



*Providing environmental and energy information and solutions to
Nevada's businesses and communities*

Waste Reduction and Recycling Tips for Empty Containers

As concerns increase about groundwater contamination and landfill capacity, disposing of empty containers has become more difficult. Landfill operators are concerned about the effect of residues left in empty containers, regardless of size and the space required for disposal of large quantities of empty containers.

This fact sheet outlines some tips to help your business reduce or recycle empty containers. **Options for handling empty containers may be affected by decisions you make when purchasing materials; therefore, consider the reduction options listed below before purchasing materials.**

Good Housekeeping Ideas

- Make certain valuable material are not left in drums or containers. For example, one inch of material remaining in 10 drums represents a loss of about 20 gallons of usable material. Consider using a pump to completely empty the drums, or tip containers to drain any remaining material.
- Make sure empty containers stored outside are **closed** and laying on their sides. This prevents rainwater from entering easily. Rainwater collecting on the tops of drums and can slowly seep into empty drums even when bungs are closed.
- Store empty containers where there is controlled access. This allows you to monitor container inventory and prevent unauthorized materials (hazardous and non-hazardous) from being added to containers. Keep in mind drums (if they contain hazardous residues) removed from your property without your company's approval could create a liability issue in the future.

Waste Reduction Options

- **Return Containers to the Supplier.** For certain types of materials, chemical suppliers may offer returnable containers. A deposit is usually required because returnable containers cost more to purchase than non-returnable containers. Be sure to keep the returnable containers in good condition to receive the deposit refund.
- **Purchase in Larger Containers.** It is difficult to obtain reusable small (less than 30 gallons) containers. Smaller containers are also more difficult to recondition or recycle than larger containers, such as 55-gallon drums which are more widely reconditioned and reused. If you can easily use all the material in a 55-gallon drum before it expires, consider purchasing materials in these larger, reusable drums.
- **Send Drums to a Reconditioner.** Drum reconditioners strip, paint, and resell good-quality, heavy-gauge empty drums. However, most chemicals are shipped in lighter weight drums (which cannot be reconditioned) because they are not made with heavy gauge steel. Ask your chemical supplier to ship your materials in drums that can be reconditioned.

Before sending drums to a reconditioner, make sure they are completely empty. Keep drums in good condition and have all the bungs, rings, and closures in place.

The definition of "empty" can be found in 40 CFR 261.7 and requires:

- All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and
- No more than 2.5 centimeters (1 inch) of residue remain on the bottom of the container or inner liner, or
- No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size.
- No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.

Initially, reconditioning drums may be more expensive due to the higher cost of the heavier gauge steel. Over time, however, it is generally less expensive to recondition drums than dispose of them. Remember to ensure the drum reconditioner is properly handling any residues removed from the drums you cannot recover.

Recycle Empty Containers. Scrap metal and scrap plastic recyclers may accept empty containers for recycling, but usually not if hazardous residues remain in the container. Check with a recycler about what they will accept. Below are a few typical questions to ask:

- Do you accept empty containers for recycling? If so, what kind (examples: HDPE, plastic or steel)?
- Do you accept residues in the bottom of a container? If so, how are residues handled?
- Do I need to certify the container as empty? What certification form should I use?
- How do I prepare the container before bringing it in for recycling? Do the ends need to be removed or does the container need to be crushed?

Be sure the recycler is actually recycling the containers or sending the containers to another recycler, rather than disposing of them. If possible, you should visit the recycler and view its operations.

You should verify the company recycling or reconditioning your empty containers is properly handling the containers. Under the Superfund Amendments of 1986, hazardous residues left in empty containers may subject a company to property cleanup liabilities.

The Business Environmental Program (BEP) is a partner in the Business Services Group
College of Business of the University of Nevada, Reno.

DISCLAIMER: This guidance document is intended as general information and is not provided nor intended to act as a substitute for legal advice or other professional services. BEP advises the regulated community to read all applicable regulations set forth in both US Code of Federal Regulations (Title 40 C.F.R. Parts 260-279) and the Nevada Hazardous Waste Regulations and to keep informed of all subsequent revisions or amendments to these regulations. This guidance document was developed by BEP with funding support provided by the Nevada Division of Environmental Protection (NDEP).

Printed on recyclable paper



Business Environmental Program
College of Business
University of Nevada, Reno