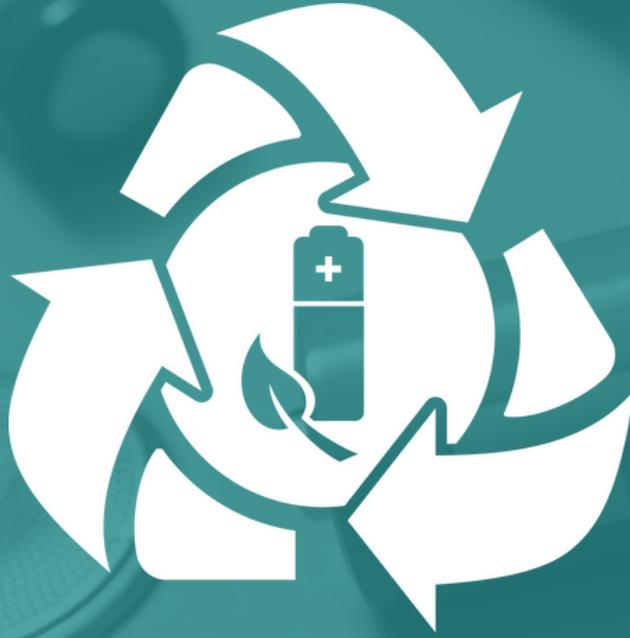


2021 & 2022 | MINNESOTA BATTERY RECYCLING REPORT



MARCH 31, 2023

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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 2021 & 2022 battery recycling report on behalf of its 200+ Stewards. With the participation of municipalities, retailers, businesses, manufacturers, and Minnesota residents, more than 329,673 pounds of rechargeable batteries were diverted from the state's waste stream during these two years.

Call2Recycle saw an increase in rechargeable battery collections from 2021 to 2022 by 1%.

The dominant rechargeable battery chemistry collected in both 2021 and 2022 was Lithium Ion (Li-Ion), 46,577 pounds in 2021 and 65,528 pounds in 2022. Over the two-year period, Lithium Ion (Li-Ion) battery collections increased by 29%. 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 2022 Annual Report, including audited financial reports, will be available in June 2022 on its website at www.call2recycle.org/annualreport/.

Battery Recycling Collections

During the two-year period of 2021 and 2022, Call2Recycle collected a total of 329,673 lbs. of rechargeable batteries. Below please find the specific recycling collection data by battery chemistry and industry sector for both 2021 & 2022 (Figure 1).

Figure 1

Material Type	Material Name	2021	2022	% Chg
Rechargeable	Small Sealed Led Acid (SSLA/PB)	47,604	38,282	-20%
Rechargeable	Lithium Ion (Li-Ion)	46,577	65,528	41%
Rechargeable	Nickel Cadmium (Ni-Cd)	59,045	51,800	-12%
Rechargeable	Nickel Metal Hydride (Ni-MH)	10,710	10,127	-5%
Primary	Alkaline/Carbon Zinc	108,413	118,711	9%
Primary	Lithium	6,698	4,832	-28%
Cellphone	Cellphone	1,703	1,608	-6%
Other	Other	343	316	-8%
Total		281,093	291,204	4%
Total Rechargeable Battery		163,936	165,737	1%

Batteries Collected by Industry (Lbs.)	2021	2022	% Chg.
Retail/Wholesale	38,979	42,786	10
Public Agency / Municipality	224,201	206,653	-8%
Business Services	6,092	22,107	263%
Manufacturing	11,821	19,658	19,658

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).

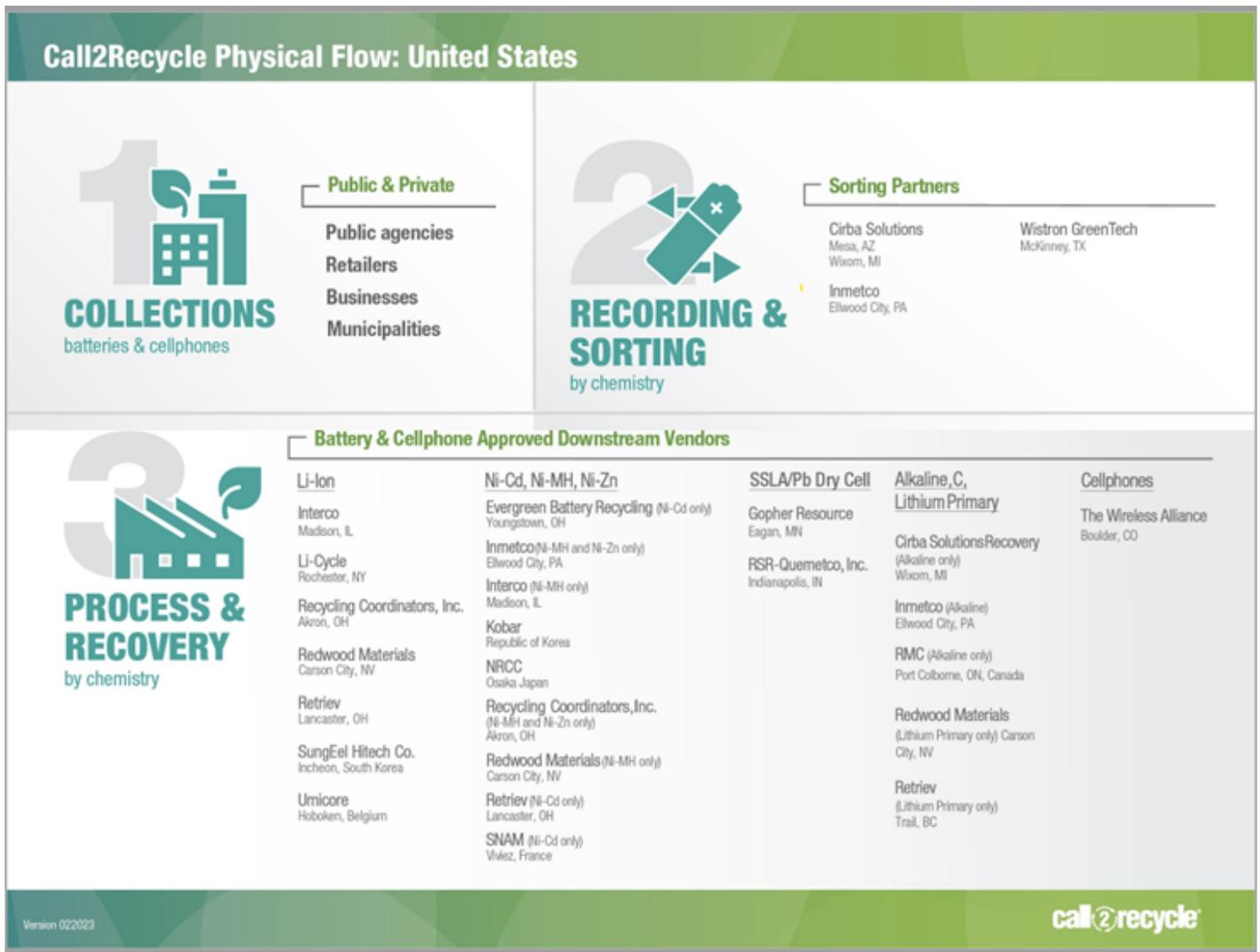
Figure 2

Estimated Rechargeable Batteries Sold	2021	2022
Estimated Pounds of ALL Rechargeable Batteries Sold into the State	3,627,089	3,712,400

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.

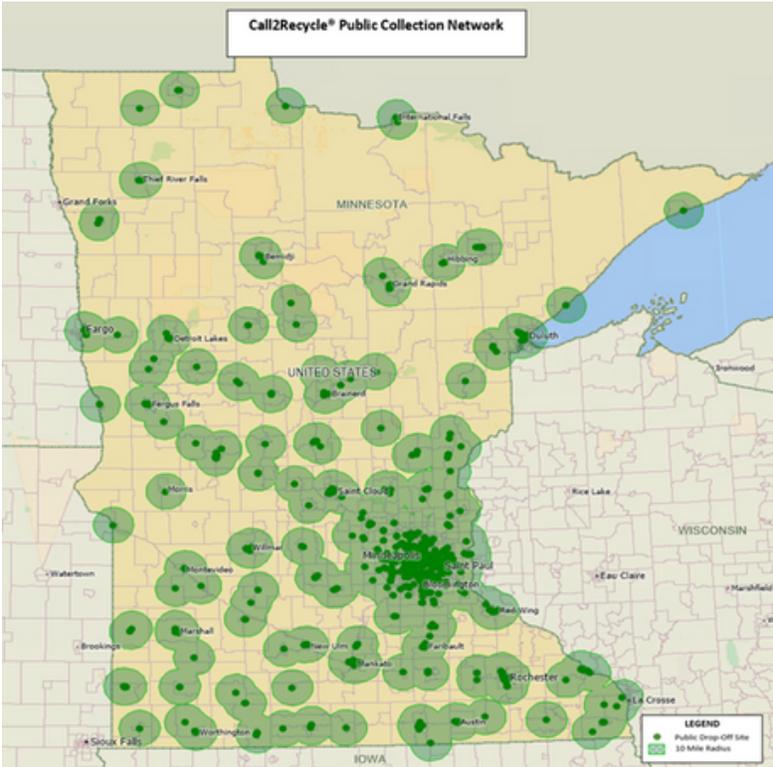
Figure 3



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 2022, Call2Recycle achieved an 83% accessibility rate in Minnesota. Please see the below map (Figure 4) for specific details.

Figure 4



Collection Network		
Site Type	2021 # of Sites	2022 # of Sites
# of Active Public Sites	167	201
# of Active Private Sites	279	798
Public Accessibility Rate	81.7%	83.4%

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 29,709 (2021) and 27,082 (2022) times by Minnesota residents to find a Call2Recycle drop-off location.

Figure 5

The screenshot shows the Call2Recycle website's drop-off location locator tool. At the top, there is a navigation bar with links for Home, About, Contact, Find drop-off location, Store, Cart, and My account. The main header features the Call2Recycle logo and a search bar for finding a drop-off location, with a dropdown menu for selecting a region. Below the header, there is a section titled "Find a drop-off location near you" with a search bar containing "St. Paul, MN" and a "Search" button. A sidebar on the right offers a link to "Check the battery recycling laws in your area".

The main content area is titled "Select what you would like to recycle." and includes four categories with checkboxes: Rechargeable Batteries (checked), Single-Use (primary) Batteries (checked), E-Bike Batteries (unchecked), and Cellphones (checked). Below this, a safety notice states: "Call2Recycle's number one priority remains its commitment to safety. If you have any Damaged, Defective or Recalled (DDR) batteries (including lithium-ion), please DO NOT bring them to a participating collection site. DDR batteries require special handling and CANNOT be placed in regular Call2Recycle boxes. Please visit our store to purchase a compliant DDR shipping container."

The bottom section displays a list of participating drop-off locations in Saint Paul, MN, each with a "Get Directions" button and "About this Location" link. The locations listed are:

- Ramsey County Recycling**: 5 Empire Dr, Saint Paul, MN 55103-1888, 651-268-1160. Accepts Rechargeable Batteries, Cellphones, and Single-Use Batteries.
- Reed's Sales & Service**: 1280 Payne Ave Ste A, Saint Paul, MN 55130-3597, 651-774-6516. Accepts Rechargeable Batteries and Cellphones.
- Hub Hobby Center**: 82 Minnesota Ave, Saint Paul, MN 55117-1736, 651-490-1872. Accepts Rechargeable Batteries and Cellphones.
- Lowe's**: Saint Paul, MN. Accepts Rechargeable Batteries and Cellphones.

A map on the right side of the page shows the location of these drop-off sites in Saint Paul, MN, with a red star indicating the current location. The map is powered by Google Maps and includes a copyright notice for 2023.

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 – 19 in 2021 and 238 in 2022.
- New Collection Site Enrollments – 149 in 2021 and 25 in 2022.
- Boxes Sent Out / Boxes Received – 3,186/3,169 in 2021 and 4,890/ 3,538 in 2022.

Damaged, Defective or Recalled Lithium-Ion Batteries

The safe handling, transport and disposal of used batteries, specifically lithium-based 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. In 2021 & 2022, Call2Recycle has provided over 400 DDR kits (Figure 7) to MN collection sites to safely recycle these batteries.

Figure 6



Figure 7



CALL2RECYCLE® Rechargeable Battery Stewards

18650 Battery Store - Epoch
3M
ACE COMPUTERS
ACE HARDWARE CORPORATION
ACER AMERICA CORPORATION
AERO DESIGN, INC
AMAZON LAB 126
AMAZON.COM, INC.
AMERICAN LAWN MOWER COMPANY
AMERICAN OUTDOOR BRANDS, INC.
AMERICAN TOPPOWER
APC - SCHNEIDER ELECTRIC
ARLO
ARRIS TECHNOLOGY, INC.
ASUS COMPUTER INTERNATIONAL
AWAY
BACCUS GLOBAL
BALMUDA INC.
BARNESANDNOBLE.COM, LLC
BAYCO PRODUCTS
BELKIN INTERNATIONAL, INC.
BEST BUY
BISSELL HOMECARE, INC
BOSE CORPORATION
BRAUN
BROTHER INTERNATIONAL
CANON USA
CAR MATE USA
CHANGZHOU GLOBE TOOLS CO., LTD.
Chervon HK Limited/Menards
CISCO SYSTEMS INC.
CONAIR LLC
CTL
DAYE NORTH AMERICA
DEERE & COMPANY (JOHN DEERE)
DELHAIZE AMERICA (HANNAFORD SUPRMKTS)
DELTRAN USA LLC
DENALI
DLG (SHANGHAI) ELECTRONIC
DO IT BEST CORP.
DOLLAR GENERAL CORPORATION
DORCY INTERNATIONAL
DURACELL DISTRIBUTING INC
DYNABOOK AMERICAS, INC
Dyson
EATON CORPORATION
ECHO INCORPORATED
ENERGIZER BRANDS, LLC.
ENERSYS
EPSON AMERICA, INC.
FAMILY DOLLAR STORES OF NY, INC
FDK
FINISH THOMPSON, INC.
FUJIFILM HOLDINGS AMERICA CORP
GARMIN INTERNATIONAL, INC
GETAC INC.
GIINII TECH CORPORATION
GLOBAL TECHNOLOGY SYSTEMS, INC.
GOOGLE, INC.
GS YUASA ENERGY SOLUTIONS, INC.
GUANGZHOU GREAT POWER ENERGY &
TECHNOLOGY CO., LTD
HAMILTON BEACH BRANDS
HARBOR FREIGHT TOOLS USA, INC.
HARMAN INTERNATIONAL INDUSTRIES,
INCORPORATED
HD SUPPLY HOLDINGS, INC.
HEWLETT PACKARD ENTERPRISE
HILTI INC.
HOMEDICS
HONEYWELL INTERNATIONAL INC.
HONG KONG HIGHPOWER TECHNOLOGY
COMPANY LIMITED
HP INC.
HTC Corporation
HUSQVARNA AB
HYTORC
ICON ENERGY SYSTEM (SHENZEN) CO., LTD
IDX SYSTEM TECHNOLOGY INC
INSPIRED ENERGY, LLC
INTERMETRO INDUSTRIES CORP
INTERSTATE BATTERIES INC.
INVACARE CORPORATION
I-PRO AMERICAS INC
IROBOT CORPORATION
JASCO PRODUCTS CO., INC.

CALL2RECYCLE® Rechargeable Battery Stewards

JIANGSU DONGCHENG M&E TOOLS CO.,LTD
JLG INDUSTRIES, INC.
JVCKENWOOD USA CORP
KAN BATTERY CO., LTD
KEYENCE CORPORATION OF AMERICA
KOBALT
L3HARRIS CORPORATION
LAWNMASTER
LEDVANCE (SYLVANIA)
LEGO GROUP
LENOVO
LG ELECTRONICS
L'IMAGE HOME PRODUCTS INC. (IHP)
LOGIC PREMIUM E-CIG
LOGITECH INC.
LUXOTTICA OF AMERICA
MAG INSTRUMENT, INC
MAKITA U.S.A. INC.
MASTERCRAFT MAXIMUM
MATTEL, INC.
MAX CO., LTD
METABO CORPORATION
MICROSOFT
MIDLAND RADIO CORPORATION
MILLER MFG CO
MOPHIE
MOTOROLA MOBILITY, LLC
MOTOROLA SOLUTIONS, INC
MYCHARGE
NATIONAL POWER
NEPTUNE TECHNOLOGY GROUP INC.
NETGEAR, INC.
NIKKISO MEDICAL AMERICA, INC.
NIKON, INC.
NORMARK INNOVTIONS INC.
O2 COOL®
OCOOPA
OLYMPUS CORP OF THE AMERICAS
OMRON HEALTHCARE, INC.
ORACLE AMERICA, INC.
ORAL-B
Otter Products LLC
PANASONIC CORPORATION
PELICAN
PELLENC AMERICA, INC.
PFU AMERICA, INC.
PHILIP MORRIS USA INC.
PHILIPS CONSUMER LIFESTYLE
PITNEY BOWES
POLICE SECURITY
POLYCOM, INC.
POSITEC TOOL CORPORATION
POWEREX
QD Laser America, Inc.
RAZOR
RESIDEO, INC DBA ADEMCO
RICOH USA, INC
RIDGE TOOL COMPANY (RIDGID)
RJ REYNOLDS VAPOR COMPANY
ROBERT BOSCH TOOL CORPORATION
ROYAL CONSUMER INFORMATION PRODUCTS
RRC POWER SOLUTION INC.
SAGER ELECTRONICS
SAICOME INDUSTRIES LIMITED
SAMSUNG ELECTRONICS CO
SATO AMERICA INC
SCOSCHE INDUSTRIES
SCUD (Fujian) Electronics Co., Ltd.
SDI TECHNOLOGIES INC
SENCO PRODUCTS, INC
SHARKNINJA
SHARP ELECTRONICS CORPORATION
SHENZHEN HIGHPOWER TECHNOLOGY
SIGMA CORPORATION
SNAP-ON INC
Snow Joe, LLC
Sonos, Inc.
SONY ELECTRONICS, INC
SOUTHWICK TECHNOLOGIES INC
SOUTHWIRE COMPANY
SPRINGPOWER TECHNOLOGY (SHENZHEN) CO., LTD.
STANLEY BLACK & DECKER, INC.
STIHL INCORPORATED
STORTRONICS
STREAMLIGHT, INC.

CALL2RECYCLE® Rechargeable Battery Stewards

SWIFFER
TARGET CORPORATION
TCT MOBILE, INC. (ALCATEL & ALCATEL
ONETOUCH,TCL MOBILE)
TECHTRONIC INDUSTRIES CO. LTD.
TENERGY CORPORATION
TENNANT COMPANY
TEST RITE PRODUCTS CORP
TEXAS INSTRUMENTS INC
THE COLEMAN COMPANY, INC.
TOMTOM INC.
TONIES
TORO
TRACTOR SUPPLY COMPANY
TRANSCOSMOS AMERICA INC.
TRANSOURCE COMPUTERS
TRAXXAS
TREK BICYCLE CORPORATION
TRUE VALUE COMPANY
TTEK ASSEMBLIES INC
TTI (MACAO COMMERCIAL OFFSHORE) LTD
ULTRALIFE CORPORATION
UNIDEN AMERICA CORPORATION
VARTA MICROBATTERY INC.
VERITAS TECHNOLOGIES LLC
VERNIER SOFTWARE & TECHNOLOGY
VIBRATEX, INC.
VORNADO AIR
VTECH COMMUNICATIONS, INC.
WACOM TECHNOLOGY CORP
WHILL, INC.
ZEBRA TECHNOLOGIES
ZIPPO MANUFACTURING COMPANY