

## **Responsible Management of Waste Batteries for Businesses, Schools and Government Agencies**

Unwanted or used batteries are frequently hazardous wastes because they contain heavy metals and corrosive electrolyte solutions that are the source of their energy. Metals commonly used in batteries include lead, mercury, nickel, cadmium, lithium, silver, zinc and manganese. Battery identification is critical in determining if a battery is hazardous waste and in selecting the proper disposal method. Since the type of battery often appears only on the packaging material and not on the battery itself, you should keep the battery package if possible and try to minimize the variety of batteries you purchase.

### **Which batteries are regulated as hazardous waste?**

A used battery becomes a waste on the date it is discarded. An unused battery becomes a waste on the date you decide to discard it. If you must dispose of old or unwanted batteries, you will need to determine if the battery exhibits a characteristic of hazardous waste (such as toxicity or corrosivity). In general, nickel-cadmium (Ni-Cd), silver-oxide, mercury-oxide, lithium ion, nickel metal hydride (Ni-MH), zinc-air, and sealed lead-acid batteries are hazardous wastes when disposed of.

Older zinc-carbon and alkaline batteries contain sufficient amounts of mercury to be hazardous waste when disposed of. Newer alkaline and zinc-carbon batteries often contain significantly lower amounts of mercury and other metals and are not hazardous waste. Low mercury content is usually prominently printed on the packaging material, but not necessarily on the batteries themselves. This is an example of when it is important to be able to identify the types of batteries you manage.

While lead-acid batteries of the variety used in automobiles and other vehicles would be hazardous waste if sent for disposal, these batteries have trade-in value and are easily recycled. Because of this, they are handled a little differently under state disposal regulations.

### **How should you manage unwanted or used batteries?**

If you have determined that your batteries are hazardous waste because they contain heavy metals and/or corrosive solutions, do NOT dispose of them in the trash. You should store the batteries safely in an area protected from extreme temperatures until you are able to dispose of them properly. You may choose to manage your waste batteries under the full requirements of the hazardous waste regulations or under the less restrictive requirements of the universal waste rule, as described here.

Each battery should be labeled as "Waste Battery," "Used Battery" or "Universal Waste Battery," or the batteries can be put into an accumulation container that is in good condition and capable of preventing a release in case one of the batteries starts to leak. If the batteries are placed into a container, only the container needs to be labeled as "Waste Batteries," "Used Batteries" or "Universal Waste Batteries," not the individual batteries within it. Vehicle-type batteries need not be labeled and can be stored on a pallet or neatly stacked on the floor until picked up for recycling.

Your employees should be thoroughly familiar with how to manage the batteries and what to do in case of a spill or release. Always have a spill kit or other material available to help contain and clean up a spill. Spill cleanup materials are available from scientific and safety supply companies.

**Where can you recycle or dispose of your waste batteries?**

Nickel-cadmium, nickel-metal hydride, lithium ion and small sealed lead acid batteries can be recycled through the Rechargeable Battery Recycling Corporation (RBRC). RBRC is a non-profit organization set up to provide recycling of rechargeable batteries. If you choose to utilize their services, your business would be responsible for paying the cost to ship the batteries to RBRC, but RBRC pays all processing fees and recycling costs. Pre-paid collection boxes are available from RBRC, as well as pre-paid authorization labels if you prefer to use other US Department of Transportation approved shipping containers.

The Rechargeable Battery Recycling Corporation does not recycle non-rechargeable batteries like silver-oxide, mercury-oxide, zinc-air, zinc-carbon and alkaline batteries. However, some local battery retailers will accept these batteries, as well as the rechargeable ones, for recycling. Battery recyclers and retailers can be found in your local phone directory or on the Internet "yellow pages" directories.

Although battery recycling is the strongly preferred, and probably less expensive, option, you may dispose of your unwanted or used batteries as hazardous waste. Contact a hazardous waste disposal company for assistance. Companies that provide these services can be found in your local yellow pages or on Internet "yellow pages" directories under listings for *waste disposal - hazardous*. Although these companies may not be in your local phone directory, most operate throughout the state.

**Where can you go for more information?**

For more detailed information on managing waste batteries, see the Management of Waste Batteries compliance bulletin at [www.cdphe.state.co.us/hm/battery.pdf](http://www.cdphe.state.co.us/hm/battery.pdf). You may also email questions to [comments.hmwm@state.co.us](mailto:comments.hmwm@state.co.us) or call the customer Technical Assistance Line at 303-692-3320 or 1-888-569-1831 ext. 3320 toll-free.

The Rechargeable Battery Recycling Corporation can be contacted at 1-800-8-BATTERY or visit their web site at [www.rbrc.org](http://www.rbrc.org). RBRC has programs available for retailers, businesses and public agencies that want to collect and recycle rechargeable batteries.

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This is designed to provide general guidance on the appropriate management of wastes and is not intended to provide a comprehensive analysis of all regulatory requirements.