


21st Century Battery Recycling: Keep the Bunny Going!

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Batteries: They're EVERYWHERE!



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Battery Types – Primary


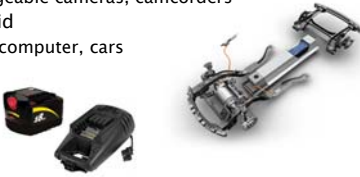
- ▶ Disposable – Low Power Drain
 - Zinc–Carbon
 - remote controls, flashlights, clocks, or transistor radios
 - Alkaline
 - toys, flashlights, etc.



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Battery Types – Secondary


- ▶ Rechargeable
 - Nickel Cadmium and Nickel Metal Hydrides
 - rechargeable cameras, camcorders, power tools
 - Lithium
 - rechargeable cameras, camcorders
 - Lead Acid
 - u.p.s., computer, cars

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Battery Waste – Regulations


- ▶ Federal **Resource Conservation and Recovery Act (1976)** prohibits improper disposal of **hazardous waste**. A waste may be considered hazardous if it is ignitable (i.e., burns readily), corrosive, reactive (e.g., explosive) or toxic.



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Battery Waste – Regulations

- ▶ Federal **Mercury-Containing and Rechargeable Battery Act (1996)** prohibits handlers (e.g., contractors) from disposing of waste Ni–Cd and Lead Acid batteries and further indicates that these batteries must be sent for recycling.



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Battery Waste – Regulations

- ▶ Maryland's Rechargeable Battery Management Law
 - Maryland is one of a dozen states that have enacted laws to regulate the management of used rechargeable nickel-cadmium (Ni-Cd) batteries and associated products. Although Maryland's labeling and easily removable provisions have been replaced by uniform federal requirements contained in the Mercury-Containing and Rechargeable Battery Management Act (P.L. 104-142), several other state requirements remain in effect.



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Battery Waste – Generators

Household

VS.

Business/Government

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Battery Collection

- ▶ County Recycling Centers



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Battery Collection

- ▶ Select Retailers (Lowes, Staples, etc.)



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Battery Collection

- ▶ Trash Can!!!



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Battery Processing

- ▶ Packaging & Shipping:

- Lead Acid
- Lithium
- NiCad
- Alkaline



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Battery Processing (con't)

- ▶ Incineration vs. Recycling



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Battery Processing (con't)

- ▶ Recycling – The Wrong Way!



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Battery Processing (con't)

- ▶ Recycling – The Right Way!



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QUESTIONS?

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Thank You!

- ▶ Christopher Maciejewski
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