



Welcome to
Northeast Resource
Recovery Association's

Summer Webinar Series

Need Professional Credits?



- Receive 1 hour of professional development credit from NRRA for viewing this webinar.
- Webinars are recorded and made available for those who registered.
- Complete the survey at the end and connect with NRRA.
- Continue your learning with webinars all summer long!
- Visit our new website at: nrrarecycles.org



For Registration:
nrrarecycles.org

Operator Track - Wednesdays 9:00 am - 10:00 am		
Date	Webinar	Presenters
July 22, 2020	Disposal Capacity	Mike Nork, NHDES; John Fischer, MADEP; and Jeff Bourdeau, VTDEC
July 29, 2020	Using Processed Glass Aggregate in Road and Infrastructure Projects	Reagan Bissonnette and Maddie Dilonno, NRRA
August 5, 2020	Legislative Updates	Josh Kelly, VTDEC; Ariela Lovett, MA Mun. Assoc.
August 12, 2020	Educate, Don't Contaminate! A Toolkit to Clean up Recycling	Lucy Perkins and Matt Grondin, ecomaine
	Break	
August 26, 2020	Extended Producer Responsibility	Terri Goldberg, NEWMOA; Megan Pryor, MEDEP
September 2, 2020	Tricks of the Trade	Joan Cudworth, Hollis; Ed Walsh, Rollinsford; Brian Patnoe, Littleton, NH
September 9, 2020	MA Mattress Recycling Incentive Grant Program	Rachel Smith, MADEP



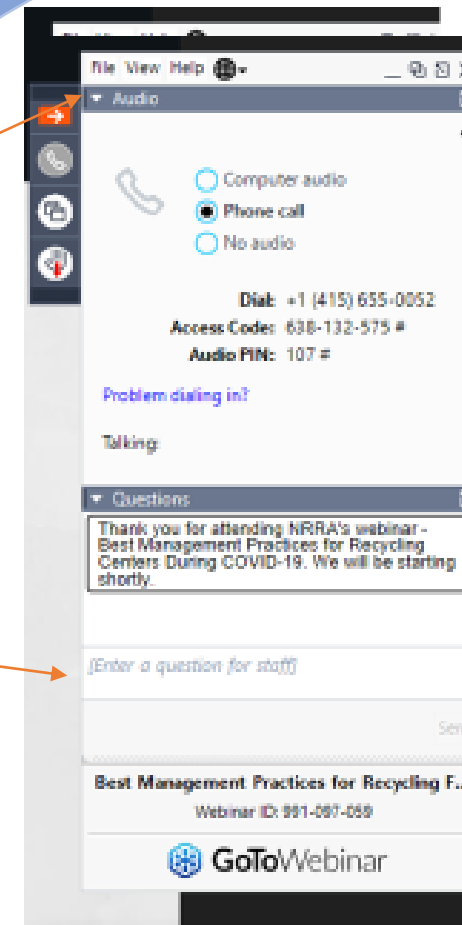
For Registration:
nrrarecycles.org

Educator/Community Track - Fridays 12:00 - 1:00 pm		
Date	Webinar	Presenters
July 10, 2020	Refill Not Landfill	Marc Morgan, Lebanon, NH; Emily Rogers, Lebanon Food Co-op
July 17, 2020	REUSE! Because You Can't Recycle the Planet	Alex Eaves, Stay Vocal, The Reuse! Documentary
July 24, 2020	Food: Too Good to Waste	Brenna Toman, CVSWMD
July 31, 2020	The Messy Truth about Garbage	Cindy Sterling, NRRRA
August 7, 2020	The 6th R: Cultivating a Culture of Repair	Ollie Cultrara and Cassandra Hemenway, ACSWMD
August 14, 2020	Medical Waste: Needles, Pharmaceuticals, Vaping and More	Cindy Sterling, NRRRA
August 21, 2020	Event Waste Reduction: Thinking Outside the Bin for Your Event Part I	Cindy Sterling, NRRRA
August 28, 2020	We Need to Think About Clothing Differently	Joe Whitten, Apparel Impact
September 4, 2020	Cafeteria Sorting Stations	John Jose, CVSWMD
September 11, 2020	Event Waste Reduction: Styling Your Event Recycling Plan Part 2	Cindy Sterling, NRRRA



GoToWebinar Setting the Table

- You will not be able to be heard by the presenters or other participants on GTW.
- If you cannot hear the presenters, click on audio and computer audio. If that does not work, try clicking on phone call.
- We hope you ask questions and the presenters will answer them if time allows. Click on Questions and keep it short!



About NRRA

- Recycling nonprofit
- 400+ members,
primarily municipalities
- Founded nearly 40
years ago



Cooperative Marketing & Purchasing



- Enable communities to manage their own recycling programs
- 40 programs, including single stream and municipal solid waste
- Connect sellers of recyclables to purchasers



Education & Technical Assistance

- Workshops
- Facility tours
- Annual conference
- Technical assistance
- School Club programs





The webinar will begin soon!





Lithium The Battery of Things

Sean Plasse
Program Manager, Northeast Region
splasse@call2recycle.org



Call2Reycle's Defining Moment - June 5, 2017

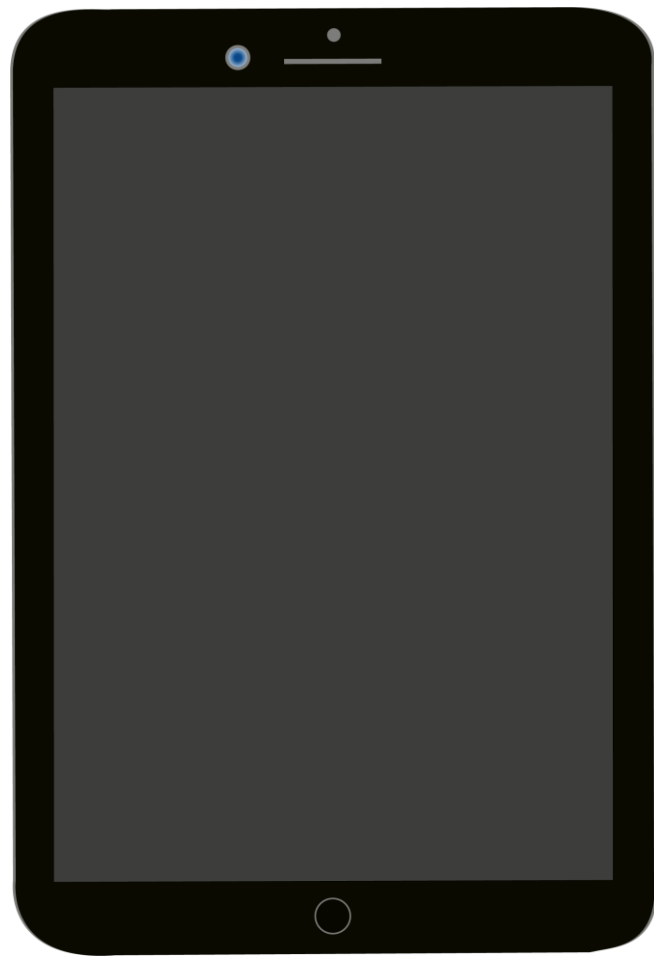


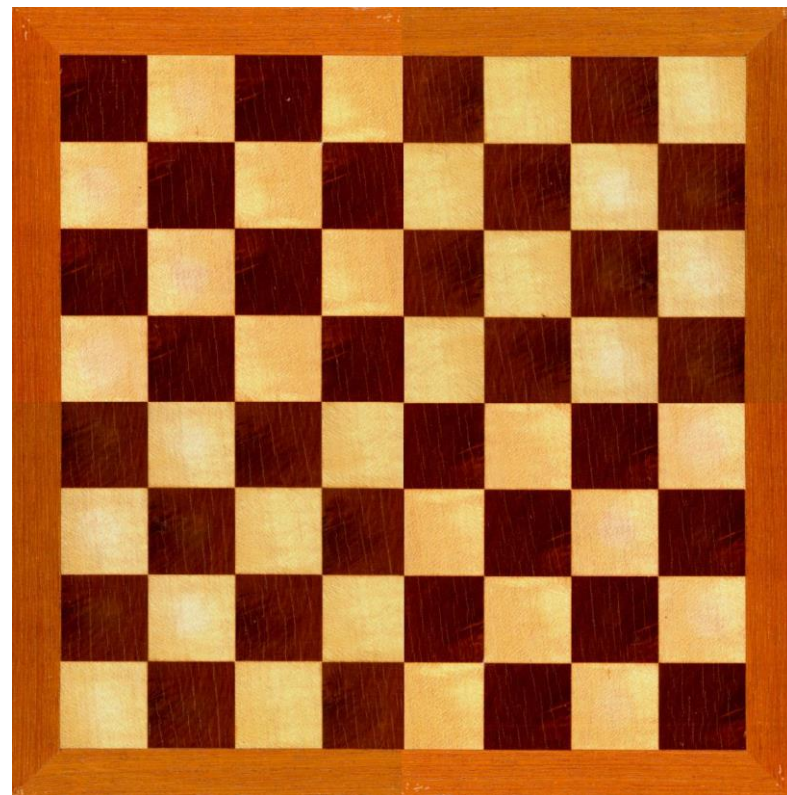
[Video Link](#)

Tioga County, NY January 2020

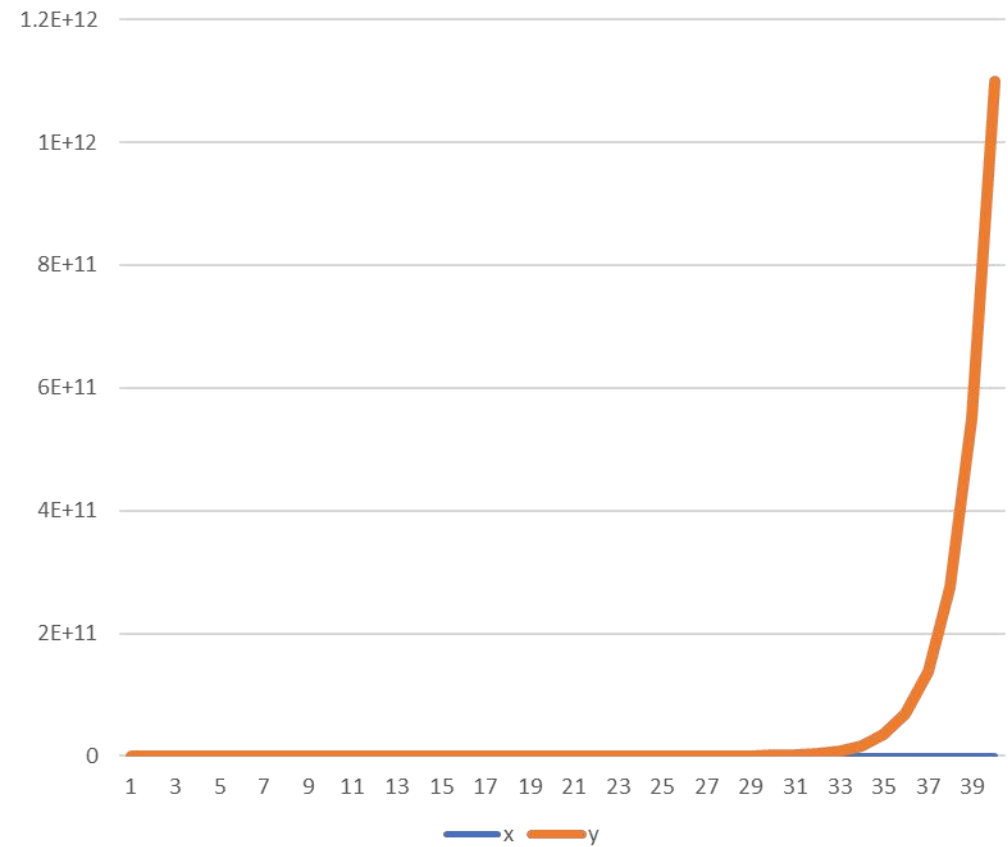
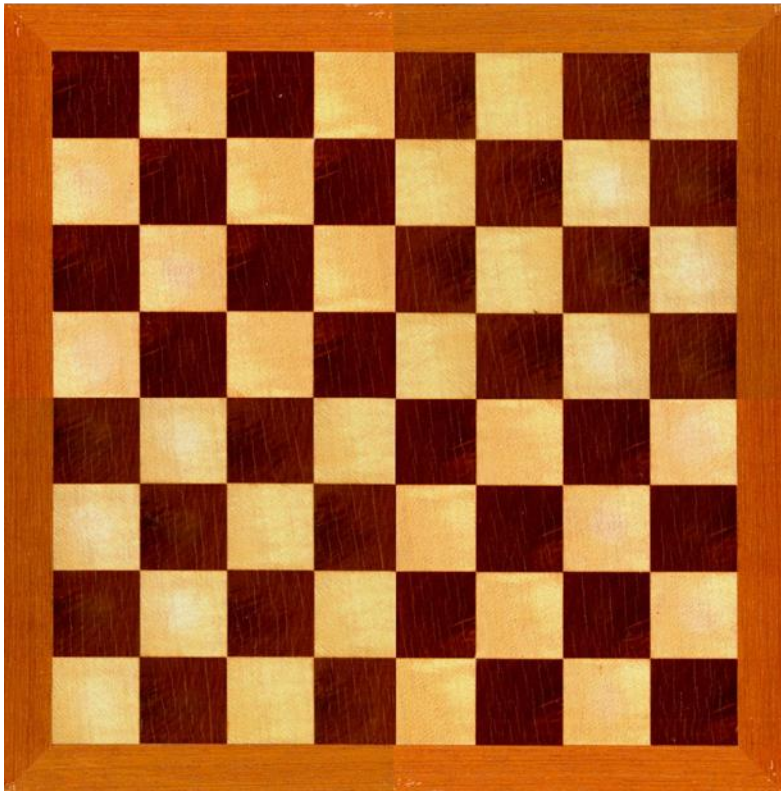


[CellBlockEX Video](#)





Innovation: Second Half of the Chessboard



Convergence

Integration of disparate technologies
into single integrated system.

HD Video, 3D VGA, AI, 5G Cellular, Lithium Batteries, Etc.



Emergence

The parts don't predict the whole.

$H_2 + O = H_2O$

$3 + 5 = \text{Cheese}$

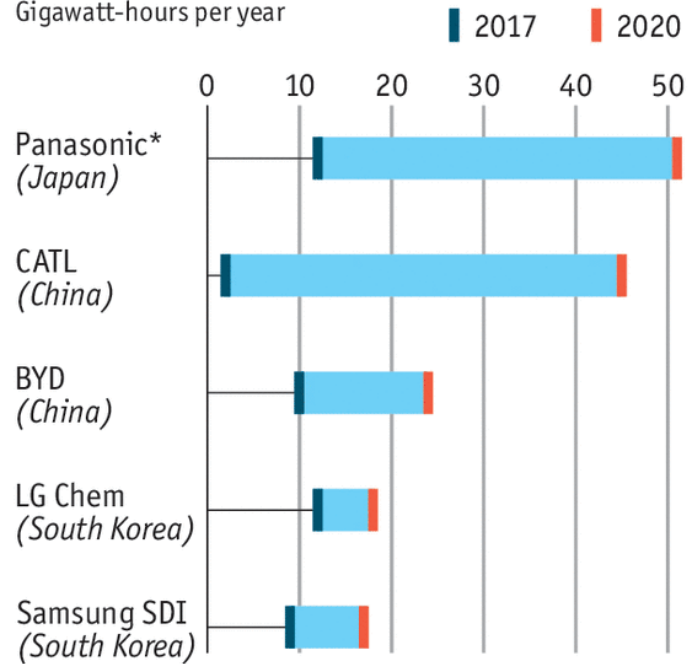


The future cannot be predicted by the present.

The Dynamic Lithium Battery Market

Electric dreams

Manufacturing capacity
Gigawatt-hours per year

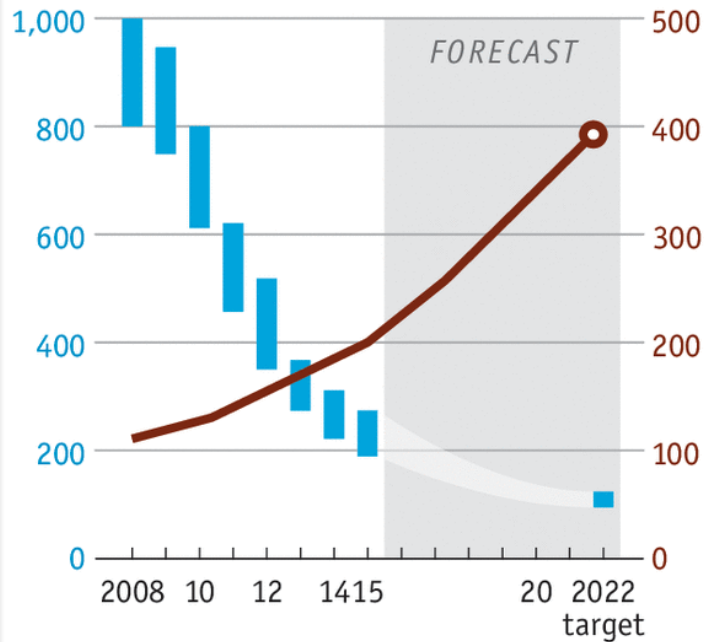


Sources: Cairn ERA; US Department of Energy

onomist.com

Battery cost
Worldwide, \$/kWh

Battery energy density
Watt-hours per litre



*Includes Tesla gigafactory

Lithium Batteries

“They have laid the foundation of a wireless, fossil fuel-free society, and are of the greatest benefit to mankind.”



Winners of the 2019 Nobel Prize in Chemistry

John B. Goodenough, Akira Yoshino, M. Stanley Whittingham

Internet of Things (IoT)

2020 - 10 billion

2025 - 62 billion

400% Increase in Lithium Manufacturing Capacity



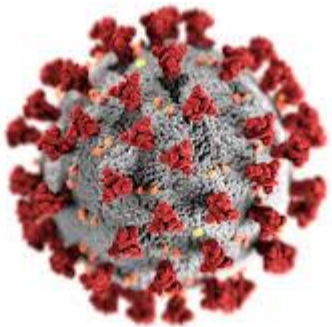
Internet of Things (IOT)

Internet of Everything

Enterprise of Things

Wearables
Smart Homes
Healthcare
Small Businesses
Banking
Education
Retail

E-Commerce
Transportation
Agriculture
Smart Cities
Insurance
Supply Chain
Utilities



A Day in the IOT Life

Rushing home from a business trip, to an energetic dog, an energetic teenager, an overgrown lawn, hungry finicky family, napping baby, while drinking too much beer.



[Robot Suitcase Link](#)













**How will you manage
convergence
and
emergence?**

Innovation Outpacing Regulation and Legislation

Market Share
Embedding, Packaging
Overseas Manufacturing
Internet Sales and Services





Recycling as Environmental Management

Recycling as Risk Management





Non-profit – Atlanta - Founded in 1994.

Steward fees, fee-based services.

Collection and recycling program at no cost to consumers.

16,000 publicly accessible sites.

Over 144 million pounds of consumer batteries recycled.



Stewardship Services

If you are a battery or product manufacturer, Call2Recycle can help fulfill your recycling requirements in the U.S., including compliance with extensive state and federal regulations.



Product & Battery Return Management

Customized solutions for battery & product return services, including recalls, damaged products, deinstallation of large battery banks and warranty returns.



Collecting & Recycling

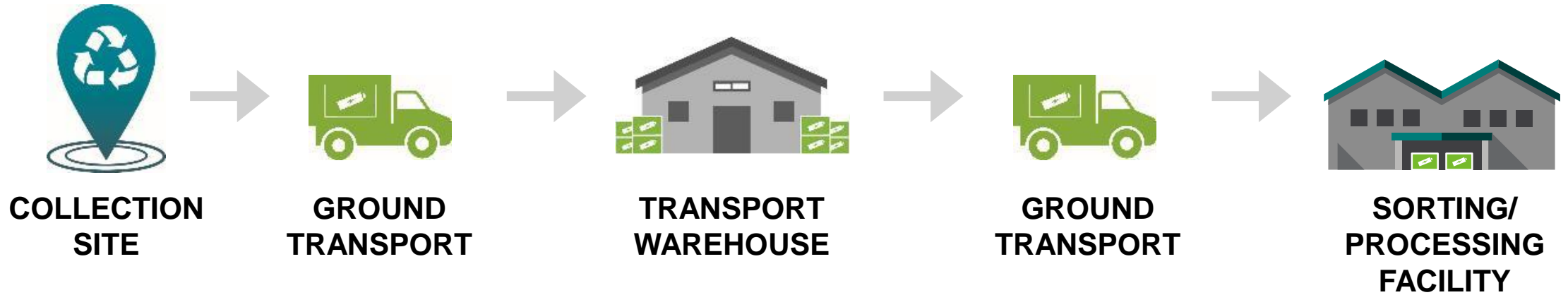
Whether you're looking to start a public-facing program, set-up an internal battery recycling program or have a one-time need, Call2Recycle offers flexible, safe and convenient options.



Battery Protection & Fire Suppression

As the exclusive distributor of CellBlock FCS products, Call2Recycle offers safe handling, storage and shipping solutions to minimize fire risks.

Where does a used battery go?



Safety is important during every step of the journey.

Recycled batteries are turned into new products.



**NEW
BATTERIES**



**STAINLESS
STEEL POTS
& PANS**



GOLF CLUBS



SILVERWARE



**ASPHALTS
FOR ROADS**

No batteries to landfill, domestic or overseas.



R2 Certified – Responsible Recycling

SERI - Sustainable Electronics Recycling International

Independently audited.

Call2Recycle Downstream Oversight

Required Safety Training

Auditing

Suspension / Termination

Communications

Research



Main Reasons Consumers Do Not Recycle Batteries



Don't know what to do.

It's inconvenient.

Hoarding Trash Wishful Recycling

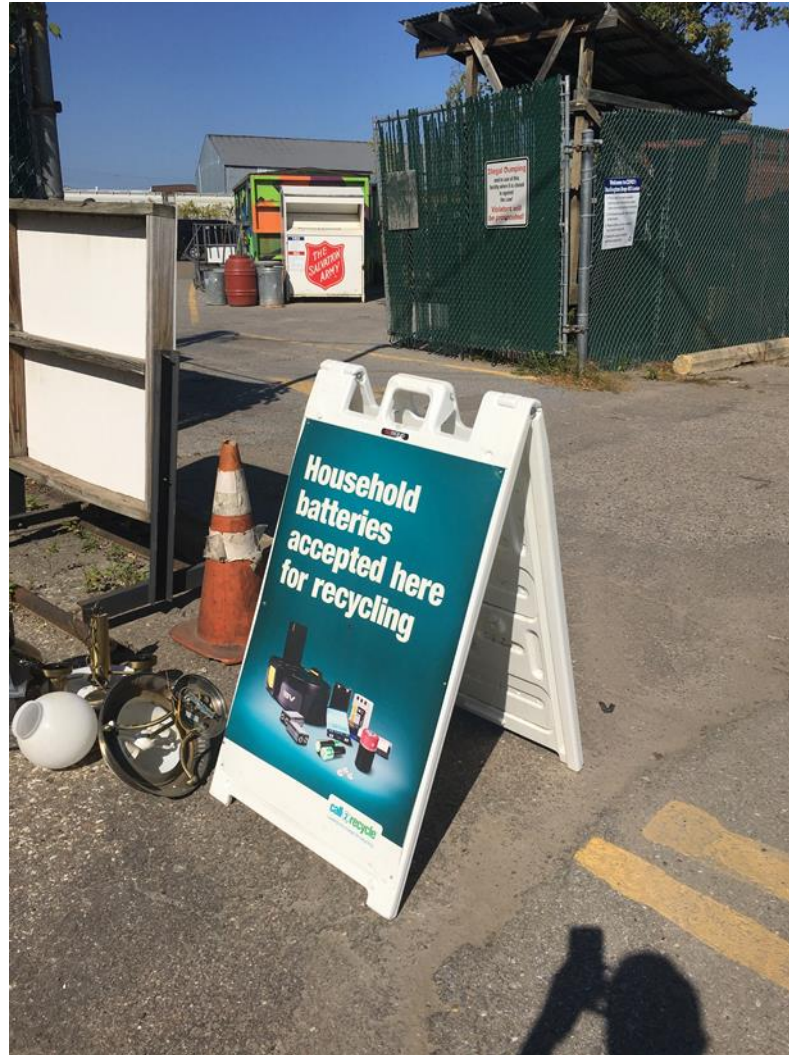


Findability and Accessibility

The screenshot displays a web-based application for finding recycling locations. On the left, a map of Wrentham, MA, shows 13 numbered locations marked with green pins. A red star marks the user's current location. The map includes labels for various towns and roads. On the right, a dark green sidebar contains the following elements:

- WHERE WOULD YOU LIKE TO RECYCLE?**
A search bar containing "wrentham ma" and a radius selector set to "10 miles".
- WHAT WOULD YOU LIKE TO RECYCLE?**
A section with three checkboxes, all of which are checked:
 - ☒ RECHARGEABLE BATTERIES
 - ☒ SINGLE-USE (PRIMARY) BATTERIES
Why single-use batteries are different
 - ☒ CELLPHONES
- A link: "Purchase a mail back kit from [our store](#)."
- A summary bar at the bottom: "13 LOCATIONS NEAR YOU".

Websites and Signage



Two Battery Types

Primary – One and done.
Rechargeable – Use it more than once.

Latin Roots
Prime (one)
Re (repeat)



Accepted Primary (Single-Use) Batteries

**Call2Recycle accepts primary batteries
each weighing less than 11lbs (5kgs).***



Alkaline



Lithium Primary

** Select collection sites have opted into Call2Recycle's fee-based program for primary batteries. Check to see if your collection site is one of them.*

Accepted Rechargeable Batteries

**Call2Recycle accepts rechargeable batteries
each weighing less than 11lbs (5kgs).**



Nickel Cadmium (Ni-Cd)



Lithium Ion (Li-Ion)



Nickel Metal Hydride (Ni-MH)



Small Sealed Lead Acid (SSLA/Pb)



Nickel Zinc (Ni-Zn)

Rechargeable Battery Terminals Must be Protected



They hold residual charge when appearing dead.

**If terminals contact other batteries or metal,
risk of spark, smoke, fire.**

When in doubt, PROTECT!

Must Ship Batteries to U.S. DOT Guidelines*

ONE rechargeable battery per bag (or taped individually).

Call2Recycle boxes include self-sealing clear plastic bags.

***U.S. DOT has specific terminal protection requirements.
For a complete list visit [Call2Recycle.org/safety](https://www.call2recycle.org/safety).**



**When clear plastic bags not available,
surround the battery with packing tape.**



For button/coin cells, make a ravioli.

CLEAR packing tape, sticky side up.

Button/coin batteries on the tape with space between each battery.

Cover with a second layer of CLEAR tape.



Do not use any of the following for protecting battery terminals.

Do not put anything else in the box.



Grocery bags



Paper bags



Paraffin or other dipping products



Masking tape



Scotch tape

Research and Development of New Containers

DOT approved for 4 ft drops with 66lbs, mixed battery use.

Display, collections, storage.

No cost to businesses or municipal facilities in Vermont.



Patented Flame-Retardant Liner

Third-Party Tested - Extensive testing by independent laboratory, withstood up to 1,100 degrees F.

Containment - Prevents flames & heat from spreading outside the box.



DDR Batteries

Damaged, Defective, Recalled LITHIUM batteries.

A Department of Transportation statutory term that ONLY applies to lithium batteries.

There is no such thing as another type of DDR battery.

**EPA – Determines ‘hazardous waste.’ Example, NiCd Battery.
DOT – Determines ‘hazardous material.’ Only Lithium DDR Battery.**



Call2Recycle Online Store

[home](#) | [about](#) | [contact](#) | [find drop-off location](#) | [store](#) | [cart](#) | [bot wizard](#)

1-877-723-1297

customerservice@call2recycle.org

site search



FIND A DROP-OFF LOCATION:

Enter Postal Code

REGION



RECYCLING 101

COLLECTION PARTNERS

STEWARDS

SAFETY

NEWS & RESOURCES

CONTACT US

Call2Recycle Store

Home > Call2Recycle Store

Search



Battery Collection & Recycling Services

Charge up battery recycling with best-in-class recycling solutions that are convenient, compliant and safe. Call2Recycle offers turnkey and flexible options to ship in boxes or in bulk. [Contact us](#) at 1-877-723-1297 to learn more about these services or to discuss your recycling needs in more detail.



Large Nested Battery & Cellphone Recycling Boxes

\$115.00

1

Add to cart



Large Battery & Cellphone Recycling Box

\$65.00

1

Add to cart



Small Battery & Cellphone Recycling Box

\$45.00

1

Add to cart



Pallet of 50 Small Battery & Cellphone Recycling Boxes

\$600.00 – \$2,000.00

Select options



Pallet of 50 Large Battery & Cellphone Recycling Boxes

\$750.00 – \$2,500.00

Select options



CellBlock DDR Kits

DDR lithium-ion batteries.
U.S. DOT approved recycling kit.

U.S. DOT Special Permit 20549 that fully complies in
transporting hazardous materials.

Pre-paid shipping and recycling. Order online.
www.call2recycle.org



CellBlockEX

Fire-suppression material. 100% recycled glass granules.

Heat – As glass melts, it pulls heat from fire.

Fuel – The porous surface absorbs electrolytes.

Oxygen – Glass melts to form a silicate coating, cutting off O2.

Class D, combustible metals, lithium-ion battery fires.

[CellBlockEX Video](#)

CellBlock Lithium Fire Incident Kits



[CellBlock PEDPad Fire Video](#)

CellBlock Drums for Storage and Transportation

Drums are lined with CellBlockEX granules to filter heat, smoke and fumes, with a vented lid.

Transport lithium-ion batteries when packaged with CellBlockEX.

Access to DOT Special Permit 20549.

Reusable.



Greater than 300Wh



Hazardous Material (even not DDR)
80 volts x 40 amp hours = 320 watt hours
September 1, 2021
Kit Pre-Permitted for 300Wh to 800Wh
No CFR Training or Paperwork



Leading the charge for recycling.™

thank you!

Sean Plasse

Program Manager, Northeast Region
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Corporate Headquarters:
1000 Parkwood Circle, Suite 200
Atlanta, Ga 30339





INTERSTATE REFRIGERANT RECOVERY, INC.

"Protecting the Environment and Ozone Layer for the Future of Our Children"



United States Department of Agriculture
Rural Development

Thank You to our Sponsors



Please take the survey at the end of the webinar.

SUMMER WEBINAR SERIES- COMING NEXT



REUSE! Because you Can't Recycle the Planet

Presenter: Alex Eaves,

Reuse Expert

Owner STAY VOCAL

Director REUSE Documentary

Friday, July 17

12:00-1:00 pm



Disposal Capacity

Panel Presenters: Jeff Bourdeau, VTDEC; Michael Nork, NHDES; John Fischer, MADES

Wednesday, July 22

9:00-10:00 am

