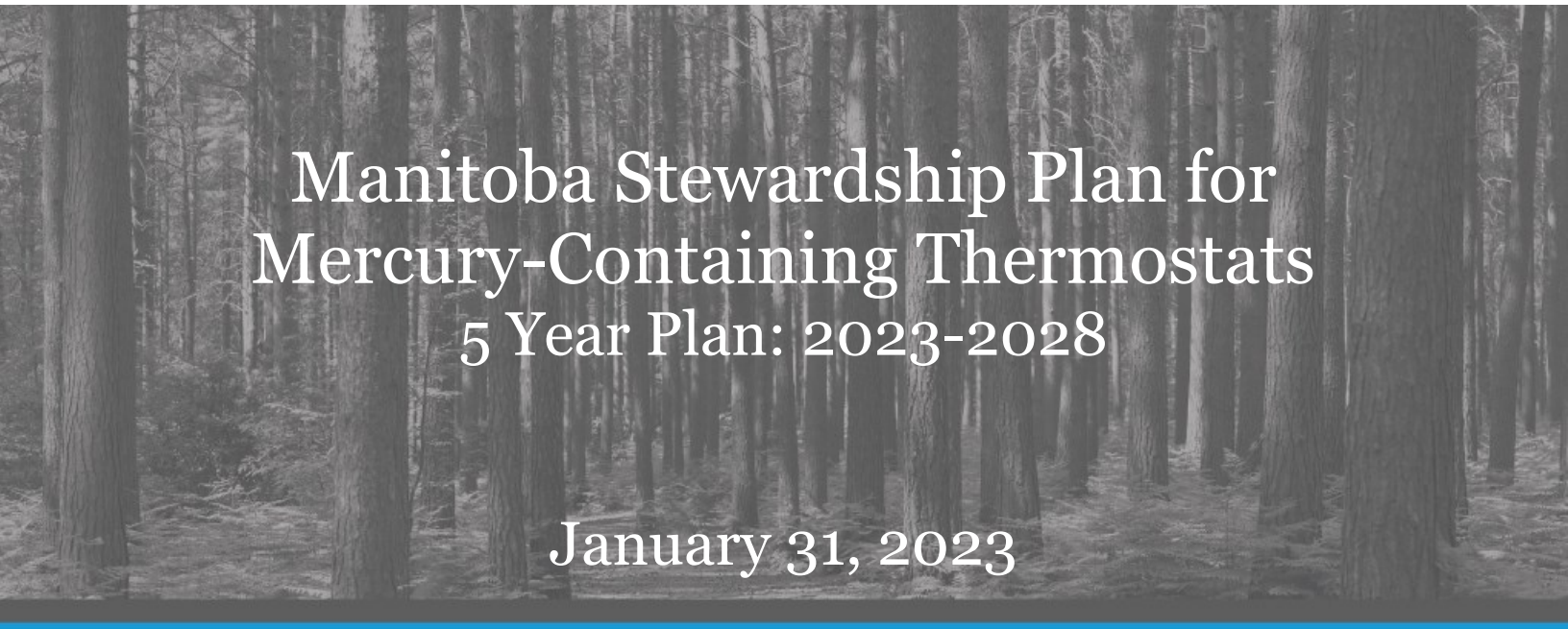

Manitoba Stewardship Plan for Mercury-Containing Thermostats

5 Year Plan: 2023-2028

January 31, 2023

Submitted by:
Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI)

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With the support of the Canadian Institute of Plumbing and Heating (CIPH)

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1.0 GLOSSARY

1.1 Definitions

In this Plan,

"contractor" – means a licensed heating, ventilation, and air conditioning technician who is trained to properly install and remove HVACR equipment (including thermostats).

"distributor" – means a business that purchases thermostats directly from the manufacturers, warehouses the products and then distributes and sells them either to wholesalers or to HVACR contractors who install them into residences and businesses.

"HVACR" – means heating, ventilation, air conditioning and refrigeration.

"manufacturer" – means a business that designs and makes (manufacturers) thermostats.

"mercury switches" – means mercury that is sealed in a glass bulb/vessel/vial as part of the thermostat.

"*thermostat(s*)" – means products that sense and control room temperature through communication with heating, ventilation, and air conditioning equipment from all sectors (residential and commercial), including: electromechanical thermostats, which contain internal mercury switches; and electronic thermostats, which use sensors instead of switches to detect temperature levels.

"wholesaler" – means a business that purchases brands of thermostats directly from the manufacturers, warehouses the products and then sells them to HVACR contractors who then installs them into residences and businesses.

2.0 EXECUTIVE SUMMARY

The Thermostat Recovery Program is a designated program for recovering mercury-containing thermostats in the province of Manitoba. Mercury-containing thermostats are defined as products that use a mercury switch to sense and control room temperature through communication with heating, ventilation and air conditioning equipment. The program is fully administered by the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) on behalf of the thermostat manufacturers.

As per the requirements under the *Household Hazardous Material and Prescribed Material Stewardship Regulation,* this Program Plan covers a five-year period from July 1, 2023 to June 30, 2028, and as such, sets five-year targets for accessibility and collection. This Plan builds on work that was completed in the previous five-year plan to ensure the program continues to operate in an effective manner and is easily accessible.

The goal of this Program Plan is to continue to deliver a high-quality program that satisfies the thermostat manufacturer's obligations under the Regulation, which is also part of a harmonized national program. The mercury-containing thermostat collection targets will be reported annually as required under *Regulation 16/2010.*

The record of all materials recovered from the province of Manitoba since 2006 includes:

- ✓ 8,432 mercury-containing vessels, including 1,655 loose vessels, which were clipped from thermostats and returned loose in pails
- ✓ 6,438 intact mercury-containing thermostats
- ✓ 21 kilograms of elemental mercury
- ✓ 8 kg of glass
- ✓ 128 kilograms of metals
- ✓ 363 kilograms of plastics
- ✓ 102 Batteries

The program's performance is measured according to number of participants, number of collection locations and communication outreach.

Table 1: Performance Targets

Measure	Target	
Number of Collection Locations	2024	132
	2025	135
	2026	135
	2027	140
	2028	140
Collection Totals	2024	510
	2025	535
	2026	561
	2027	589
	2028	618
Communication Outreach	Maintain communication outreach across HVACR supply chain, media channels, key partner, and website access.	

The two main changes to this 5-year Plan includes:

1) Increase in the number of collection locations to 140 by 2028; and
2) Adjusted total collection targets to reach 618/yr by 2028 based on the last 5-year average.

3.0 INTRODUCTION

Founded in 1968, the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) is a non-profit national trade association that represents more than 1,150 member companies in the heating, ventilation, air conditioning, and refrigeration (HVACR) industry. Since 2016, HRAI has administered the Thermostat Recovery Program (TRP) Extended Producer Responsibility (EPR) on behalf of the Canadian HVACR industry.

The Manitoba Regulation 16/2010 (February 3, 2010) for *Household Hazardous Material and Prescribed Household Material Stewardship Regulation (*Regulation*)* under the *Waste Reduction and Prevention Act (WRAP)* sets the requirements for stewards of designated materials to have either a program of their own or to join an approved industry-funded program. In accordance with the Regulation, HRAI, is submitting this Stewardship Plan on behalf of manufacturers responsible for previously selling mercury-containing thermostats in Manitoba, since manufacturers are no

longer manufacturing, distributing, or selling these products. The program is endorsed by the Canadian Institute of Plumbing and Heating (CIPH).

The TRP is a designated program for recovering mercury-containing thermostats at end of life in the province of Manitoba. Mercury-containing thermostats are defined as products that use a mercury switch to sense and control room temperature through communication with heating, ventilation, and air conditioning equipment.

This Program Plan covers a five-year period from July 1, 2023 to June 30, 2028, and as such, sets five-year targets for accessibility and collection. This Plan builds from the work that was completed in the previous five-year plan April 1, 2017 to March 31, 2021, with a focus on improving program accessibility to Manitobans to ensure that program performance targets are met.

As per *Regulation 16/2010* guidelines, the collection program for thermostats will be ongoing and the Plan will be reviewed after five years of operations, with any necessary amendments being made at that time. Between five-year plan revisions, the TRP will remain committed to achieving the targets set out in this Plan and demonstrating regulatory compliance.

3.3 Program Participants

In accordance with Manitoba Regulation 16/2010, HRAI has taken the lead in developing this Plan on behalf of manufacturers responsible for previously selling mercury-containing thermostats in Manitoba.

HRAI serves as a Producer Responsibility Organization (PR0), administering this stewardship program in Manitoba on behalf of thermostat manufacturers subject to extended producer responsibility regulations in Manitoba.

The list in Appendix A represents the 5 thermostat manufacturers who have signed on and fully fund the program. These 5 manufacturers have historically sold and/or imported mercury-containing thermostats into Canada through their distribution channels. The list of participating manufacturers is posted on the TRP program website (www.hrai.ca/trp). The Program does not charge or collect eco fees and there is no cost to government.

3.4 Program Products

In Manitoba, mercury-containing thermostats are specifically designated under the Manitoba *Household Hazardous Material and Prescribed Household Material Stewardship Regulation.* Therefore, this program plan includes mercury-containing thermostats:

- Electromechanical (mercury) thermostats, which contain internal mercury switches/vessels (mercury in a sealed glass bulb) or snap switches to control the flow of electrical current.

It should be noted that under the HRAI national TRP program, all thermostats are collected (i.e. mercury-containing and electronic). Electronic thermostats use sensors instead of switches to detect temperature levels and electronically control the flow of electrical current and are not included as part of this Plan.

4.0 PRODUCT STEWARDSHIP PLAN

4.1 Plan Development

HRAI has executed and managed the TRP on behalf of the thermostat manufacturers under an approved stewardship plan in MB since 2017. HRAI will continue to provide program management and delivery, as the agency appointed by the 5 major manufacturers listed in Appendix A to fulfill their legal obligation to develop and deliver a collection and recycling program for mercury-containing thermostats in Manitoba under the *Household Hazardous Material and Prescribed Household Material Stewardship Regulation*.

4.2 Collection Process

The Plan will continue to use the same three channels from previous years to collect end-of-life mercury-containing thermostats in Manitoba:

1. HVACR contractors/wholesalers who remove and collect thermostats during the course of their operation, and act as drop-off locations for the general public.
2. Regional District and municipal collection points where the public can drop off their old thermostats.
3. Send-back kits for members of the public in remote regions of the province, or who have mobility challenges.

The program automated registration is accessible to all on the TRP's website. This online process allows a checkbox for registrants to read and agree to the terms of the *Transportation of Mercury-containing Thermostat Agreement*. Registrants have the option to list as "Drop off Location", "Collection Point", or "Send it Back".

Following registration, HRAI distributes the following materials to each new registrant:

- 5-gallon collection container (United Nations approved for storing and transporting mercury-containing thermostats)
- welcome letter and program instructions
- information brochures
- drop off location poster
- a pre-paid return courier waybill

Participants will also be asked to send back any pail that is half-full or more during the collection sweeps, which take place bi-annually in May and September.

The Thermostat Recovery Program collection process is described in the following chart:

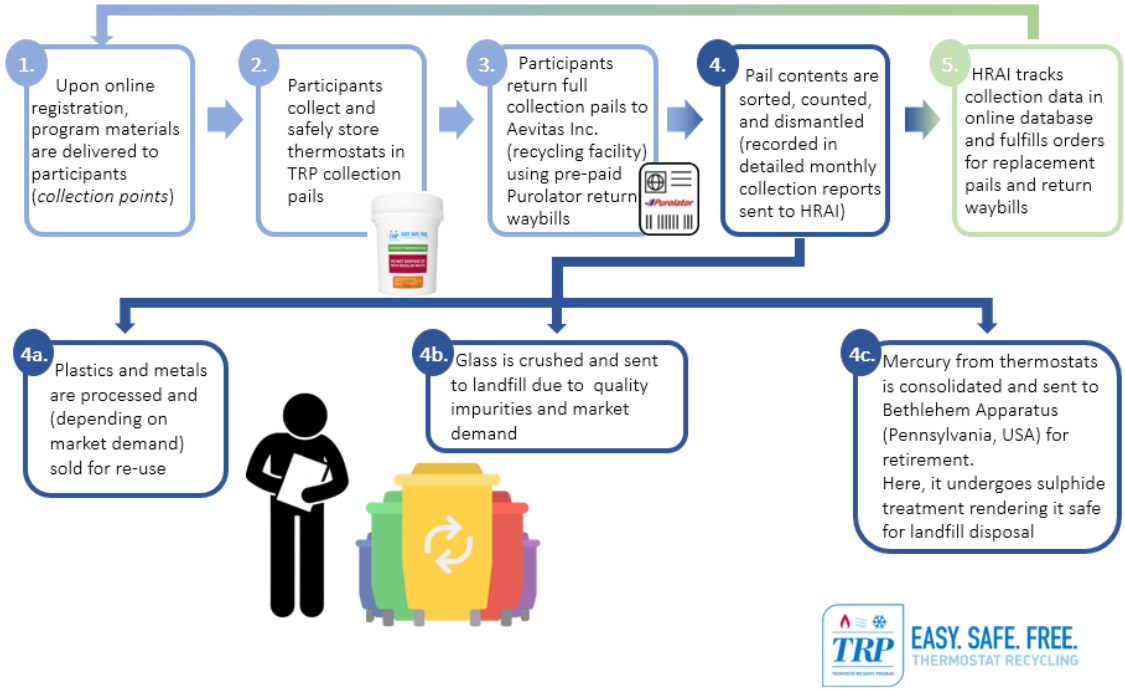


Figure 1: Thermostat Recovery Program collection process in Canada (incl. Manitoba)

Contractor/Wholesaler Channel

The HVACR contractors/wholesaler channel continues to be the primary collection channel for the program. Most new thermostats in Manitoba are sold and installed via the HVACR supply chain.

HVACR contractors/wholesalers have the option when signing up to register to participate in the TRP to either act as collection points (locations that collect thermostats through the course of their regular business operations and return them via the program); or to act as both collection points and drop off locations (allowing contractors, do-it yourselfers and the general public to drop off their old thermostats at their location and return them via the program).

Contractors remove old thermostats from homes or businesses and replace them with new thermostats, placing the old models in the provided collection containers, intact. Once the collection container is full, the participant uses the pre-paid waybill to return the collection container to the recycling facility designated by HRAI.

The program continues to ensure that the courier and recycling companies used by the program have the appropriate certificates of approval to transport and receive all types of thermostats, including those containing mercury.

For do-it-yourselfers or smaller contractor businesses (who do not collect a sufficient volume of thermostats to warrant having their own pail), the program promotes the larger contractors and wholesalers that participate in the program as year-round drop-off locations. The TRP website (www.hrai.ca/trp) includes a postal code search engine allowing the general public to easily locate an accessible participating contractor/wholesaler.

Regional District/Municipal Collection

This channel will continue to be used as a collection channel for the Plan, to ensure that the program is as accessible to all residents of MB. This channel provides a good way for the general public to easily access the program. These are locations that members of the public are most likely already familiar with, and which most often support the collection of other stewarded materials. For this reason, the TRP will continue to engage regional districts and municipalities throughout Manitoba to be a part of TRP.

Send-back Channel

This channel will continue to be used as a secondary collection channel for the Plan. This channel is important in terms of offering fair and equitable access to thermostat recycling for northern and remote residents of Manitoba. This channel is provided as an option for Manitoba residents living in remote areas who do not have access to TRP drop-off locations. Through the TRP website, there is an online request option where the public can request a 1.25-gallon shipping container (suitable for up to approximately 4 thermostats) with a pre-paid courier waybill to ship their old mercury-containing thermostat directly to the recycling facility.

4.3 Pollution Prevention Hierarchy

Reduce/Redesign

The main environmental concern with thermostats is the mercury contained in many of the older models. While mercury-containing thermostats may remain in use, they are no longer manufactured and sold in Canada. For example, Johnson Controls stopped selling mercury-containing thermostats in Canada in 2004, Honeywell stopped in 2006 and Emerson/White Rodgers stopped in 2008. As well, the government of Canada *Products Containing Mercury Regulations* prohibits the manufacture, import, and sale of mercury-containing products (excluding lamps and dental amalgam) in Canada.

Since 2008 all thermostats have been redesigned eliminating the mercury-switch component.

Reuse

The Plan does not encourage the reuse of old mercury-containing thermostats. Our goal is to collect end-of-life mercury-containing thermostats and ensure that the mercury and other components are properly recovered from the environment and managed responsibly, not see them in continued use.

Furthermore, there are dangers associated with the reuse of mercury-containing thermostats due to incompatibility with some new HVACR 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.

The mercury recovered from the mercury-containing thermostats is no longer processed for reuse in new product manufacturing due to the lack of a market for post-consumer mercury.

Recycle

All collection pails are returned for processing directly to Aevitas Inc. located in Ayr, Ontario. Once at the recycling facility, the thermostats are counted, documented, and dismantled, and the number of thermostats collected is tracked and reported to HRAI on a monthly basis, along with a

breakdown of the total quantities of mercury-containing thermostats, the total number of mercury vessels (each thermostat can have between 1-4), the total number of batteries, and the total weight of plastics and metals from each participant.

The following steps will continue to be taken to manage the materials recovered through the program:

- The metals collected are a mix of iron, nickel, and aluminum, all holding high reuse/recycling value and are sent for recycling and reuse within Canada.
- The glass mercury vessels are consolidated with others from Canada and shipped to Bethlehem Apparatus located in PA, USA at least once a year, where the glass and mercury are separated.
    - The glass is crushed and sent to landfill due to quality impurities and 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 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 was 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, has been disposing of collected e-plastics in the landfill.
- The batteries are sent to Port Colborne, ON for recycling.

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 other countries.

The total breakdown of all materials recovered from the province of Manitoba includes:

- ✓ 8,432 mercury-containing vessels, including 1,655 loose vessels, which were clipped from thermostats and returned loose in pails
- ✓ 6,438 intact mercury-containing thermostats
- ✓ 21 kilograms of elemental mercury
- ✓ 8 kg of glass (calculated at 0.001 kg of glass per mercury-containing vessel)
- ✓ 128 kilograms of metals
- ✓ 363 kilograms of plastics
- ✓ 102 batteries

5.0 PROGRAM PERFORMANCE

5.1 Program Accessibility

CONTRACTOR/WHOLESALER CHANNEL

The program now reaches 89 HVACR contractors and wholesalers in MB. These contractors provide on-site collection for thermostats that they remove from homes and businesses.

The program has also worked to engage wholesaler branches as drop-off points for thermostats because all small contractor businesses visit wholesaler branches on a regular basis to purchase supplies. Research conducted by the program team has also shown that many smaller contractor businesses prefer to visit drop-off locations rather than registering for the program, therefore it will not be possible to register 100% of the potential businesses. However, these businesses will still have access to the program through the drop-off locations.

REGIONAL DISTRICT/MUNICIPAL CHANNEL

To ensure that the program is accessible to the residents of MB, collection is also available through Regional Districts and Municipal collection channels. This channel provides convenient access to the program for members of the public who are “do-it-yourselfers” and prefer not to use a contractor for a thermostat replacement, as well as being a method of disposal that many residents are already familiar with. Whenever possible, TRP makes collection available at the same municipal/regional district locations as other MB PRO programs, to improve the convenience to the public, as well as program visibility.

The program reaches 16 regional district/municipal collection points located throughout Manitoba.

SEND-BACK COLLECTION

This channel provides access to the TRP in rural and remote areas of the province. While the Plan only saw two collections through this channel from consumers living in rural communities in Manitoba in the last 5 years, there remains value in offering this collection option accessible to those residents of MB who are outside the areas currently serviced by existing participants and drop-off locations. This revised plan intends to continue to offer this channel.

For a full list combining all 105 collection points throughout Manitoba, please see Appendix B.

Collection Location Targets

The program has experienced steady collection totals and public awareness communication efforts continue.

It has recently come to the attention of TRP that mercury-containing thermostats may be placed in the Mercury Non-Program Products collection channel administered by the Product Care Association of Canada (PCA). PCA provided TRP with a list of collection sites in MB that collect Household Hazardous Waste (HHW) products (which include mercury material). Of the 37 collection sites on the PCA HHW list, 10 sites are already signed on as TRP participants. TRP will reach out to the remaining 27 sites to invite them to register and join TRP to ensure that mercury-containing thermostats are being diverted and collected by TRP.

HRAI will continue to contact contractors and wholesalers, as well as Municipal and Regional District locations with the intention of increasing the number of collection points outside of the Winnipeg Regional District.

TRP is currently collaborating with the City of Winnipeg to have them join the TRP program. TRP will also reach out to the City of Brandon and invite them to join the TRP program. This will provide additional collection coverage in southern MB.

Research conducted has indicated that many small contractor businesses prefer to visit drop-off locations rather than register for the program themselves. Therefore, while the original assumption as to the number of contractors and wholesalers who could potentially participate was accurate, the program has likely reached a saturation point as to the number that would actually register for the program. TRP will continue to reach out to wholesalers to encourage them to register.

Table 2: Target vs Actual Collection Locations

Program Year	Target Number of Collection Locations	Actual Collection Locations
2017	117	97
2018	123	99
2019	123	104
2020	123	105
2021	123	104

The targets presented in the previous Plan for 2017-2021 aimed for a more modest growth of 5% in 2017 and then reaching a plateau in the following years, after which point recruitment efforts were focused on ensuring that coverage remains consistent and any collection locations that opt out of the program (for example, businesses that close) were replaced.

Table 3: Target Number of Collection Locations

Program Year	Target Number of Collection Locations
2024	132
2025	135
2026	135
2027	140
2028	140

5.2 Consumer Awareness

The TRP is primarily focused on the HVACR and Plumbing industry, rather than the general public. However, a small amount of thermostats are collected from Regional and Municipal channels, therefore, there is a need for public awareness of the program.

The messaging that is used for consumer awareness outreach focuses on why old thermostats need to be recycled (in particular because of the risks associated with the mercury found in many older thermostats), who funds the program (and the fact that it is completely free to participate), disposal options (contractor channel, drop-off locations, send-back), and program contact information. This information is communicated through the following resources and channels:

- **Program website:** presents a comprehensive overview of the program and will continue to be one of the primary educational tools, with periodic updates and an up-to-date list of disposal locations (i.e., participating contractors and wholesalers, drop-off locations and send-back options).
- **Program Information Documents:** the program information contains pertinent information for new registrants, next steps, and collection guidelines. Upon registering, participants receive a Welcome Letter via email, including the Program Information Document, 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 a commitment to the program.
- **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.
- **Printed brochures:** consumer-friendly promotional brochures are made available at contractors, and regional district/municipal collection locations. These are sent upon registration and available upon request for distribution to participants and include facts about the hazards of mercury and TRP, with instructions on how to participate.
- **Recycle Manitoba:** information about the program currently appears on the Recycle Manitoba website (www.recyclemanitoba.ca/).
- **WasteWise (Where to Recycle in Manitoba):** TRP is listed as a producer responsibility organization (PRO) on the website responsible for the recovery of mercury-containing thermostats.
- **Advertising via the Mechanical Contractors Association of Manitoba website:** a link to the HRAI website currently appears on the Links to the Resources page.
- ***Municipal Leader Magazine*** - circulated to members of the Association of Manitoba Municipalities (Manitoba mayors, councilors, municipal administrators, etc.).
- **Collection Container Labels** - the TRP 5.0-gallon collection pails are labeled with the program branding, with warnings to restrict collections to intact thermostats only. This serves as a visual reminder for participants and helps ensure compliance with Manitoba shipping regulations and program goals.

Manufacturers currently provide information on the packaging of new thermostats sold in North America to inform the customer that their old thermostat may contain mercury, along with a website (www.thermostat-recycle.org) and a toll-free phone number so that customers can find out where and how to properly dispose of it in the United States. This Plan will continue to utilize this existing US infrastructure which includes a link to the TRP (http://www.thermostat-recycle.org/program-info/faqs).

Appendix C provides examples of the existing TRP program resources that are focused on consumer awareness.

5.3 Industry Awareness

Because TRP is industry-focused rather than consumer-facing, awareness efforts will primarily target HVACR contractors/wholesalers. However, contractors have the primary relationship with the consumer and are encouraged to engage them regarding proper thermostat recycling. To supplement the consumer-facing initiatives detailed above, industry-facing materials are also available. The messaging for these materials is similar to the consumer-facing information, in that it focuses on why old thermostats need to be recycled (in particular because of the risks associated with the mercury found in many older thermostats) and who funds the program but includes a greater emphasis on the fact that it

is completely free to participate. Materials also describe the ways that contractors or wholesalers can join the program (registering as a participant or a drop-off location, or the option for smaller businesses to visit drop-off locations), what they will receive once they register, and emphasize how easy it is to participate. This information is communicated through the following resources and channels:

- **Program website:** presents a comprehensive overview of the program, with regular updates, an up-to-date list of disposal locations, and a quick link for registering for the program.
- **Printed brochures:** to be distributed by contractors/wholesalers at locations that sell new thermostats.
- **Printed posters:** to be displayed at participating drop-off locations to advertise to customers that the program is available at that location.
- **Industry communications:** via newsletters and industry publications (e.g., *HPAC Magazine*) to inform the contractors/wholesalers about the program and how to easily register and participate.
- **Wholesalers and manufacturers:** will promote the program to contractors and the general public via their websites, newsletters, signage, etc.
- **Wholesalers:** provide on-site promotion and education for the small, one-person contractors via signage and printed information (posters and brochures), as well as allowing the contractors to use their collection containers (instead of acquiring their own collection pail).

Appendix D provides examples of the existing TRP program resources that are focused on Industry Awareness.

The following metrics will be used as benchmarks to measure the effectiveness of the communications tools listed above:

- Program website – the program website is updated monthly with collection results and new program participants and drop-off locations.
- Printed brochures – a minimum of 500 brochures will be printed and distributed on an annual basis.
- Printed posters – posters will be distributed to all new drop-off locations to be displayed on site.
- Industry-facing advertising – will target industry (for example, through industry associations, trade publications, e-blasts, etc.)

Table 4: Actual vs Target Brochure Distribution

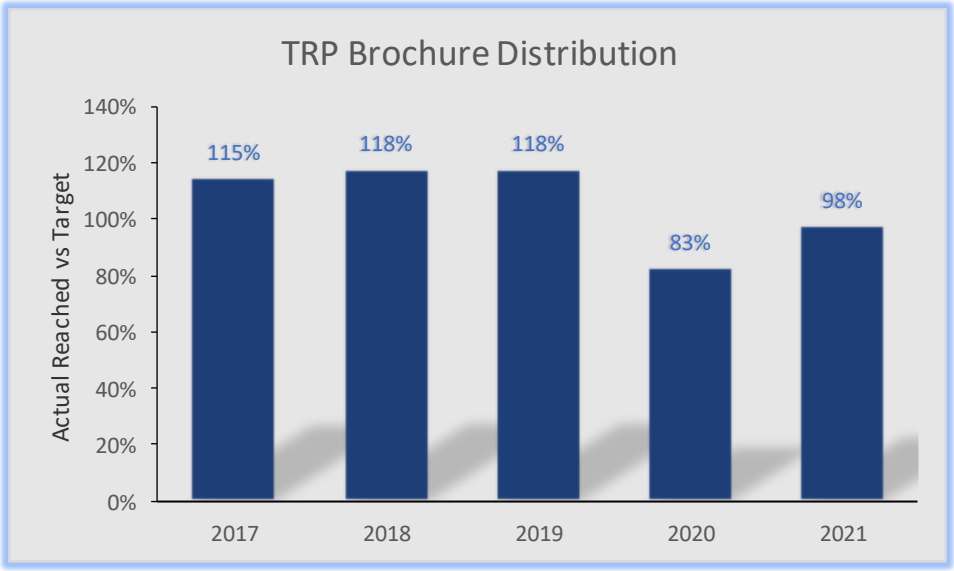


Table 5: Number of website visitors from MB:

Program Year	Number of Website Visits from MB
2017	115
2018	274
2019	125
2020	221
2021	411

5.4 Collection Targets

The designed life span of a mercury-containing thermostat is 20 to 30 years. However, in reality, the majority of thermostats are replaced more frequently than that, on average every 7 to 10 years, as a result of renovations and/or replacing furnaces and other HVACR equipment. This long potential lifespan, coupled with the significant variability in the replacement rate presents a challenge in anticipating how many thermostats will become available for collection in a given year. As a result of this, targets are based on collection totals rather than a recovery rate.

The collection targets determined for the previous plan were based on research conducted in Ontario as there was limited information available specific to the MB context. The data gathered was adjusted on a per capita basis for MB and adjusted upward to ensure the program set ambitious collection targets. The targets set in ON were appropriate for that context, however, the actual collection results in MB have proven that these targets were unrealistic.

Table 6: Target vs Actual mercury-containing thermostats collected

Year	Target Number of Thermostats to be Collected	% Capture	Actual Collection Results
2017	1,292	42%	538
2018	1,368	49%	670
2019	1,444	33%	470
2020	1,520	22%	341
2021	1,520	20%	302
Average			464

As mentioned above, the previous 5-year collection targets proved to be unrealistic and the actual collection results support the adjustment of collection targets for the 2023-2028 Plan. The approach for setting realistic collection targets for this Plan was to take the previous 5-year actual collection average and increase it by 5%/yr. Except for 2024 where the actual collection is increased by 10% to account for outreach to PCA HHW collection sites.

It is not possible to predict when the TRP will be complete given the lack of statistics on how many mercury-containing thermostats were sold in MB, and that mercury-containing thermostats have not been sold in Canada for at least the past 15 years. The number of mercury-containing thermostats available for collection will decline as the program matures.

Table 7: Target mercury-containing thermostats collected

Program Year	Target Number of mercury-containing thermostats collected	% Increase in collection
2024	510 (464 previous 5-year actual collection average)	10%
2025	535	5%
2026	561	5%
2027	589	5%
2028	618	5%

Monitoring

The quantities collected and diverted as reflected in the Plan will be monitored via monthly reporting from the recycler to HRAI and will include the number of thermostats collected from specific Contractors/Wholesalers, Municipal/Recycling Centres, and Take Back channels.

6.0 FIRST NATIONS AND REMOTE COMMUNITIES

HRAI will continue to work collaboratively with other stewardship organizations in Manitoba and government agencies to provide province-wide accessibility to the TRP through the stewardship initiative known as the 'Manitoba Winter Roads Project'. The TRP participates in collecting end-of-life mercury-containing thermostats through this partnership initiative with the Green Action Centre and contributes to funding this initiative. The program aims to deliver cost-effective and efficient collection systems for the removal and recycling of end-of-life stewarded waste products

from remote and First Nation communities. Though no thermostats have been recovered through this initiative to date, ongoing consultations and engagement with our partners will ensure waste continues to be recovered responsibly from these communities.

TRP has made connections with Indigenous Services Canada (ISC) and the Plan will continue to collaborate with ISC for ensuring that end-of-life mercury thermostats are properly managed on First Nations reserves.

As previously noted under section *5.1 Program Accessibility*; the program implemented the Send Back channel specifically for the purpose of providing individuals in northern and remote regions with the ability to return end-of-life thermostats. Therefore, this channel will continue to be very valuable for providing these remote communities with full access to the program.

7.0 PROGRAM ADMINISTRATION

7.1 Program Financing

The Plan will be managed by HRAI and is fully funded by the manufacturers that have sold previously manufactured mercury thermostats; and/or, import/have imported thermostats into Manitoba (mercury-containing thermostats are no longer manufactured or sold by manufacturers into any markets). The manufacturers continue to pay for the full costs for the recovery and recycling of mercury-containing thermostats as per the approved plan, along with all other program expenses incurred including collection, transportation, recycling, and marketing, etc.

As no eco-fees are charged to the public, financial statements are not presented or audited.

8.0 ANNUAL REPORT

In accordance with Section 16(1) of the *Household Hazardous Material and Prescribed Material Stewardship Regulation*, an annual report will be submitted as stated in the Regulation within 90 days after the end of each calendar year. The annual report will also be available on the program website as a PDF file.

9.0 STAKEHOLDER CONSULTATION

Stakeholder consultation was conducted with interested parties. The public consultation was meant to gather feedback and ideas to improve the Plan. The consultation included a joint public webinar with the Canadian Battery Association, Call2Recycle, and the Health Products Stewardship Association held on January 20, 2023.

Appendix E includes a summary of feedback received from interested parties.

List of Manufacturers who fund the Program

- Ademco III Ltd. – ADI / Resideo Technologies Inc.
- Carrier Canada Corporation
- Emerson Electric Canada Ltd.
- Johnson Controls LP Canada
- Lennox International

Appendix B: List of TRP Collection Points throughout Manitoba

Company Name	Type	City
4 Seasons Heating & Cooling	Contractor	Winnipeg
A&B Mechanical Ltd	Contractor	Winnipeg
ABCO Supply & Service Ltd.	Contractor	Winnipeg
AC Environments	Contractor	West Saint Paul
Aire Serv of Winnipeg	Contractor	Winnipeg
Assiniboine Community College	Contractor	Brandon
Atlas Heating & Sheet Metal Ltd	Contractor	Winnipeg
Barcol Controls Ltd.	Contractor	Winnipeg
Beauchamp Plumbing & Heating	Contractor	Portage la Prairie
Bert's Refrigeration	Contractor	Blumenort
Black & McDonald Limited	Contractor	Winnipeg
Boundary Co-op	Contractor	Boissevain
BSD Solutions Ltd	Contractor	Winnipeg
Buhler HVACR Ltd.	Contractor	Hartney
Cheguis and Son	Contractor	West St. Paul
Cobbe's Plumbing & Heating Ltd.	Contractor	Portage la Prairie
Custom Vac Ltd	Contractor	Winnipeg
Delta Farms	Contractor	Austin
Derksen Plumbing & Heating (1984) Ltd.	Contractor	Winnipeg
Dick's Heating	Contractor	Carman
DMD ELECTRIC LTD.	Contractor	Traverse Bay
Duguids Plumbing	Contractor	Gimli
E.G. Penner Building Centre	Contractor	Steinbach
ER Refrigeration	Contractor	Brandon
Frontier Refrigeration and Mechanical Services	Contractor	Winnipeg
Furnasman New Homes	Contractor	Winnipeg
Furnasmans One Hour Heating and Cooling	Contractor	Winnipeg
Glen's Plumbing	Contractor	Whitemouth
Global Mechanical Inc.	Contractor	Winnipeg
GLT Service Professionals Ltd.	Contractor	Winnipeg
Gord's Plumbing & Heating Ltd.	Contractor	Erickson
Hanover Plumbing & Heating	Contractor	Steinbach
Heritage Heating & Cooling	Contractor	Winnipeg
Howell Mechanical	Contractor	Winnipeg
Hutlet's Total Home Service	Contractor	Beausejour
Ingram's Plumbing & Heating Ltd	Contractor	Oakville
Jira Electric	Contractor	Winnipegosis
Keating Mechanical Service Inc.	Contractor	Landmark
Kozak Plumbing & Heating Ltd	Contractor	Carman

Company Name	Type	City
Lance Wagner Plumbing & Heating Ltd	Contractor	Brandon
Local 254 Plumber and Pipefitter union	Contractor	Winnipeg
Lowe Mechanical Services Ltd. (2 branches in Winnipeg)	Contractor	Winnipeg
McMechan Plumbing& Heating	Contractor	Melita
Noble Heating	Contractor	Winnipeg
Nor-tech Mechanical	Contractor	Arborg
North Hill Plumbing & Heating	Contractor	Brandon
On Time	Contractor	Winnipeg
Paradise Geothermal	Contractor	Dunrea
Parsons Plumbing, Heating & Electrical	Contractor	Winnipeg
Paul's Plumbing & Heating Ltd.	Contractor	Thompson
Penn-Lite Electrical and Mechanical	Contractor	Steinbach
Polar Plumbing and Heating	Contractor	Winkler
Reliance Home Comfort	Contractor	Winnipeg
S.S Plumbing and Heating	Contractor	Sunnyside
SAE Engineers	Contractor	Winnipeg
SERVICE EXPERTS HEATING & AIR CONDITIONING	Contractor	Winnipeg
Shewfelt's Plumbing & Heating Ltd	Contractor	Portage la Prairie
Shorty's Plumbing & Heating Inc.	Contractor	Winnipeg
Smart Electric	Contractor	Carberry
Southern Comfort Mechanical Inc	Contractor	Niverville
Systech Mechanical Services Ltd.	Contractor	Winnipeg
Tech-Air Ltd	Contractor	Winnipeg
TOM'S PLUMBING & HEATING	Contractor	Brandon
Tradesman Mechanical	Contractor	Winnipeg
Valley Plumbing & Heating	Contractor	Swan River
Westside Plumbing & Heating	Contractor	Brandon
Winkler Plumbing & Heating (2008) Ltd	Contractor	Winkler
City of Dauphin	Municipal	Dauphin
City of Selkirk	Municipal	Selkirk
City of Steinbach	Municipal	Steinbach
City of Winkler	Municipal	Winkler
Evergreen Environmental Technologies	Municipal	Minnedosa
Hanover School Division	Municipal	Steinbach
Monominto Transfer Station - Regional Municipality of Tache	Municipal	Dufresne
R.M. of East St. Paul	Municipal	East St. Paul
RM of Lakeshore	Municipal	Rorketon
Rural Municipality of West Interlake	Municipal	Ashern
Flin Flon Recycling Centre	Recycling Centre	Flin Flon
Louise Integrated Waste Management	Recycling Centre	Pilot MounD
MOPIA	Recycling Centre	Winnipeg

Company Name	Type	City
Portage & District Recycling Inc.	Recycling Centre	Portage la Prairie
Prairie Printing	Recycling Centre	Winkler
Responsible Electronics Recycling	Recycling Centre	Selkirk
B.A. Express	Wholesaler	Winnipeg
B.A. Express	Wholesaler	Winkler
B.A. Express	Wholesaler	Brandon
B.A. Express	Wholesaler	Steinbach
B.A. Robinson Co Ltd	Wholesaler	Winnipeg
Direct Energy	Wholesaler	Winnipeg
Ecco Supply - Winnipeg	Wholesaler	Winnipeg
EMCO HVACR	Wholesaler	Winnipeg
Lennox Parts Plus	Wholesaler	Winnipeg
Master Group - Winnipeg	Wholesaler	Winnipeg
National Energy Equipment	Wholesaler	Winnipeg
Nexus Energy Products Inc.	Wholesaler	Morden
Refrigerative Supply Ltd.	Wholesaler	Winnipeg
Robinson Supply (2 branches in Winnipeg)	Wholesaler	Winnipeg
Sinclair Supply Ltd.	Wholesaler	Winnipeg
Wolseley Canada HVACRR Group	Wholesaler	Winnipeg
Wolseley Mechanical Group (2 branches in Winnipeg)	Wholesaler	Winnipeg
WWG Totaline Carrier (2 branches in Winnipeg)	Wholesaler	Winnipeg

Appendix C: Consumer-facing Outreach Materials

Consumer-facing Brochure

TRP
THERMOSTAT RECOVERY PROGRAM

MAKE THE RIGHT SWITCH

This is a mercury switch – Something that still exists in millions of older mechanical thermostats. Mercury is highly toxic and dangerous to the health of people and wildlife.

Switching to newer and more energy-efficient programmable thermostats and responsibly disposing of old mercury containing thermostats reduces energy consumption and prevents mercury from contaminating our soil, water and air.

HRAI
YOUR ENVIRONMENT OUR EXPERTISE

HRAI Industry Leadership – Environmental Responsibility in Action

NOW THE CHOICE IS YOURS!

If you dispose of your old thermostat with your household waste, you are sending mercury to landfill.

Old mechanical thermostats have one to four switches, each containing approx. 2.5 grams of mercury.

Mercury is a potent neurotoxin. It only takes one gram of mercury to contaminate an eight-hectare lake to the point the fish is not edible for a full year.

If you participate in the Thermostat Recovery Program, you'll conserve energy, save money, and prevent mercury releases to the environment.

STEP 1: With the help of your participating Thermostat Recovery Program contractor, change to a newer, more energy efficient programmable thermostat.

STEP 2: Responsibly dispose of your old mercury containing thermostat through your local Thermostat Recovery Program contractor.
A recycling facility will dismantle the thermostat, recycle the parts, and prevent the mercury from contaminating soil, water and air.

FOR MORE INFORMATION
1(800) 267-2231, x 224 Email pthompson@hrai.ca

Administered & delivered by: HRAI

Supported by: CPI

Municipal Leader Magazine Ad (Manitoba Municipal Employees Publication)

Earth Day Campaign 2022

View this email in your browser

TRP

EASY. SAFE. FREE.
THERMOSTAT RECYCLING

A good planet is hard to find...

Participating in the TRP is an EASY, SAFE, and FREE way to make a **positive difference** and help **conserve our planet**.

With your help, the TRP has successfully diverted from landfill:

- **230,220** Mercury Thermostats
- **30,004** Electronic Thermostats
- **793 kg** of Mercury

Celebrate Earth Day with HRAI by continuing to think green, spread awareness, and make environmentally conscious decisions!

Do you have a TRP collection pail that is at least 1/2 full and ready for return?

Call Purolator at 1-888-SHIP-123 to return it for safe recycling using your pre-paid return waybill

Thank you for helping us keep thermostats out of our waste stream, and mercury out of our environment!

Have a question? Need a new pail or return waybill?

Contact the TRP Team!

HRAI

Appendix D: Industry-facing Outreach Materials

Industry Brochure
Front:

Back:

Contractor Brochure

TRP
THERMOSTAT RECOVERY PROGRAM

MAKE THE RIGHT SWITCH

This is a **mercury switch** – something that still exists in millions of older mechanical thermostats.

Mercury is a **highly toxic** heavy metal that is extremely harmful to human and environmental health upon exposure.

Switching to newer programmable thermostats is not only safer for your health, but also reduces energy consumption, greenhouse gas emissions and prevents mercury from contaminating our soil, water and air!

Fully administered by

HRAI
YOUR ENVIRONMENT OUR EXPERTISE

HRAI Industry Leadership –
Environmental Responsibility in Action

NOW THE CHOICE IS YOURS!

By disposing of your old thermostat with household waste, you risk sending mercury to landfill.

It only takes **one gram of mercury** to contaminate an eight-hectare lake (about the size of 1.5 Olympic-sized swimming pools) to the point where the fish are unsafe for consumption for an entire year!

Each thermostat can contain **2.5-10 grams** of this potent neurotoxin!

By participating in the Thermostat Recovery Program, you can conserve energy, save money, and prevent mercury releases to the environment.

STEP 1:

With the help of your participating TRP contractor upgrade to a newer, more energy efficient programmable thermostat.

STEP 2:

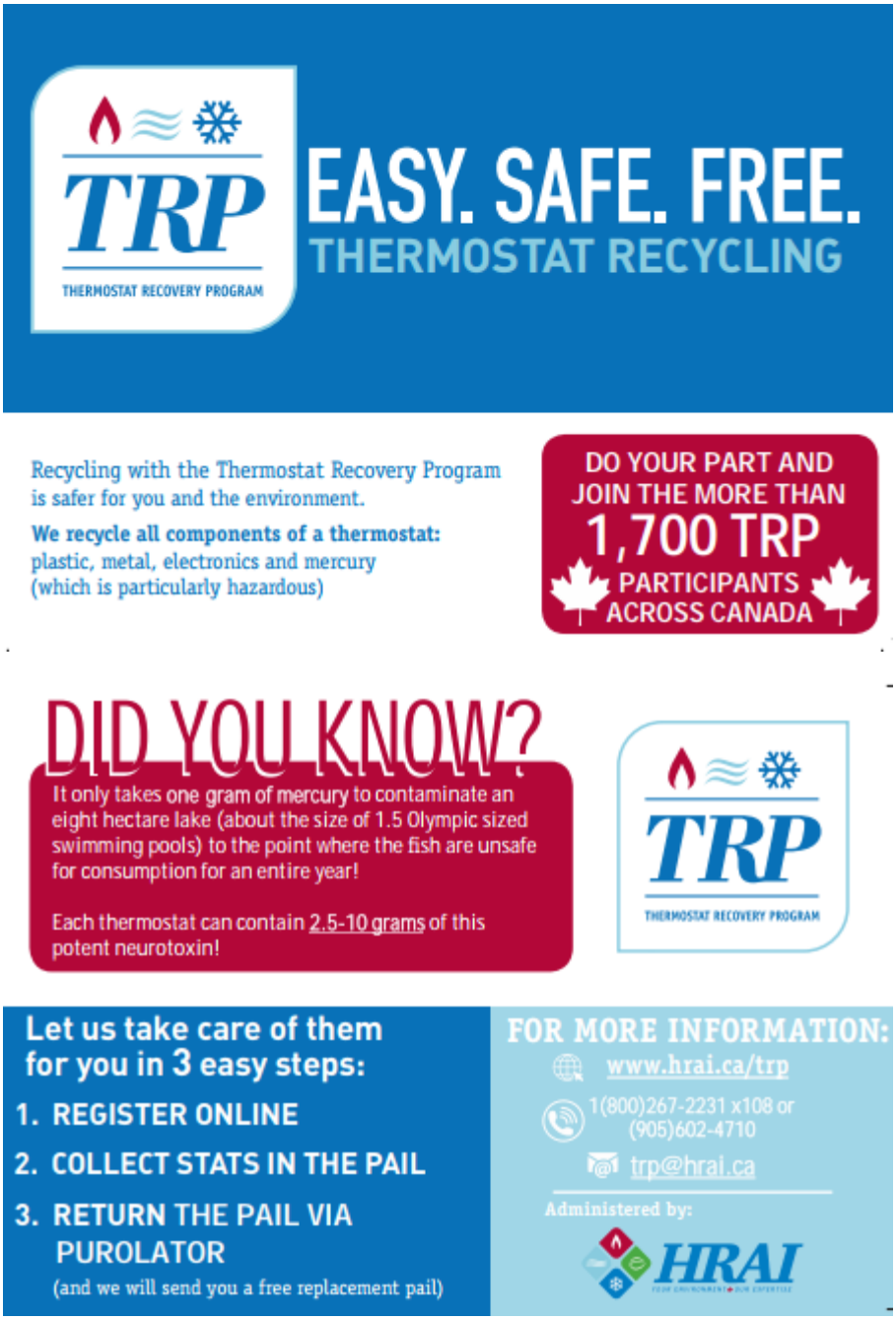
Dispose of your old thermostat in a TRP collection pail to ensure all components (particularly the hazardous mercury) are recycled responsibly.

FOR MORE INFORMATION:

1(800)267-2231 x108 or (905)602-4710

www.hrai.ca/trp trp@hrai.ca

Wholesaler Brochure



Drop-off Poster

HPAC Magazine Ad (Industry Publication)

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.

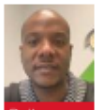

Ruetz


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 E: Consultation Feedback

No consultation feedback was received during the development of this Plan, resulting from the webinar or posting on HRAI's website.