

BATTERY BEWARE

TAKE CHARGE. STAY SAFE.

Tracy Nestor
Senior Area Manager
Municipal Sales

Tuesday, April 9th



Battery Beware

01 The Problem

02 Milwaukie Fire

03 Industry Trends- NWRA

04 Safety Best Practices

05 Education and Resources

06 The Path Forward



“Lithium-ion batteries are in more items than we might think, besides recycling facilities, these batteries are a threat to the entire solid waste and recycling system, from collection to disposal, and impact our members every day. Given the risk they pose, it is important consumers understand that lithium-ion batteries should not be placed in their waste or recycling bins and should be disposed of properly through the right channels.”

NWRA Interim President and CEO Jim Riley.



The Problem

The cost to prevent Lithium Ion Battery Fires is an additional burden to the costs to process recyclables further jeopardizing municipal programs

41%↑

**Catastrophic
Losses Last 5
Years**



- Litigation
- Technology Investment
- Rebuilding
- Rerouting
- Commodity Loss



1200° F

**Malfunctioning
lithium-ion battery
can reach internal
temperatures**

Milwaukie Fire 2023



EPA SAFETY RECOMMENDATIONS

Train

safety training for all employees removing, disassembling, or handling the batteries

Isolate

isolating the terminals of the batteries with non-conductive tape, plastic bags, or other separation techniques, keeping the label

Separate

storing batteries in a separate building away from other flammable materials and occupied spaces when possible

Prevention

installing advanced fire detection and suppression equipment

Storage

storing batteries in climate-controlled spaces with good ventilation

Inspect

conducting frequent visual and thermal inspections of batteries

Communicate

having ongoing communications with local fire marshals and first responders about materials and processes happening on site

Plan

maintaining a plan for how to respond and evacuate in case of an emergency

Safely Dispose of Lithium Batteries



PREVENT FIRES

Never toss lithium batteries or rechargeable devices in your household recycling or waste carts.



WHERE TO RECYCLE

Always dispose of lithium batteries at hazardous waste collection locations or with designated retailers.



PROPER DISPOSAL

Before disposing of lithium batteries, cover the battery terminals with electrical tape and/or place them in separate plastic bags.

Find Local Lithium Battery Drop Off Locations

Contact your local municipality, [Call2Recycle.org](https://www.call2recycle.org) or [Earth911.com](https://www.earth911.com)

EDUCATE

BATTERY BEWARE

TAKE CHARGE. STAY SAFE.

DON'T Recycle or Trash Lithium Batteries at Home

Lithium batteries are extremely popular because they are reliable and long-lasting. These types of batteries are found in a wide range of devices, including cell phones, power tools, laptops, tablets, children's toys, scooters, electric toothbrushes and more.



PREVENT FIRES

Lithium and lithium-ion batteries, which are made from highly flammable materials, can pose a serious fire risk.¹ If overheated, punctured or faulty, these batteries can cause fires or explode.



PROTECT PEOPLE

Lithium battery fires are incredibly difficult to extinguish and may reignite days later. When batteries fail, they can release toxic gases that endanger individuals in their homes and workplaces.



WHERE TO RECYCLE

Recycle lithium batteries for **FREE** at retail drop-off locations like Best Buy, The Home Depot, Staples, Ace Hardware and Lowes. You can also use a mail-back program or take them to a certified electronics recycler.



PRESERVE THE ENVIRONMENT

Improper disposal of lithium batteries can have dire consequences for the environment. The materials within these batteries can harm ecosystems and contaminate water supplies, causing long-lasting damage.



CONSERVE PRECIOUS RESOURCES

By recycling lithium batteries correctly, you can help preserve the valuable resources contained within them, such as nickel, cobalt, graphite, lithium and manganese.^{2,3}

DO'S & DON'T'S

- DON'T** Overcharge lithium batteries or leave them plugged in overnight.
- DON'T** Throw away lithium batteries in the garbage.
- DON'T** Try to recycle lithium batteries at home.
- DO** Store batteries between 40° and 80°F.
- DO** Cover battery terminals with electrical tape and/or place them in separate plastic bags when disposing.
- DO** Dispose of lithium-ion batteries at designated recycling or household hazardous waste collection points.



LEARN MORE AT:
RepublicServices.com/LithiumBatteries



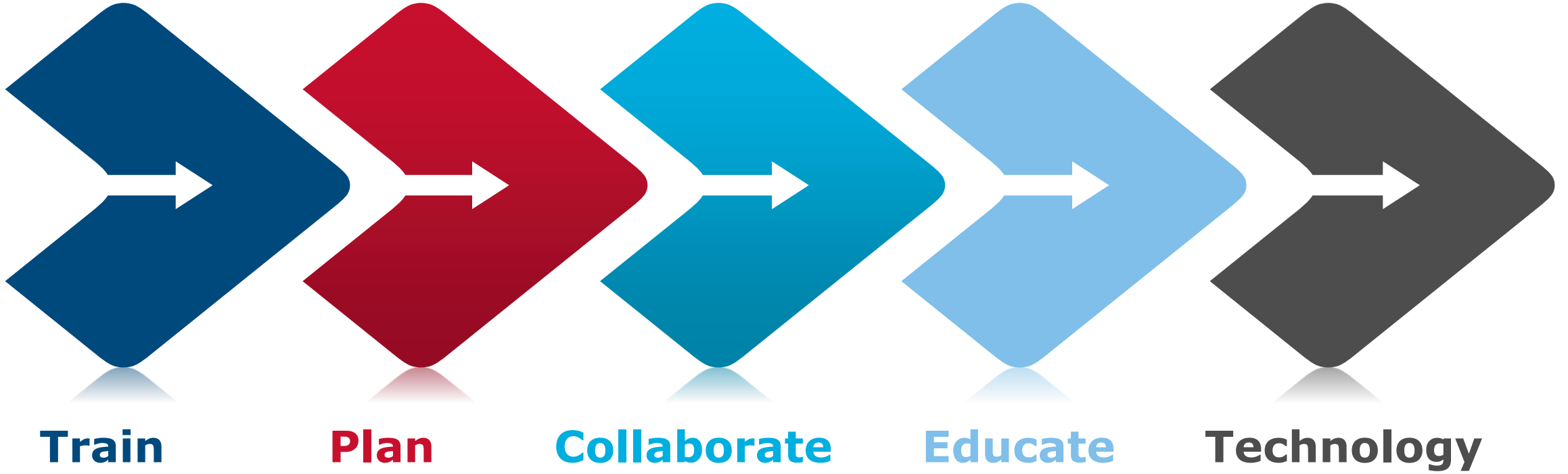
Sustainability in Action

1. https://ehs.oregonstate.edu/sites/ehs.oregonstate.edu/files/pdfs/lithium_fire_prevention_053.pdf
2. <https://cleantechica.com/2023/03/03/are-lithium-ion-batteries-recyclable-yes-or-no/>
3. <https://greenly.earth/en-us/blog/ecology-news/the-harmful-effects-of-our-lithium-batteries>

EDUCATE



THE PATH FORWARD



Our Vision

Partnering with customers to create a more sustainable world.

Republic Services proactively executes essential aspects of our customers' environmental responsibilities so they can always make a positive impact on people and planet.



Thank you

TRACY NESTOR

SENIOR AREA MANAGER MUNICIPAL SALES

TNESTOR@REPUBLICSERVICES.COM

828.217.8766