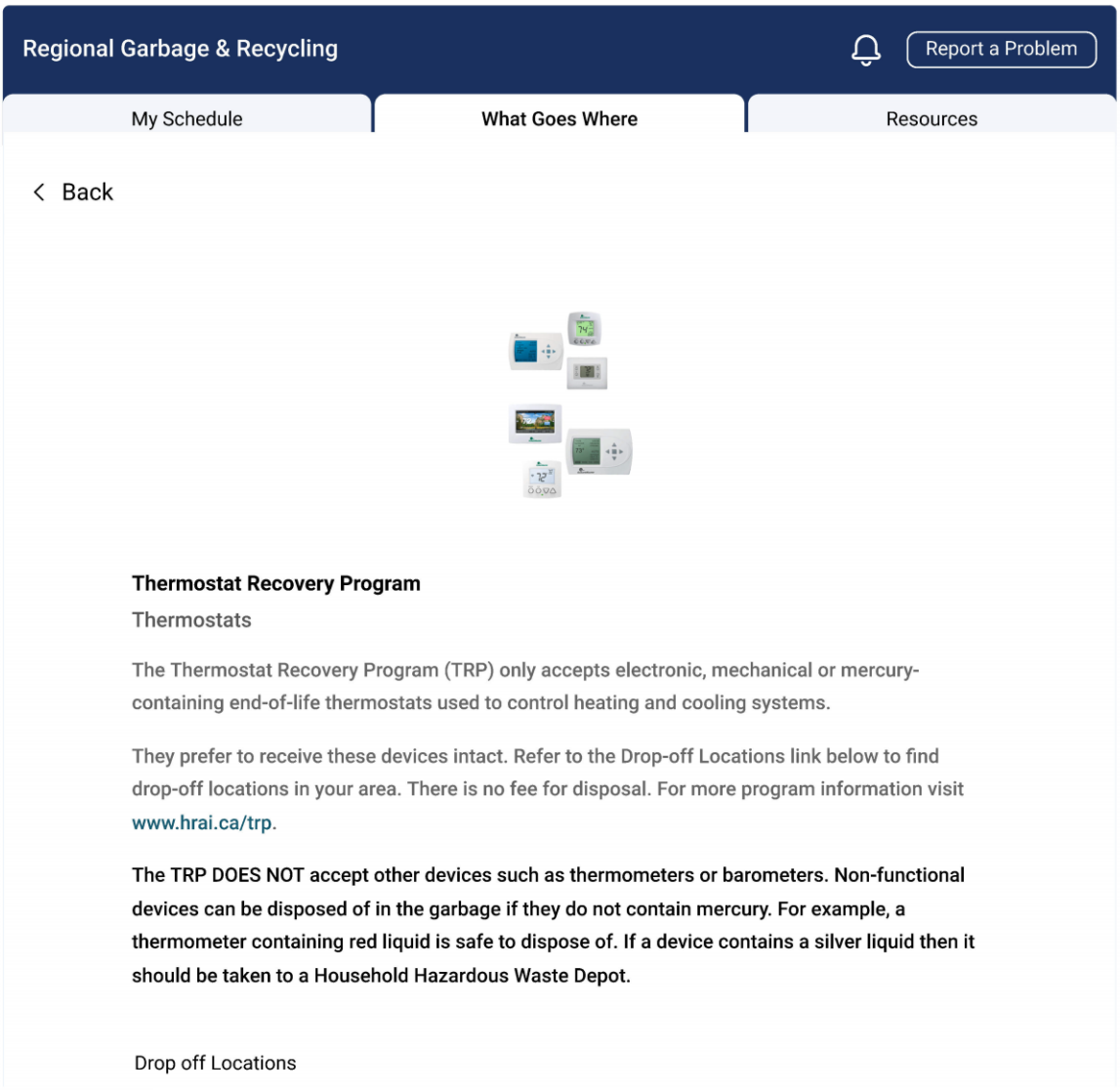
Recycle coach app

Home / ...Waste and recycling / Recycling / Recycle coach app

Get the Recycle Coach app for iPhones/iPads

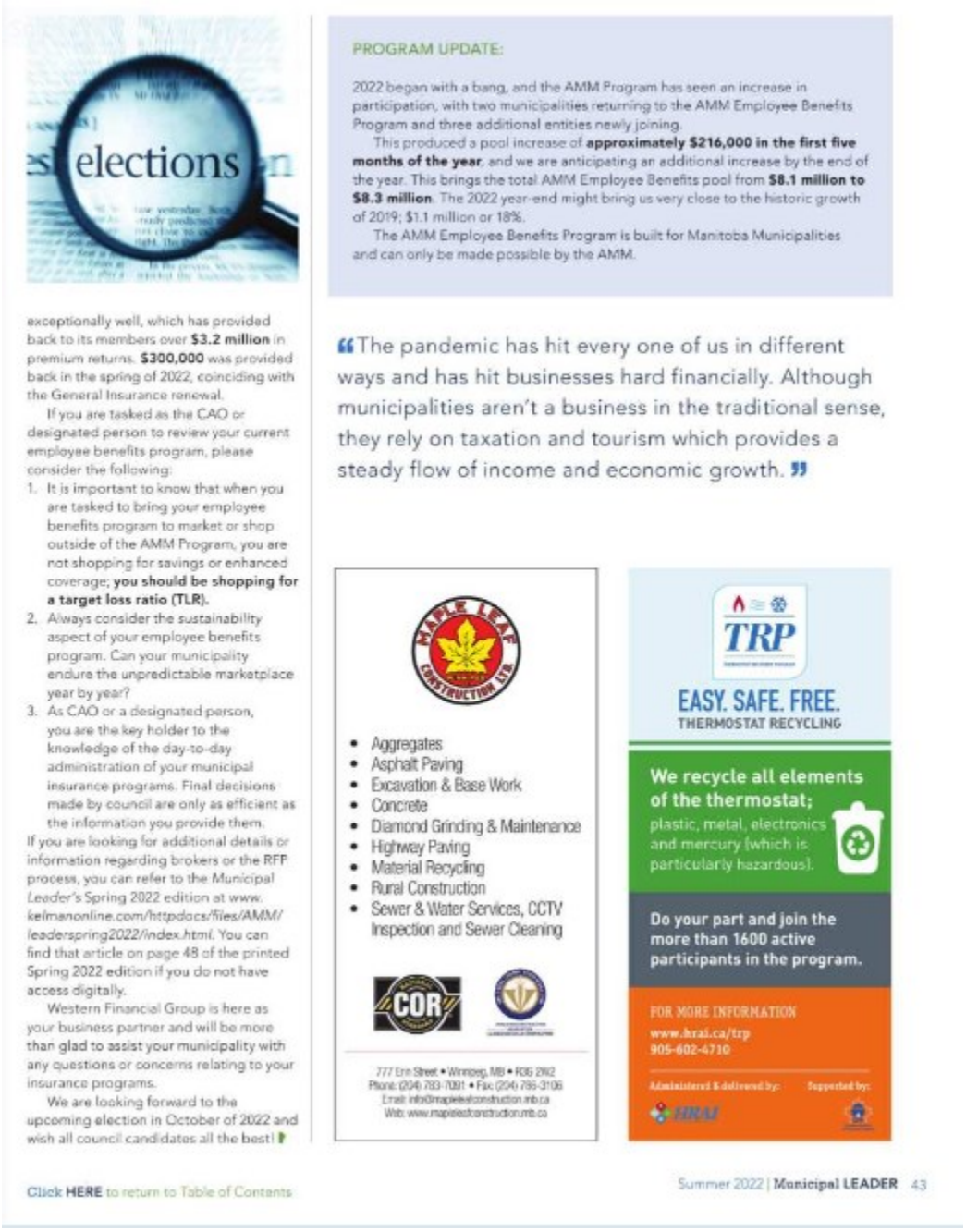
Get the Recycle Coach app for androids

The free Recycle Coach App for mobile phones and tablets lets you search on how to dispose of hundreds of items, check your weekly pickup schedule and set pickup reminders all in the palm of your hand.



Municipal Leader Magazine Ad

Summer & Winter Issues 2022



exceptionally well, which has provided back to its members over **$3.2 million** in premium returns. **$300,000** was provided back in the spring of 2022, coinciding with the General Insurance renewal.

If you are tasked as the CAO or designated person to review your current employee benefits program, please consider the following:

1. It is important to know that when you are tasked to bring your employee benefits program to market or shop outside of the AMM Program, you are not shopping for savings or enhanced coverage; **you should be shopping for a target loss ratio (TLR).**
2. Always consider the sustainability aspect of your employee benefits program. Can your municipality endure the unpredictable marketplace year by year?
3. As CAO or a designated person, you are the key holder to the knowledge of the day-to-day administration of your municipal insurance programs. Final decisions made by council are only as efficient as the information you provide them.

If you are looking for additional details or information regarding brokers or the RFP process, you can refer to the Municipal *Leader's* Spring 2022 edition at www.kelmanonline.com/httpdocs/files/AMM/leaderspring2022/index.html. You can find that article on page 48 of the printed Spring 2022 edition if you do not have access digitally.

Western Financial Group is here as your business partner and will be more than glad to assist your municipality with any questions or concerns relating to your insurance programs.

We are looking forward to the upcoming election in October of 2022 and wish all council candidates all the best!

PROGRAM UPDATE:

2022 began with a bang, and the AMM Program has seen an increase in participation, with two municipalities returning to the AMM Employee Benefits Program and three additional entities newly joining.

This produced a pool increase of **approximately $216,000 in the first five months of the year**, and we are anticipating an additional increase by the end of the year. This brings the total AMM Employee Benefits pool from **$8.1 million to $8.3 million**. The 2022 year-end might bring us very close to the historic growth of 2019; $1.1 million or 18%.

The AMM Employee Benefits Program is built for Manitoba Municipalities and can only be made possible by the AMM.

"The pandemic has hit every one of us in different ways and has hit businesses hard financially. Although municipalities aren't a business in the traditional sense, they rely on taxation and tourism which provides a steady flow of income and economic growth."

Click **HERE** to return to Table of Contents

HPAC Magazine Ad (Industry Publication)

February and March 2022 Issues

Viessmann Canada has named Jeff Amlin as regional manager – Eastern Canada. In his new role Amlin will work with sales agencies in Ontario, Quebec, New Brunswick, Nova Scotia, P.E.I. and Newfoundland/Labrador as well as continuing to be the main point of contact for key accounts across Canada. And Randy Stuart has taken on responsibilities as regional manager – Western Canada. Stuart will continue to manage the Viessmann B.C. office and will also work closely with sales agencies in Alberta, Saskatchewan, Manitoba, Northwest Territories and the Yukon.


Amlin


Stuart

Aqua-Tech Sales and Marketing has promoted Darryl Singleton to president and named Chris Neilson as vice president operations. Singleton, who has been with the company for 27 years, most recently served as national sales manager and has more than 16 years of senior management experience with Aqua-Tech. And Neilson, who began his career with Aqua-Tech 24 years ago, has served as operations manager with the company for the past eight years.


Singleton


Neilson

Uponor announced that Bill Gray, president, building solutions – North America and a member of Uponor's executive committee has decided to pursue new challenges. Gray officially left his position as of January 10th, 2022. The transition comes almost 10 years after Gray was first named president of Uponor North America. He was previously general manager for Uponor in Canada for three years and then vice president of sales in North America.


Gray

Wolseley Canada has appointed Jason Bloedow as national director, HVAC. Bloedow is responsible for growing and developing market share, talent, and innovative business solutions in the HVAC sector and will support the HVAC team in enhancing sales and category strategies. He holds over 15 years of experience in the HVAC, construction, fire, and gas industries.


Bloedow

Desco Plumbing and Heating Supply has announced changes among its leadership team. Brian Ruetz has been promoted to vice president and general manager. With Desco for over 17 years, Ruetz was previously sales manager. Taking over the sales manager role, overseeing all sales related functions is Melanie Peet-Winkfield, who was previously manager – branch operations, responsible for nine branches in western Ontario. Peet-Winkfield joined Desco in 2010 as a branch manager in Kitchener.

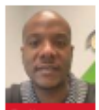

Ruetz


Peet-Winkfield

In addition, Riva Jamil, formerly a key account manager is now regional sales manager – Greater Toronto Area and East, and Colin Halligan takes over as regional operations manager for the GTA and East territory. Finally, Jermaine Bailey, who has operated as a retail manager with Desco since 2014 is now the retail manager leading the company's Water Closet showroom business.


Jamil


Halligan


Bailey

Michael Segala has returned to Aquatherm as vice president of sales. Segala will direct the sales team in both Canada and the U.S. He previously served as regional sales manager in the Northeast from 2014 to 2021. And Rhett Coles is now director of operations with the company.


Segala


Coles

APPENDIX B – THIRD PARTY ASSURANCE

Independent practitioner's reasonable assurance report on Heating, Refrigeration and Air Conditioning Institute of Canada's Annual Report to the Director of Extended Producer Responsibility Programs at the Ministry of the Environment and Climate Change Strategy, Government of British Columbia

To the Management of Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI)

We have undertaken a reasonable assurance engagement on the subject matter detailed in Appendix A as presented in HRAI's Annual Report to the Director (the Report) of the British Columbia Ministry of Environment and Climate Change Strategy (the Ministry) as hosted on the HRAI's website[1] for the year ended December 31, 2022.

Management's responsibility
Management is responsible for the preparation of the subject matter in accordance with the sections 8(2)(b), 8(2)(d), and 8(2)(e) of the British Columbia Recycling Regulation 449/2004 (the criteria) detailed in Appendix A. Management is also responsible for such internal control as management determines necessary to enable the preparation of the subject matter that is free from material misstatement, whether due to fraud or error.

Our responsibility
Our responsibility is to express a reasonable assurance opinion on the subject matter based on the evidence we have obtained. We conducted our reasonable assurance engagement in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3000, *Attestation Engagements Other than Audit or Reviews of Historical Financial Information.* This standard requires that we plan and perform this engagement to obtain reasonable assurance about whether the subject matter is free from material misstatement.

Reasonable assurance is a high level of assurance, but is not a guarantee that an engagement conducted in accordance with this standard 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 decisions of users of our report. The nature, timing and extent of procedures selected depends on our professional judgment, including an assessment of the risks of material misstatement, whether due to fraud or error, and involves obtaining evidence about the preparation of the subject matter in accordance with the applicable criteria.

Our reasonable assurance procedures included, but were not limited to the following:

- making enquiries to obtain an understanding of the overall governance and internal control environment and risk management processes relevant to the management and reporting of the Report;

[1] The maintenance and integrity of the HRAI's website (https://www.hrai.ca/program-results-trp) is the responsibility of HRAI; the work carried out by PricewaterhouseCoopers LLP does not involve consideration of these matters and, accordingly, PricewaterhouseCoopers LLP accepts no responsibility for any changes that may have occurred to the reported information or criteria since they were posted on the website.

PricewaterhouseCoopers LLP
PwC Tower, 18 York Street, Suite 2500, Toronto, Ontario, Canada M5J 0B2
T: +1 416 863 1133, F: +1 416 365 8215, ca_toronto_18_york_fax@pwc.com

- analytical reviews and trend analysis of reported data;
- testing the processes, documents and underlying data on a sample basis;
- recalculating quantitative data on a sample basis as it pertains to the subject matter information; and
- evaluating the presentation and disclosure of the subject matter information in the Report.

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

Our independence and quality management
We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Canadian Standard on Quality Management 1, *Quality Management for Firms that Perform Audits and Reviews of Financial Statements, or Other Assurance or Related Services Engagements,* which requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Opinion
In our opinion, HRAI's subject matter as presented in the Report for the year ended December 31, 2022 is prepared, in all material respects, in accordance with the applicable criteria.

Emphasis of matter

We draw your attention to Appendix B, which describes why certain items required by the Assurance Requirements have been excluded. Our opinion is not modified in respect of this matter.

Purpose and restriction of use
The subject matter has been prepared in accordance with the applicable criteria to report to the Ministry. As a result, the subject matter may not be suitable for another purpose. Our report is intended solely for HRAI.

We acknowledge the disclosure of our report, in full only, by HRAI at its discretion, to the Ministry without assuming or accepting any responsibility or liability to the Ministry or any other third party in respect of this report.

/s/PricewaterhouseCoopers LLP

Chartered Professional Accountants

Toronto, Ontario
June 28, 2023

Appendix A – Results and criteria

1. The location of collection facilities, and any changes in the number and location of collection facilities from the previous report as presented on page 3 of HRAI's 2022 Annual Report to the Director.
Result: There is one main collection facility as of December 31, 2022. Reference: Page 3 of HRAI's 2022 Annual Report to the Director.
Method of reporting: • Reporting Period: January 1 to December 31, 2022. • HRAI considers Aevitas Inc. to be the only Collection Facility, because "Collection Points" are more of a mechanism of recovery that increases access to the public similar to the function of a Canada Post or Courier outlet. • The number of Collection Facilities is reported on the basis of the number of Collection Facilities who have a signed contract with HRAI to collect, process, ship, and report on collected program products during the reporting period. • The changes in number and location of Collection Facilities are calculated by tracking the additions and removals of Collection Facilities throughout a given reporting year. This information is further compared with the equivalent data from the end of the prior year.
Definitions: • "Program Products" are all products included in the program as listed in the revised product stewardship plan 2015-2020, Section 2.4. • "Collection Facilities" are considered to be locations with a signed contract with HRAI for the purpose of collecting, processing, shipping, and reporting on Program Products at any point during the reporting year. • "Collection Points" are mechanisms for collection. This term was new to the program as of the 2012 reporting year. In prior years, the collection points were considered the collection facilities. Collection Points may include the following types of businesses (also known as 'participants') and have either signed a formal document or had a verbal discussion outlining their agreement with the Agency to take part in the program: ◦ Contractors ◦ Wholesalers ◦ Local or regional government recycling centers or transfer stations ◦ Direct send-back

2. The description of how recovered product was managed in accordance with the pollution prevention hierarchy in accordance with 8(2)(d) of the Recycling Regulation as presented on pages 3, 4, 12, 13, and 14 of HRAI's 2022 Annual Report to the Director.

The descriptions of how components (i.e., plastic, metals, glass vials containing mercury) are processed, is presented in a list on pages 12-14 of the 2022 Annual Report for Aevitas Inc.

The acceptable end fates for each of the components of a thermostat is presented within the table on page 14 of the 2022 Annual Report.

Component	Reuse	Recycle	Energy recovery	Landfill	Other
Plastics	X	Preferred	X	X	See page 14
Metals	X	Preferred	X	X	NA
Mercury Vessels (glass)	X	Preferred	X	X	NA
Mercury Vessels (mercury)	No	X	X	X	See page 14

Reference: Pages 3, 4, 12, 13, and 14 of HRAI's 2022 Annual Report to the Director.

Processor due diligence:

i. HRAI satisfies itself with the sufficiency of all downstream processors of Program Products, up to and including end of fate, based on an established due diligence process including qualification by primary processors and/or annual site visits).

ii. The due diligence process is administered or overseen by HRAI and considers the qualifications and capabilities of the processors, in line with the goals of the Program as set out in the revised product stewardship plan 2015-2020.

iii. If the due diligence process is administered by the processors (i.e., a primary processor assessing a secondary processor), the results of the due diligence are assessed by HRAI for sufficiency.

iv. The rigour of the due diligence process is tailored using a risk-based approach to assess the likelihood that, and impact of, the associated Program Products/materials will enter a waste stream.

v. Processors are responsible for designing and maintaining their own system of internal control over the Program Product reporting process, as well as assessing the system of internal control of the downstream processors as part of the selection and ongoing due diligence process.

Processor reporting:

- The Primary Processors are responsible for maintaining the records for Program Products processed, for each separately identifiable commodity of Program Products, and reporting the results, including those from downstream processors, up to and including end of fate, on a consistent and timely basis to HRAI. Reporting includes both quantitative and qualitative end of fate data for Program Products.

Method of reporting:

- Reporting Period: January 1 to December 31, 2022.
- Program Products collected are reported by end of fate both by commodity and by process on the Pollution Prevention Hierarchy:
    - Reuse: N/A – No Program Products are reused per the revised product stewardship plan 2015-2020.
    - Recycle: Products are reported by each separately identifiable end of fate commodity (e.g., metals, glass, etc.) either based on the number of units for the mercury vessels; or based on weight in kilograms for the plastics, metals, mercury and glass:

        § The weight in kilograms of glass is calculated by multiplying the total number of mercury vessels by the industry standard of 1 gram of glass per vessel;

        § The weight in kilograms of mercury is calculated by multiplying the total number of mercury vessels by the industry standard of 2.5 grams of mercury per vessel.

- Recovery: N/A – No Program Products are recovered.
- Waste: In 2022, the plastics generated from the TRP thermostats were disposed of into landfills.

Definitions:

- The Pollution Prevention Hierarchy includes the following:
  - "Reuse" includes all Program Products that are refurbished or can be reused "as is" through either resale, return to inventory, or given away as a donation.
  - "Recycle" includes:
    - Any Program Product that cannot be Reused;
    - Any Program Product where the sales agreement strictly prohibits the reuse of that product or requires its destruction;
    - Any Program Product that is harvested for parts;
  - Any commodities that are captured from the recycling process.
  - "Energy Recovery" relates to processing activities after the recycling stage and includes any element of the Program Product that is harvested to generate energy.
  - "Waste" includes any products not captured in the three streams above.
- "End of fate" is defined as the final processed state of each commodity before entering a re-use stream or shipment to landfill/sequestration.

3. The total amount of the producer's product sold and collected and the recovery rate as presented on pages 4, 5, 12, 15, and 16 of HRAI's 2022 Annual Report to the Director.

Total amount of producer's product collected in 2022 is:

- Collected 2,705 mercury containing thermostats, 3,061 electronic thermostats, and 209 loose mercury vessels.
- Adjusted total: 2,854 mercury containing thermostats and 3,061 electronic thermostats, for a total of 5,766 collected.

Adjusted total mercury containing thermostats are estimated as follows:

Using the industry-accepted standard of 1.4 switches per thermostat, the number of loose switches returned in 2022 is equivalent to roughly 149 thermostats. The adjusted total number of thermostats collected in 2022 is then 2,854.

Reference: Pages 4, 5 12, 15, and 16 of HRAI's 2022 Annual Report to the Director.

Method of reporting:

- Reporting Period: January 1 to December 31, 2022.
- Quantification of Product Collected is based on the number of Thermostats and Hg vessels reported by the Collection Facilities as having been received/collected and diverted during the reporting year.
- These amounts are monitored on a monthly basis through information collected that includes the number of thermostats and Hg vessels collected by geographic location.
- Although all participating collection points are encouraged to return only intact thermostats, loose vessels (which have been clipped out of thermostats) are occasionally returned as well. The equivalent number of thermostats is calculated by dividing the number of loose vessels by the industry-accepted standard of 1.4 vessels per thermostat (determined through averages provided by the industry and confirmed during a pilot study conducted by the Agency in 2006).
    - The “Adjusted total number of thermostats” collected is calculated by summing the total number of thermostats collected and the equivalent number of thermostats calculated above.
- Additional information is also collected for internal tracking purposes such as:
    - Weight of plastics and metals collected;
    - Brand of the thermostat collected; and
    - Details of the mechanism used for collection (e.g., name and location of the Collection Point/Participant).

Definitions:

- "Program Products" are all products included in the program as listed in the revised product stewardship plan 2015-2020, Section 2.4.
- “Product Collected” is the amount of all Program Products collected from sources known to be located within the province of BC that occurred through the Collection Facilities. The amount of Product Collected is reported as the total number of thermostats, adjusted total number of thermostats, total number of Mercury (“Hg”) vessels, and number of loose Hg vessels received by the Collection Facilities during the reporting year.

4. The performance for the year in relation to targets in the approved stewardship plan under Section 8(2)(b), (d) and (e) in accordance with Section 8(2)(g) of the Recycling Regulation are not presented in HRAI's 2021 Annual Report to the Director.
Result: HRAI has not reported its performance for the year in relation to approved targets in their approved stewardship plans under 8(2)(b), (d) and (e) in accordance with 8(2)(g) of the Recycling Regulation for the year ended December 31, 2022 as HRAI is not required to report this to the Director as there are no targets set in the approved stewardship plan for these sections applicable to the reporting year.

Appendix B – Exclusions

HRAI has not reported the recovery rate for the year in accordance with 8(2)(e) of the Recycling Regulations for the year ended December 31, 2022 as the approved stewardship plan does not outline the requirement to report recovery rates. If the stewardship program does not report a recovery rate in the approved plan, assurance for producers' product sold data is not required as outlined in the Assurance Requirements.

HRAI has not reported its performance for the year in relation to targets under 8(2)(b) and (d) in accordance with 8(2)(g) of the Recycling Regulation for the year ended December 31, 2022 as HRAI is not required to report this to the Director as there are no targets set in the revised stewardship plan for these sections applicable to the reporting year.