



February 24, 2026

**To: Maryland Senate Education, Energy and Environment Committee**

**Re: SB0553 - Commission to Advance Lithium-Ion Battery Safety in Maryland - Reestablishment**

**Favorable**

As current President of the Maryland Recycling Network (MRN), I am writing in support of SB 553. I bring my experience managing electronics recycling contracts, including lithium-ion battery recycling, over the last 12 years at the Northeast Maryland Waste Disposal Authority. I am not speaking on behalf of the Authority.

Maryland Recycling Network members include public recycling and sustainability managers, private sector and non-profit recyclers and individuals who support recycling. We promote sustainable reduction, reuse and recycling (the 3 "R's") of materials otherwise destined for disposal and the purchase of products made with recycled material content. We achieve these goals through education programs, advocacy activities to affect public policy, technical assistance efforts, and the development of markets to purchase recycled materials and manufacture products with recycled content.

We have direct experience operating recycling and composting programs in the private sector and municipal government level. We know the ins and outs of recycling in Maryland. Our experience informs our comments.

We thank Senator Augustine for sponsoring this bill, and also thank Senator Love for being one of the original sponsors of HB 468, which passed in 2024, to establish the Commission to Advance Lithium-Ion Battery Safety in Maryland. I am a Member of that Commission on behalf of Maryland Recycling Network.

The law establishing the Commission charged the Commission with conducting a comprehensive study for the purpose of making legislative, regulatory, programmatic, or other recommendations regarding:

- Best practices, standards, and guidelines to prevent, detect, and suppress lithium-ion battery fires in:
  - Consumer and transportation applications

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- Utility applications, including a review of the National Fire Prevention 855 Standards for Grid Scale Storage and Safety
- Preventing, detecting, and suppressing lithium-ion fires at recycling facilities
- Reusing, recycling, and decommissioning lithium-ion batteries
- The viability of extended producer responsibility for lithium-ion batteries
- Training, education, and other information to better inform the public and first responders regarding lithium-ion battery safety
- Any other global issues the Commission may consider useful for enhancing the safety and reuse of batteries in the State.

The Commission's membership comprised a diverse set of experts that provided technical, public safety, environmental, and operational expertise throughout the Commission's work.

Our Commission did also provide a comprehensive set of recommendations in a [68-page Final Report](#), dated November 25, 2025.

We feel that the Commission has done great work with establishing these initial recommendations, however, per Key Legislative Recommendation #7 (page 6 of the Final Report), a re-establishment and extension would allow us to continue research and recommendation on the following areas:

- Battery risks at the Port of Baltimore, roads, rail and tunnels throughout Maryland
- Impacts of battery risks on insurance providers and insurance coverage availability
- Maryland's current waste classifications for lithium-ion batteries and how they affect collection, storage, and recycling as well as how this could be better addressed in the permitting and regulation of solid waste facilities; and
- The integration of pending federal regulations and emerging third-party standards

Additionally, we feel that there is need for additional subject matter experts to be added to the Commission (per Section 7.2 of the Final Report), including representatives from the Maryland Port Administration, the Maryland Department of the Environment (Land and Materials Administration), the Maryland Department of Transportation, commercial vehicle shippers, and representatives from the property casualty and commercial insurance industries.

For reference, the Commission report and supporting materials have been posted on the Office of the State Fire Marshal's website, located below:

[https://mdsp.maryland.gov/firemarshal/Pages/%E2%80%8BHB468 Commission Advance Lithium-Ion Battery Safety Maryland.aspx](https://mdsp.maryland.gov/firemarshal/Pages/%E2%80%8BHB468%20Commission%20Advance%20Lithium-Ion%20Battery%20Safety%20Maryland.aspx)

Please also see the attachment to this testimony for further background and concern regarding lithium-ion battery thermal runaway events and fires.

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We strongly urge passage of SB 553. Thank you for your consideration.

Sincerely,



Kitty McIlroy  
President  
Maryland Recycling Network

The Maryland Recycling Network stands ready to serve as a sounding board and resource for legislators and others interested in pursuing our mission. Please do not hesitate to contact MRN via email [phoustle@marylandrecyclingnetwork.org](mailto:phoustle@marylandrecyclingnetwork.org), phone 301-725-2508 or mail - MRN, PO Box 1640, Columbia MD 21044 if you have any questions or would like additional information regarding the above.

## Health and Safety Specific Information Regarding Lithium-Ion Batteries

Lithium-ion batteries are found in a variety of small to medium format electronic products including hearing aids, cell phones, e-bikes, scooters, laptops, tablets and vaping devices, in addition to large format products such as electric vehicles and stationary battery energy storage systems (BESS)/ battery storage power station or battery energy grid storage (BEGS).

When punctured or otherwise compromised, a chemical reaction can cause a fire or explosion. Chemical reactions during the fire make them burn longer and hotter and make them difficult and hazardous to extinguish. They escalate much faster, are prone to reignition and can burn for days.

Lithium-ion battery management is one of the most pressing issues, if not the most pressing issue, in the solid waste management and recycling industry right now.

Battery fire incidents have been exponentially increasing in Maryland and across the country and world. We've already seen fires at collection sites, MRFs and on solid waste trucks in Maryland. Battery fire incidents severely impact and endanger site staff, capital infrastructure like MRFs, transfer stations, waste facilities and landfills, collection trucks/drivers, other processing equipment, insurance rates (limiting capability to even be insured), in addition to first responders, who continue to receive more and more call outs due to battery fires. We need to protect our essential workers, first responders, and recycling infrastructure here. Re-establishing this Commission will help us do that.

The solid waste management sector is already consistently ranked as one of the most dangerous, deadliest labor sectors in the United States:

“Waste and recycling collection was fourth deadliest occupation in 2023...The latest Bureau of Labor Statistics data showed an increase in the rate of fatalities for the refuse and recyclable materials collection occupation. The number of fatalities in MRFs also increased... Waste and recycling jobs remain a potentially hazardous occupation, despite ongoing efforts to get out of the top 10 deadliest job category by investing in more safety training and technology for vehicles and facilities. The only occupations that had higher fatality rates in 2023 were logging, fishing and hunting and roofing...Solid Waste Association of North America CEO Amy Lestition Burke said in [a statement](#) that the organization was “very disappointed” in the results. “This data reinforces the need for safety improvements. The individuals who collect waste and recycling are making communities livable and sustainable. We all have a role to play to protect these everyday heroes.. “The increase in solid waste collection worker fatalities is concerning, and occurred from coast to coast and at small haulers, the large publicly traded companies, and local governments,” said David Biderman, a safety consultant and former SWANA CEO, in an emailed statement that also noted this was one of the

highest rates in years. “There are a wide variety of contributing factors to these tragic incidents. We know what these factors are, and need to address them.”<sup>1</sup>

“Solid waste collection workers are still on the list of the ten most dangerous jobs. From the truck itself to the collected garbage (*lithium-ion batteries*, syringes, glass, and chemicals: MSW has a lot of unexpected hazards in store), from distractions like mobile phones to bad weather conditions, from pedestrians to other drivers: The sources of danger are manifold. And more waste means more risks... Safety campaigns and awareness have an effect...SWANA will continue leading industry efforts to reduce them even further and fulfill our Strategic Plan goal of getting solid waste collection workers off the list of the ten most dangerous jobs.”<sup>2</sup>

Unfortunately, many people put these batteries in their recycling and trash bins. A recent National Solid Waste & Recycling Association (NWRA) [report](#) estimates more than 5,000 fires a year at recycling and waste facilities and in collection trucks. While many recycling processing facility fires can be quickly contained, several facilities have been damaged so badly they had to be closed and rebuilt. The loss to the facility owner can be more than \$50 million dollars. In addition, local recycling programs relying on those facilities are forced to scramble to find new processing facilities for their recyclables. Insurance companies are also [backing away from insuring](#) these types of solid waste and recycling facilities due to fire concerns.

The Commission will continue to study the severe human health and safety issues from toxic chemical battery flammable gas, smoke, fire and explosion incidents (which can be fatal, even from inhalation). This Commission will also continue investigating increased public education, comprehensive protocols with local fire departments, heat spot and fire detection and suppression equipment, as well as report on [emerging technologies and industries](#) transitioning away from liquid state to solid state electrolyte-based batteries, which are less susceptible to fires. These efforts will ensure that these batteries, so essential to so many products, can continue to be useful without causing fires and destabilizing our critical infrastructure.

Additionally, the Solid Waste Association of North America (SWANA), the National Waste & Recycling Association (NWRA), and the Recycled Materials Association (ReMA) released a joint "Guide for Developing Lithium-Ion Battery Management Practices at Materials Recovery Facilities" to offer practical steps for materials recovery facilities (MRFs) to better identify, manage, and respond to improperly discarded lithium-ion batteries. The guide is available [here](#). But the best guide is keeping them out of the recycling stream and the trash. After all, the most effective education and

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<sup>1</sup> [https://www.wastedive.com/news/waste-recycling-worker-fatality-rate-2024/735975/?utm\\_source=Sailthru&utm\\_medium=email&utm\\_campaign=Newsletter%20Weekly%20Roundup:%20Waste%20Dive:%20Daily%20Dive%2012-21-2024&utm\\_term=Waste%20Dive%20Weekender](https://www.wastedive.com/news/waste-recycling-worker-fatality-rate-2024/735975/?utm_source=Sailthru&utm_medium=email&utm_campaign=Newsletter%20Weekly%20Roundup:%20Waste%20Dive:%20Daily%20Dive%2012-21-2024&utm_term=Waste%20Dive%20Weekender)

<sup>2</sup> [Workplace safety: Getting waste collection off the list of the most dangerous jobs | WMW](#)

enforcement efforts to improve our recycling programs come to naught if the collection truck or processing facility burns down.

A survey of our members reported fires on tipping floors at recycling processing facilities, fires in trash collection trucks, fires at waste transfer stations and landfills, and even overnight fires in separately collected and stored electronics containment areas for electronics recycling contracts. Fortunately, none of these events caused serious damage. However, a [2022 fire](#) at a recycling processing facility in York, Pennsylvania, which is used by some Maryland communities, caused it to shut down.

Additionally, WM's three recycling facilities in Maryland (including the MRF in Elkridge, MD) reported the following:

- 30-40 small scale battery fires (smoke fires) in 2025
- 5-7 medium sized incidents in 2025

Additionally, there were 245 fires reported across 64 waste facilities (during 2013–2020) caused or likely caused by lithium-ion batteries. Affected facilities included MRFs (Materials Recovery Facilities), solid waste trucks, landfills, transfer stations, public drop-off points, and electronics and battery recyclers. 78% of MRFs required emergency response for fires, with 43% facing monetary impacts. Lithium-ion battery fires are increasing due to the rise in portable, chargeable electronics and electric mobility such as scooters, bikes and vehicles. For full details, please see the [EPA's Lithium-Ion Battery 2021 Report](#).

## THE FACTS

An overheating battery can go from 212°F to 1,800°F in the blink of an eye. (Source: [Clemson University](#).) When batteries ignite, they can throw off flames reaching temperatures of over 2000°F. (Source: [National Institute of Standards and Technology](#).)



**250+**  
FIRES IN 7  
MONTHS

In the first seven months of 2025, there were more than **250 fire incidents at waste and recycling facilities across the U.S. and Canada**—more facility fires than any other period on record. (Source: [Ryan Fogelman](#))



**\$22**  
MILLION PER  
FACILITY

Catastrophic losses caused by fires at waste processing facilities have **risen 41% in the last five years**, with the average catastrophic loss causing \$22 million in damage. (Source: [Recycle.com](#))



**89+**  
DEATHS IN  
THE US

Since 2020, there have been at least **89 deaths** directly related to **lithium-ion battery incidents** in the United States, nearly a 50% increase from 2015-2019! (Source: [UL Solutions](#))

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Source: [Safe Battery Disposal](#)



## EXTREME HEAT

When a battery overheats, it can jump from 212°F to 1,800°F in a second—and produce flames as hot as 2,000 °F! (Sources: [Clemson University](#); [National Institute of Standards and Technology](#).)



## TOXIC GAS

As lithium battery fires burn, they release toxic gasses like hydrogen fluoride and carbon monoxide. If inhaled, these fumes can lead to trouble breathing, eye and skin irritation, and in some cases, even death.



## LONGER BURNING

Battery fires don't just burn hotter—they burn longer, too. These fires are extremely difficult for firefighters to put out, and they can quickly reignite without a moment's notice.

Source: [Facts — Safe Battery Disposal](#)

## Increased Fires in the U.S. Waste Stream

- **Fires are increasing across waste industry (EPA report)**
- **State, Tribal and local governments (ASTSWMO Survey)**
  - High costs for safe handling
  - Hard to recycle: vapes, embedded batteries
- **Fires at U.S. material recovery facilities**
  - 5,000 fires annually across 300 MRFs ([NWRA](#) estimate)
  - More than 1% of MRFs experience a catastrophic loss every year
  - MRF property insurance rates increased 10-50x from 2017 – 2023



Photo credit: Hai Nguyen (Oakland, CA)

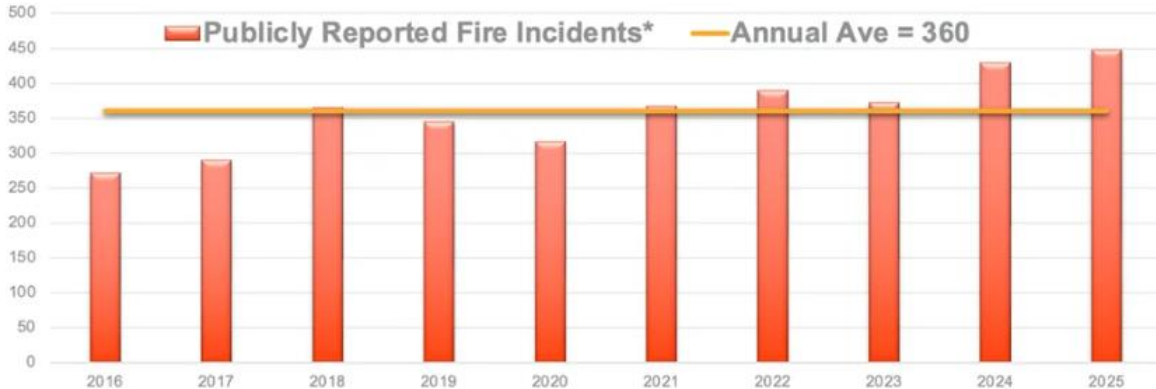


Slide from 1/27/26 EPA Virtual Roundtable Meeting

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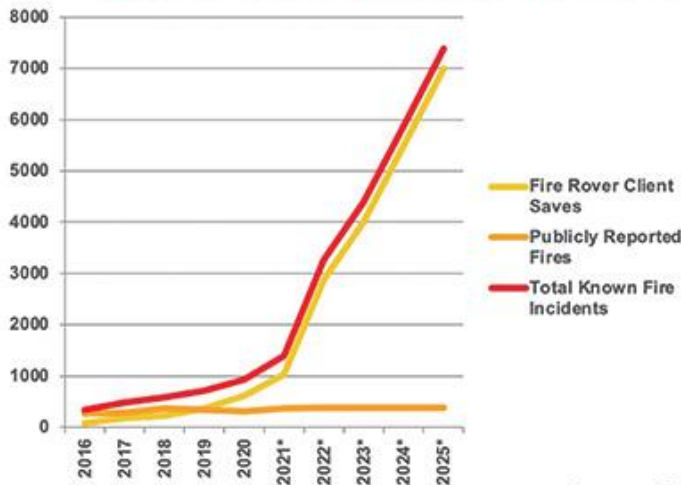
## ANNUAL REPORTED WASTE & RECYCLING FACILITY FIRES US/CAN 2016 - 2025



Source: Ryan Fogelman, rfogelman@firerover.com

As of January 2026, [“this year was the worst on record for publicly reported fires since I began consolidating and sharing the data in 2016. We finished the year with 448 publicly reported waste and recycling facility fires in the U.S. and Canada, which is more than last year’s record of 430 fire incidents and nearly 25% above the annual average of 360 fire incidents.”](#)<sup>3</sup>

## WASTE & RECYCLING FACILITY FIRES US/CANADA ACTUAL & FUTURE TRENDS



Source: Ryan Fogelman, rfogelman@firerover.com

“Then came the lithium-ion battery threat that revealed itself in 2018 in the form of increased fire incidents across the globe... This problem is not going away. In fact, the number of lithium-ion batteries forecasted to enter the waste and recycling streams is

<sup>3</sup> [January Fire Report](#), Date Accessed: February 15, 2026.

only growing along with hotter and dryer environments, which leads to a breeding ground for increased fire incidents... The goal is not just to catch a fire when there are flames, but also to understand that there are situations where hot spots can be cooled before they flame. The goal is to set the tripwire as early in the process as possible. This can be done through top-grade thermal detection in combination with smoke, optical flame detection, and advanced data analytics—all coupled with a highly trained agent who is able to weed through false positives to fight only the incidents that need fighting... 2022 was (and 2023 is forecasted to be) the worst year for reported fire incidents ...we are heading down a path where investments in solutions like the Fire Rover are considered 'critical' to successfully responding to the fire hazards that continue to hit our waste and recycling streams. We need a funding mechanism like the government or the battery manufacturers to help pay for the costs they have created... Investing in proper equipment for the fire department to use onsite can be a huge timesaver and lifesaver. Even going as far as having attached and rollout hoses so the firefighters can immediately start applying suppressant to the affected area can make a huge difference”

Source: [Keys to Building a Successful MRF: Before, During, After - Waste Advantage Magazine](#))

Lastly, videos of lithium-ion battery caused fires are provided below for reference:

- <https://youtu.be/8nz5ijXcckI?si=HqCA9p0OxftZ4KXK>
- <https://youtu.be/Vudxuqjscho?si=UspX6BmIM9rmeo5A>
- [Video: How quickly a battery fire can start - Inside Waste](#)