This document is made available electronically by the Minnesota Legislative Reference Library as part of an ongoing digital archiving project. https://www.lrl.mn.gov

2019 & 2020 | Minnesota BATTERY RECYCLING REPORT



March 31, 2021

Prepared for:

Ms. Amanda Cotton Minnesota Pollution Control Agency 520 Lafayette Rd. St. Paul, MN 55155

Submitted by:

Call2Recycle, Inc. 1000 Parkwood Circle, Suite 200 Atlanta, GA 30339 678-419-9990 I call2recycle.org



www.call2recycle.org

TABLE OF CONTENTS

<u>Section</u>		Pac	<u>ìE</u>
1)	Executive Summary	3	
2)	2019 & 2020 Recycling Overview	4 –	8
3)	List of Supporting Companies	9–	10

Executive Summary

Call2Recycle, Inc., which administers the Call2Recycle[®] program, is a non-profit, public service organization. Since 1996, on behalf of obligated battery and product manufacturers, Call2Recycle has been managing a nationwide consumer battery collection and recycling program.

Pursuant to Minnesota Statute 115A.9155, Disposal of Certain Dry Cell Batteries and Minnesota Statute 115A.9157, Rechargeable Batteries and Products, Call2Recycle is pleased to provide the 2019 & 2020 battery recycling report on behalf of its 200⁺ Stewards. With the participation of municipalities, retailers, businesses, manufacturers, and Minnesota residents, more than 280,000 pounds of rechargeable batteries were diverted from the state's waste stream during these two years.

Call2Recycle saw a slight decrease in rechargeable battery collections from 2019 to 2020 by 2%. This reduction is directly attributed to the effects of COVID-19 which saw many retailers reduce hours or temporarily close, as well as many businesses shift to "work from home".

The dominant rechargeable battery chemistry collected in both 2019 and 2020 was Nickel Cadmium (Ni-Cd), 60,622 pounds in 2019 and 52,180 pounds in 2020. Over the two-year period, both Nickel Metal Hydride (Ni-MH) and Small Sealed Lead Acid (SSLA) batteries, saw an increase in growth of 2% and 22%, respectfully. These collections are consistent with market trends as consumers upgrade to devices powered by lithium-ion (Li-Ion) batteries and recycle their old ones powered by other battery chemistries, such as Ni-Cd, Ni-MH and SSLA.

Remainder of Report

The remainder of this report provides specifics associated with battery collections, including types of materials collected and the volumes received by participating collection channels. Additionally, Call2Recycle's 2020 Annual Report, including audited financial reports, will be available in June 2021 on its website at www.call2recycle.org/annualreport/.

Battery Recycling Collections

During the two-year period of 2019 and 2020, Call2Recycle collected a total of 280,506 lbs. of rechargeable batteries. Below please find the specific recycling collection data by battery chemistry and industry sector for both 2019 & 2020 (Figure 1).

FIGURE 1				
Material Type	Material Name	2019	2020	% Chg
Rechargeable	Small Sealed Lead Acid (SSLA/Pb)	35,613	43,469	22%
Rechargeable	Lithium Ion (Li-Ion)	37,363	34,324	-8%
Rechargeable	Nickel Cadmium (Ni-Cd)	60,622	52,180	-14%
Rechargeable	Nickel Metal Hydride (Ni-MH)	8,397	8,538	2%
Primary	Alkaline/Carbon Zinc	52,320	61,622	18%
Primary	Lithium	4,362	3,423	-22%
Cellphone	Cellphone	1,002	1,422	42%
Other	Other	978	263	-73%
	Total	200,657	205,241	2%
Total Rechargeable Battery		141,995	138,511	-2%

Batteries Collected by Industry (Lbs.)	2019	2020	% Chg
Retail/Wholesale	47,543	42,556	-10%
Public Agency / Municipality	131,810	142,830	8%
Business Services	5,468	2,659	-51%
Manufacturing	13,763	15,341	11%

Below please find the *estimated* pounds of rechargeable batteries sold into the state of Minnesota during the previous two years. Please note this data is a rough estimate which is based on a compilation of total market research and state population (Figure 2).

FIGURE 2

Estimated Rechargeable Batteries Sold	2019	2020
Estimated Pounds of ALL Rechargeable Batteries Sold into the State	3,445,098	3,533,910

Proper Battery Management

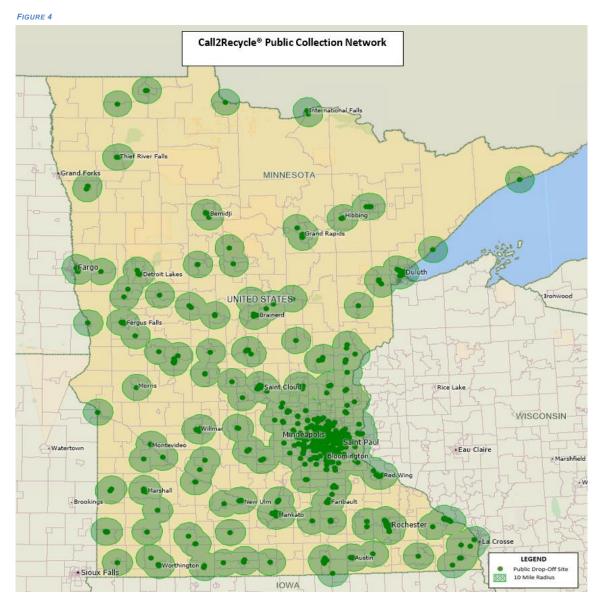
Batteries collected from Minnesota residents are transported to sorting facilities where they are separated by battery chemistry and then sent to appropriate specialty processors. These processors extract material to be used in the manufacturing of new products. Below please find the "physical flow" (Figure 3) of where batteries go after they are dropped off at a Call2Recycle participating collection site.

FIGURE 3



Public Recycling Site Accessibility

To optimize the percentage of the U.S. population that has access to battery and cellphone recycling through the Call2Recycle collection site network, Call2Recycle has developed a standard for measuring public recycling accessibility, specifically for batteries and cellphones. This accessibility rate measures the percent of a state's population that lives within a 10-mile radius of an available Call2Recycle drop off location. By year's end 2020, Call2Recycle achieved an 84% accessibility rate in Minnesota. Please see the below map (Figure 4) for specific details.

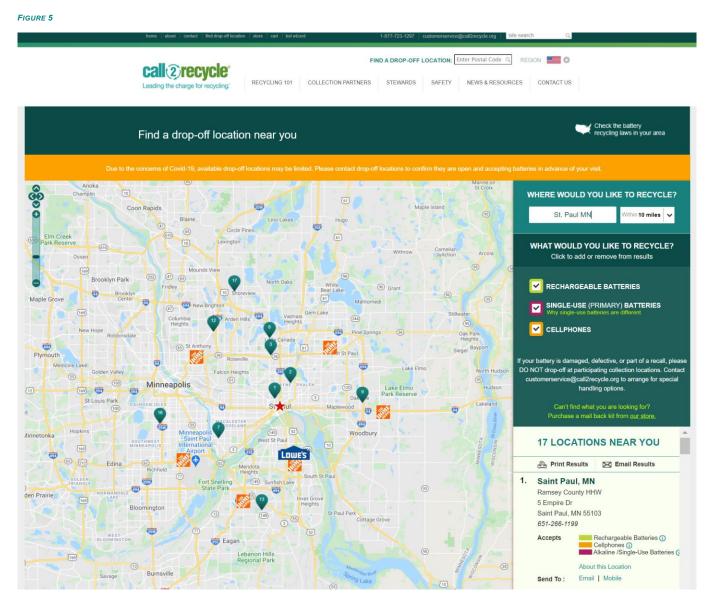


Collection Network					
Site Type	2019 # of Sites	2020 # of Sites			
# of Active Public Sites	211	185			
# of Active Private Sites	299	273			
Public Accessibility Rate	86%	84%			

Website Statistics

Call2Recycle's outreach efforts focus on driving consumers to our interactive web site, which provides educational resources and a zip code locator to identify convenient battery recycling drop-off sites.

One of the most viewed sections of the website is the public drop-off site locator tool (Figure 5). This tool allows Minnesota residents to enter their City/Town or zip code to find the nearest Call2Recycle participating site to recycle their used rechargeable batteries. The locator tool was used 32,922 (2019) and 29,395 (2020) times by Minnesota residents to find a Call2Recycle drop-off location.



www.call2recycle.org

Outreach & Customer-Related Activity

Call2Recycle's Customer Success Team fields hundreds of daily inquiries from collection sites and consumers across the country. Some of these inquiries are from the 450+ private and public battery collection sites in Minnesota.

Call2Recycle's Customer Success Team fielded the following inquiries from Minnesota:

- Customer Requests Originating from MN Collection Sites/Consumers 491 in 2019 and 371 in 2020.
- New Collection Site Enrollments 50 in 2019 and 40 in 2020.
- Boxes Sent Out / Boxes Received 3,323 /3,433 in 2019 and 3,083 / 2,973 in 2020.

Damaged, Defective or Recalled Lithium-Ion Batteries

The safe handling, transport and disposal of used batteries, specifically lithiumbased batteries, continues to be a core tenet of the Call2Recycle program. A difficult to manage subset of lithium-ion batteries are ones that are Damaged, Defective or Recalled (DDR) (Figure 6). These DDR batteries require special handling per U.S. Department of Transportation regulations and cannot be placed in a typical Call2Recycle collection box. In 2019, Call2Recycle began offering MN collection sites free, compliant and easy to use specialty storage and shipping kits. Call2Recycle has provided over 300 DDR kits (Figure 7) to MN collection sites to safely recycle these batteries.





CALL2RECYCLE[®] Rechargeable Battery Stewards

The following companies support Call2Recycle and are committed to responsible battery recycling.

3M Automotive Aftermarket Division 3M Constrctn & Home Imprv 3M Electrical Markets Division (EMD) 3M Food Safety Division (FSD) 3M Medical Solutions Division (MSD) 3M Oral Care Solutions Division (OCSD) **3M Personal Safety Division** A2Z Development Center Inc. Acer America Corporation Ademco Aero Design, Inc Allied Intl/Allied Tools Alta Cycling Group, LLC. Amazon.com, Inc. American Honda Motor Co., Inc. American Toppower APC America Inc. Schneider Electri Arlo Technologies, Inc. Arris Group, Inc Asus Computer International, Inc. Away Baccus Global LLC Balmuda Inc. barnesandnoble.com, LLC Bayco Products, Inc. Best Buy Co., Inc. Bissell Homecare, Inc **Bose Corporation** Boxine US, Inc. Brother International Corporation Bruce MacRae Canadian Tire Corporation, Ltd Canon Canada Inc Canon U.S.A., Inc. Car Mate USA Inc. Century Optronic Inc. Chervon HK Limited Chervon HK Limited/The Home Depot

Cisco Systems Inc. Cleva North America, Inc. Computer Technology Link Corp (DBA CTL) **Conair Corporation** Daye North America Deere & Company (John Deere) Dell Canada Inc. Dell Inc Deltran USA LLC DLG (Shanghai) Electronic Dongguan Golden Cel Battery Co **Dorcy International** Duracell Canada Inc **Duracell US Operations** Dynabook Americas, Inc Dynabook Canada Inc Eaton Corporation Echo Incorporated Enerco Group Inc. Energizer Holdings, Inc. Energizer Holdings, LLC. EnerSys Delaware Inc. Epson America, Inc. Fdk America, Inc. Fedco Electronics, Inc. Finish Thompson, Inc. Fuji Electronics (Shenzhen) Co, Ltd. FujiFilm Holdings America Corp Fujitsu America Garmin International, Inc GE Healthcare Canada, Inc. GiiNii Tech Corporation Global Technology Systems, Inc Google, Inc. GS Yuasa Energy Solutions, Inc. Guangdong Fenghua New Energy Co. Ltd. Guangzhou Great Power Energy Tech Co LTD Hewlett Packard Inc

Hilti Canada Corporation Hilti, Inc. HoMedics USA, LLC Honeywell International Inc. Hong Kong Highpower Technology Ltd. HP Inc. **HTC Corporation** Huawei Device USA. Inc Husqvarna AB HYTORC Industrial Bolting Systems IDX System Technology Inc IMA Test Steward Inspired Energy, LLC Intermetro Industries Corp Invacare Corporation Invox Hardware Limited **iRobot** Corporation JC Technology Inc dba Ace Computers Jiawei Technologies (USA) Ltd. JIN CO Ltd JLG Industries Inc JVCKENWOOD USA Corp KAN Battery Co., Ltd Karcher North America Keyence Corporation of America Koki Holdings America Ltd Koki Holdings Canada Co., Ltd Konica Minolta Kwonnie Electrical Products Ltd L3Harris Technologies Inc Ledvance, LLC. LEGO Brand Retail, Inc. Lenovo (United States) Inc. LG Electronics Canada, Inc. LG Electronics USA, Inc. L'Image Home Products Inc. Logic Technology Development Logitech Inc.

2019 & 2020 MINNESOTA PROGRAM SUMMARY

Mag Instrument, Inc Maha Energy Makita Canada, Inc. Makita U.S.A. Inc. Mattel, Inc. Metabo Corporation Microsoft Corporation Midland Radio Corporation Miller Manufacturing Company Mi-T-M Motorola Mobility, LLC Motorola Solutions, Inc. MTRLC LLC National Power Corp Neptune Technology Group Inc. Netgear, Inc. Nikkiso America, Inc. Nikon Canada Inc Normark Innovations Inc. Novel Direct 02C00L, LLC Olympus Corp of the Americas Omron Healthcare, Inc Oracle America, Inc. Panasonic Corporation PawaBox Sales Group, LLC. Pelican Products, Inc. Philip Morris USA Inc. Philips **Pioneer Home Entertainment** Pitney Bowes, Inc. Plantronics Inc. (Poly) Police Security Positec Tool Corporation **Power Products** Privoro, LLC ProTeam, Inc. PSA Parts, Inc. Razor USA LLC **Ricoh Imaging Americas Corporation** Ridge Tool Company (RIDGID) **Riese Und Muller GmbH** Robert Bosch Tool Corporation Royal Consumer Information Products, Inc.

RRC POWER SOLUTIONS Sager Electronics Samsung Electronics America Inc. Sato America Inc Scosche Industries, Inc. SDI Technologies Inc Senco Products, Inc. Sensidyne LP SHIMANO Sigma Corporation Snap-on Incorporated Sony Corporation of America SOUTHWICK TECHNOLOGIES INC Southwire Company, LLC Spectrum Brands Holdings, Inc. Stanley Black & Decker, Inc. Stihl Incorporated Stihl Limited **StorTronics** Streamlight, Inc. Summer Infant, Inc. SUNBEAM PRODUCTS Surefire, LLC TCT Mobile Canada Limited (CA10) TCT MOBILE INC-ALCATEL BlackBerry Techtronic Cordless GP **Techtronic Industries GmbH** Techtronic Trading Ltd **TENNANT COMPANY Test Rite Products Corp** Texas Instruments Inc The Coleman Company The Gillette Co/Braun Div The Gillette Co/Oral-B Div The Source (Bell) Electronics Inc. The Toro Company Tianjin Lishen Battery Joint-stock Co.,Ltd Tokyo Seimitsu Co., LTD TomTom Inc. Transcosmos America Inc. Transource Services Corp Traxxas L.P. Trek Bicycle Corporation TTEK Assemblies Inc.

TWS Technology(Guangzhou) Limited Ultralife Corporation Uniden America Corporation VARTA Microbattery Inc. Venom Power Veritas Technologies LLC Vernier Software & Technology LLC Vibratex, Inc. Vornado Air, LLC VTech Telecommunications Ltd Wacom Technology Corporation Whill, Inc Zebra Technologies Corporation Zhongshan Tianmao Battery Co., Ltd. Zippo Manufacturing Company