Vol 1, No. 6, 2025 NEWSLETTER

PROSPECT RECYCLES!

THE SCIENCE & ECONOMICS OF RECYCLING

Did you know?

- ***The average person can recycle over 700 lbs. of material each year.***
- ***The average person uses 7 trees per year in wood and paper products.***
- ***It is estimated that 75% of ALL ALUMINUM ever produced is STILL in use.***
- ***A glass bottle takes 4,000 years to degrade.***

FREE SEMINAR ON "HARD-TO-DISPOSE-OF" WASTE.

JANUARY 12, Prospect City Hall

Prospect welcomes:

Karen Maynard, Louisville Metro's Solid Waste Education Mgr.

Ms Maynard will present an audio visual seminar in the City Hall auditorium between 5PM and 6:30 with Questions and Answers from the people in the live audience. Others can participate through **Prospect's YOU TUBE Channel, as with Council Meetings.**

The content focus this time will be on hazardous and potentially dangerous products in our homes and garages, with leads and information on **how and where** to deposit these safely.

SEATING IS LIMITED in City Hall's auditorium and **doors open at 4:30.**

Recycling and Disposal of Batteries: Benefits, Risks, and Environmental Challenges

While batteries power nearly every aspect of modern life—from household electronics to electric vehicles, their disposal poses significant environmental and safety challenges. Understanding the pros and cons of recycling and disposing of batteries is essential for developing safer waste management practices and protecting both people and the environment.

The Benefits of Recycling Batteries

Recycling batteries helps conserve valuable natural resources and prevents hazardous materials from entering the environment. Many types of batteries—such as lithium-ion, nickel-cadmium (NiCd), and lead-acid—contain metals like cobalt, nickel, zinc, and lead that can be recovered and reused in manufacturing. By reclaiming these materials, recycling reduces the need for mining, which in turn lowers greenhouse gas emissions and conserves energy.

In addition, proper recycling prevents toxic substances from leaching into soil and groundwater. When handled through certified recycling programs, batteries are dismantled safely, neutralizing corrosive electrolytes and separating reusable components. Recycling also helps reduce the volume of hazardous

FREE TOUR!

Rumpke's Recycling Facility: February 19, 2026

Seeing is believing.

Many people still believe that all garbage still goes to the landfill. Come along with fellow residents, bring an open mind and return to share what you learned. This is a 2- part narrated access to the 900 - acre landfill, including the new 27-acre cell, and then the 226,000 square foot Materials Recovery Center, one of the largest in the country.

- We will drive private cars from City Hall at 8:45 to the Cincinnati area.

- "Carpooling" is encouraged to conserve fuel. Must be 16 years of age.

- Arrive at 11:00 for the panoramic bus tour of the landfill.

- Arrive at the 226,000 sq. ft. Recycling Center at 12:30.

- Lunch will be provided at the facility.

- Tour the facility "at-work" with a Q & A session.

- Leave to arrive in Prospect by 4:00.

Our excursion is limited to 20 residents. The tour will include the Recycling Facility and their sanitary landfill.

Call 502-228-1121 or call Norman Hicks @ 502-396-0997 or email normanhicks54@gmail.com

OR REGISTER USING THE QR CODE

PROSPECT CARES

waste in municipal landfills, supporting compliance with environmental regulations and sustainability goals.

The Dangers of Improper Disposal

When discarded with regular household trash, batteries can pose serious fire and contamination risks. **Alkaline batteries**, though now largely free of mercury, still contain manganese dioxide, zinc, and potassium hydroxide; materials that can corrode and leak in landfills, contaminating soil and water. *While many municipalities allow alkaline batteries in regular trash, large accumulations can lead to localized chemical reactions if the casings rupture.*

Rechargeable batteries, **especially lithium-ion types, present far greater hazards**. When crushed, punctured, or exposed to heat during collection or compaction, lithium-ion cells can short-circuit, ignite, or even explode. Fire incidents linked to discarded batteries have become increasingly common in garbage trucks, recycling facilities, and landfills. According to the U.S. Environmental Protection Agency (EPA), lithium-ion batteries are responsible for hundreds of fires in waste management systems each year, endangering workers and damaging infrastructure.

Even small button-cell batteries and nickel-cadmium types can leak heavy metals such as cadmium and mercury if improperly disposed of. These metals accumulate in the food chain and can cause neurological and developmental harm in humans and wildlife. The cumulative impact of millions of discarded batteries makes improper disposal a significant public health issue.

Challenges and Limitations of Recycling

Despite its benefits, battery recycling faces logistical and economic barriers. Collection programs can be costly to operate and difficult to enforce, especially for small consumer batteries. Many recycling facilities are not equipped to handle the complex chemistry of newer battery types, and contamination from mixed materials can reduce efficiency. Furthermore, transporting used batteries to specialized recycling centers increases carbon emissions and costs.

Conclusion

The safe management of used batteries requires a combination of public awareness, regulatory enforcement, and technological innovation. Recycling offers clear environmental and economic advantages, but improper disposal poses serious fire and contamination risks. As battery usage continues to rise—especially with electric vehicles and renewable energy storage—improving collection systems and expanding recycling capacity will be vital. Consumers can help by participating in designated battery drop-off programs and avoiding disposal in household trash, ensuring safer and more sustainable waste management for all.

Battery Types, Hazards, and Recycling Options

	Battery Type	Common Uses	Primary Hazards	Fire Risk	Recyclability	Recycling/Disposal
	Alkaline (AA, AAA)	Household electronics, toys	Leakage of zinc/manganese compounds in landfills	Low	Moderate	Municipal recycling or regular trash in local rules
	Lithium-ion	Phones, laptops, power tools, e-bikes	Fire/explosion risk when damaged or compacted	High	High	Designated drop-off or battery recycling
	Nickel-Cadmium (NiCd)	Power tools, cordless	Toxic cadmium pollution	Medium	High	Recycle through hazardous
	Lead-Acid	Car and industrial batteries	Lead contamination, acid leakage	Medium	Very High	Must be recycled, banned in landfill
	Button Cells	Watches, hearing aids	Mercury (if present)	Low	Moderate	Recycle as hazardous