



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](http://nrrarecycles.org)



For Registration:  
[nrrarecycles.org](http://nrrarecycles.org)

**Operator Track - Wednesdays 9:00 am - 10:00 am**

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



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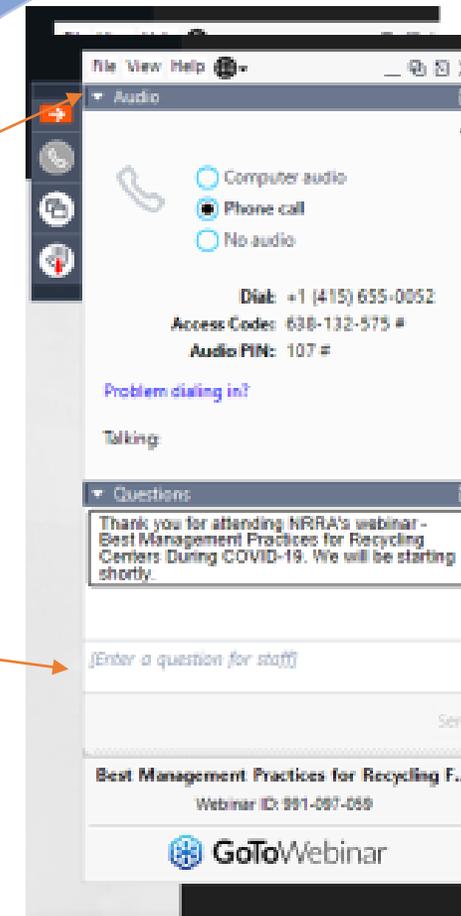
**Educator/Community Track - Fridays 12:00 - 1:00 pm**

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



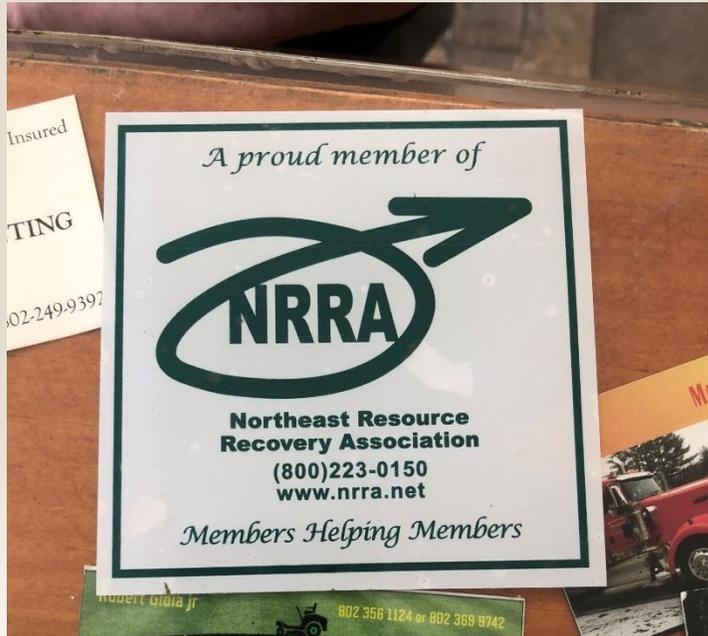
# About NRRA

- 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!





Leading the charge for recycling.™



# Lithium The Battery of Things

Sean Plasse  
Program Manager, Northeast Region  
[splasse@call2recycle.org](mailto:splasse@call2recycle.org)



## Call2Reycle's Defining Moment - June 5, 2017

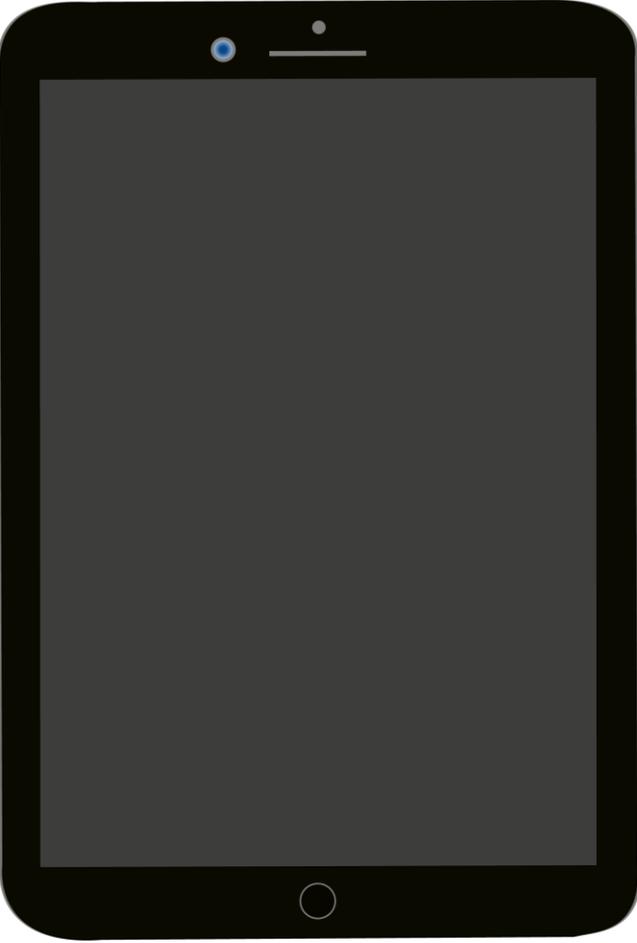


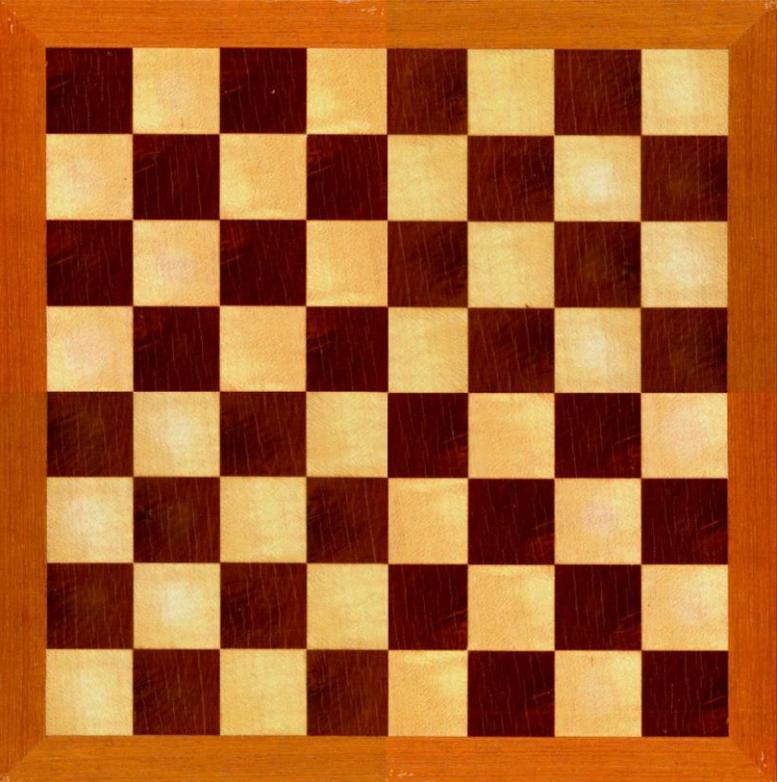
[Video Link](#)

# Tioga County, NY January 2020

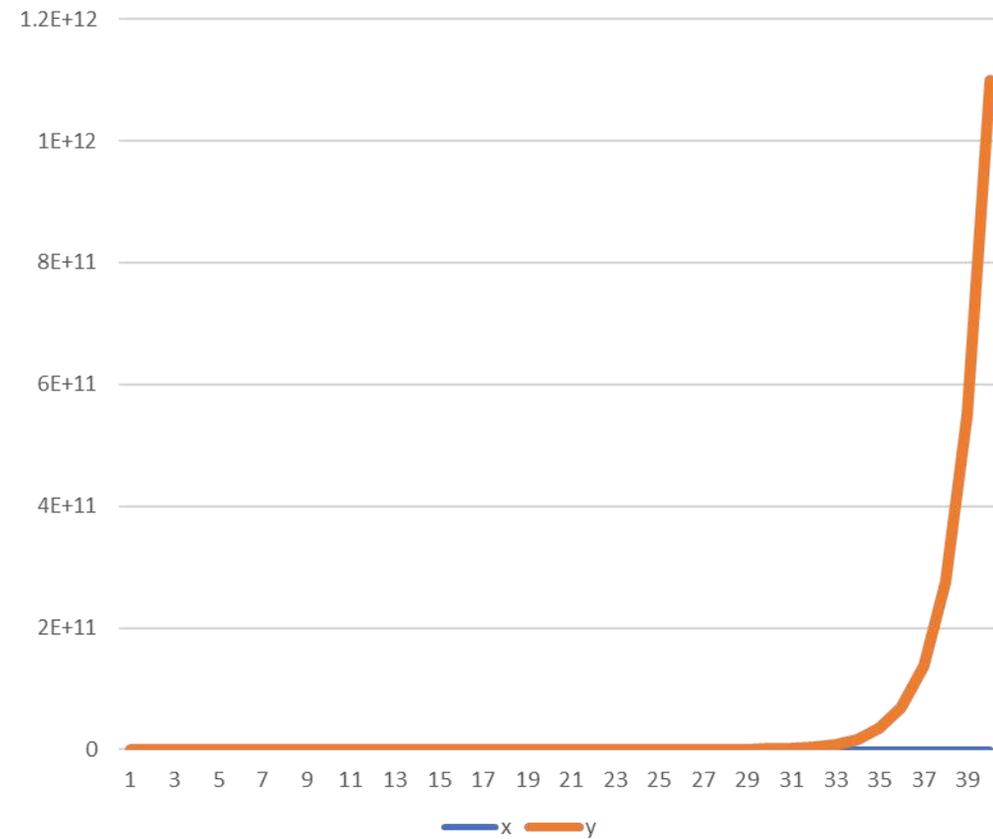
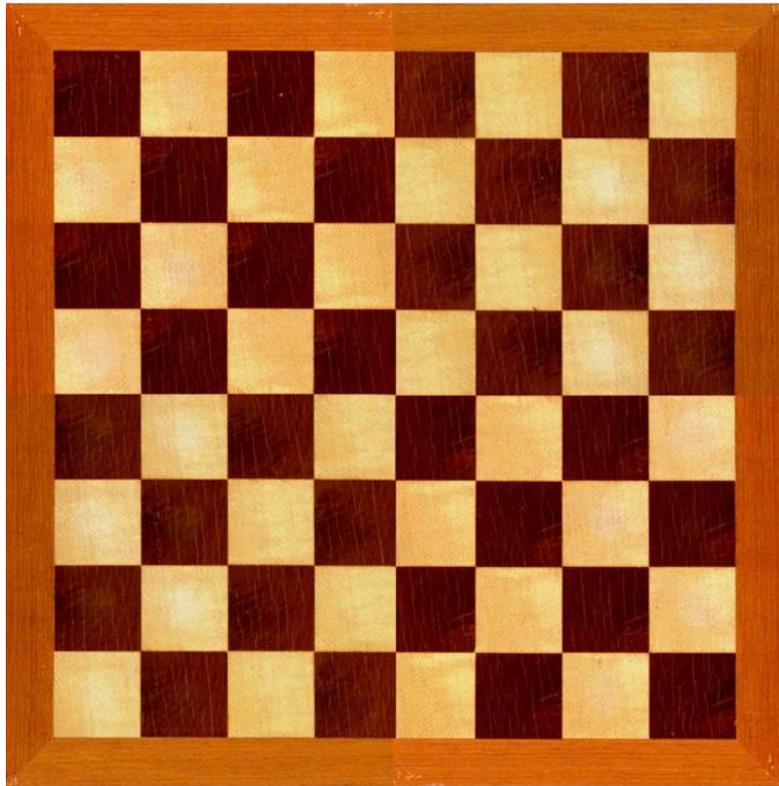


[CellBlockEX Video](#)





# 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.

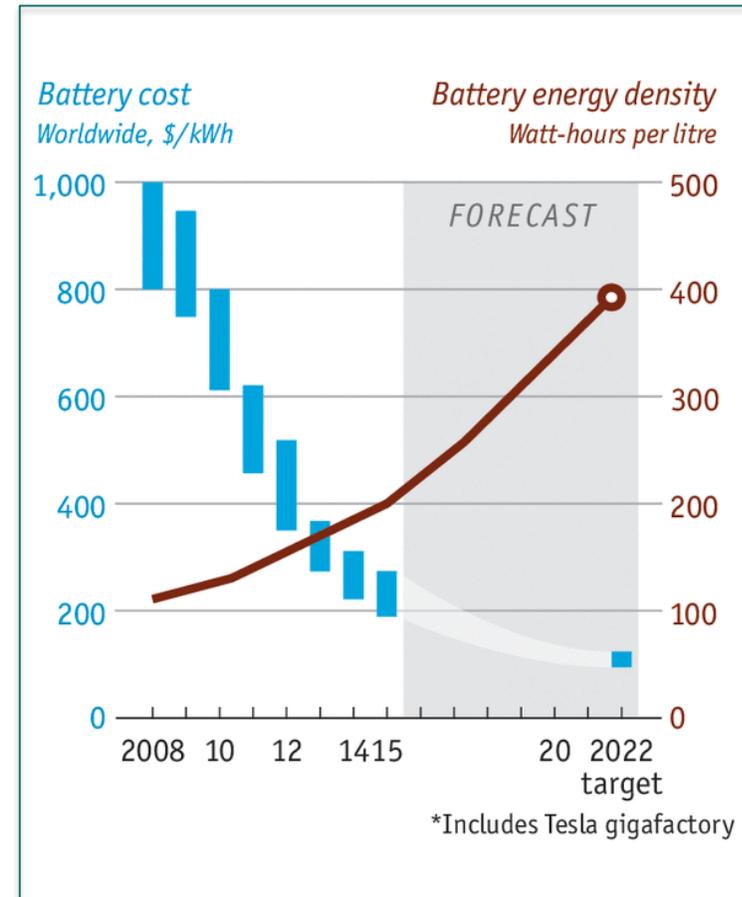
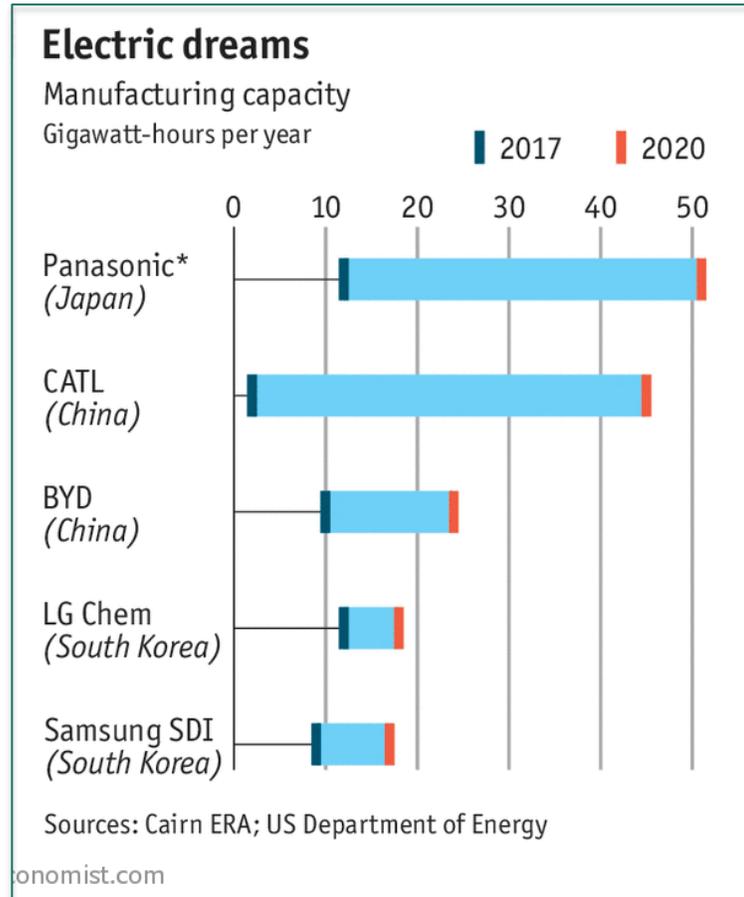
$H_2 + O = H_2O$

$3 + 5 = \text{Cheese}$



The future cannot be predicted by the present.

# The Dynamic Lithium Battery Market



# 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**



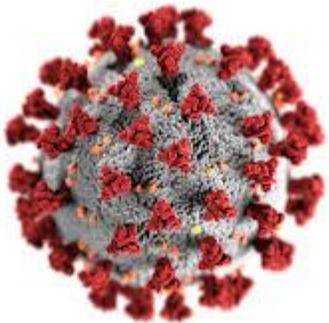
# **Internet of Things (IOT)**

## **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.**



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## 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.



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## Product & Battery Return Management

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



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## 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.

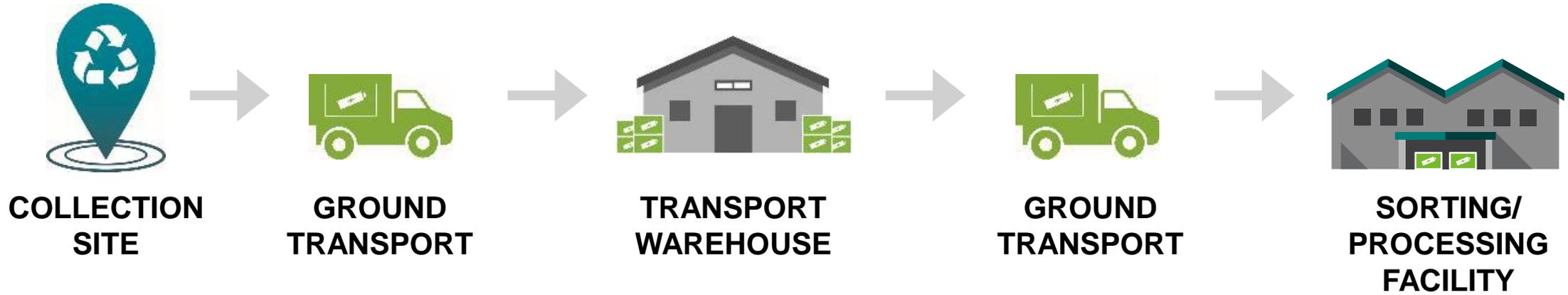


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## Battery Protection & Fire Suppression

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.**



# Main Reasons Consumers Do Not Recycle Batteries



**Don't know what to do.**

**It's inconvenient.**

# Hoarding Trash Wishful Recycling



# Findability and Accessibility

**WHERE WOULD YOU LIKE TO RECYCLE?**

wrentham ma 10 miles 0

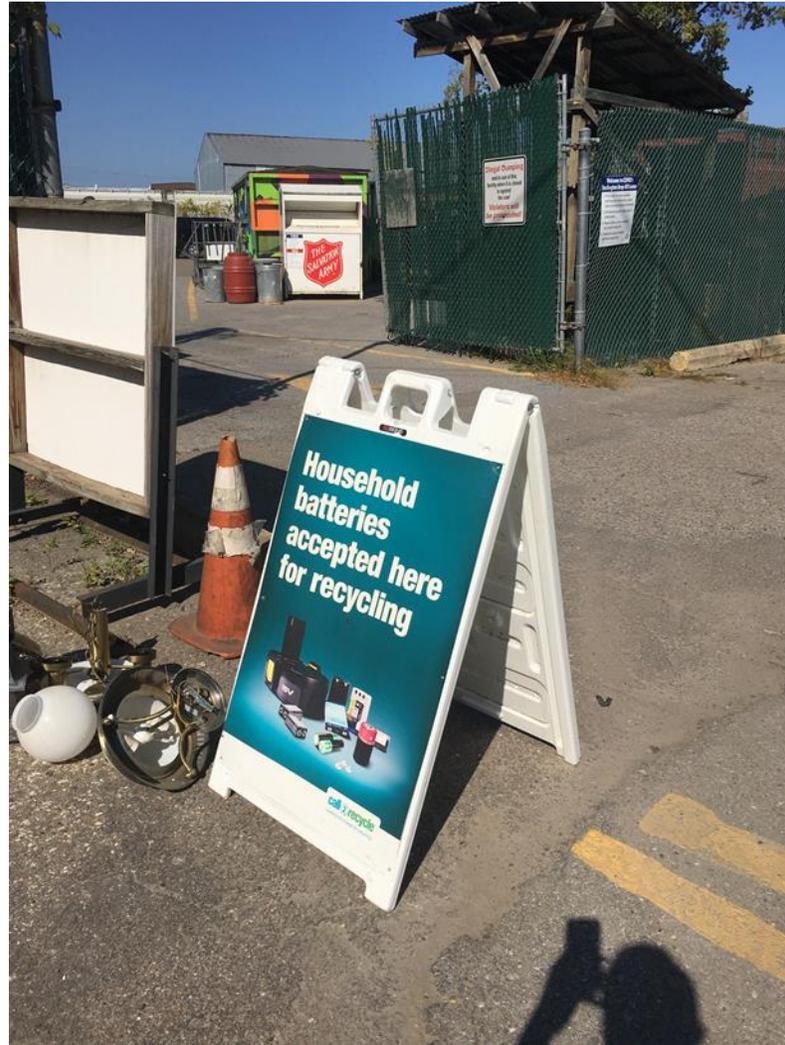
**WHAT WOULD YOU LIKE TO RECYCLE?**  
Click to add or remove from results

- RECHARGEABLE BATTERIES
- SINGLE-USE (PRIMARY) BATTERIES  
*Why single-use batteries are different*
- CELLPHONES

Purchase a mail back kit from [our store](#).

**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)**

# Battery Identification Challenges

Batteries from overseas.

Chemistries are hard to identify.

Counterfeit batteries from other countries.



# 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



FIND A DROP-OFF LOCATION:

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

Add to cart



Large Battery & Cellphone Recycling Box

\$65.00

Add to cart



Small Battery & Cellphone Recycling Box

\$45.00

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](http://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  
splasse@Call2Recycle.org

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"*



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

