

## **Dumpster Dive Best Management Practices**

### *Accepting the Zero Waste-To-Landfill Challenge*

Performing an audit of your business's waste stream, aka a "dumpster dive" or "waste sort," is crucial to understanding where your opportunities for waste reduction lie. There are many ways an audit can be performed. Businesses can choose to pull out random, representative samples of the waste stream in order to categorize and measure the main components. Or, a business may choose to go the extra mile and perform a more comprehensive audit of its waste. There are advantages to making the additional effort to analyze the entire contents of a company's solid waste dumpsters. Not only do these waste sorts identify what is currently in the waste stream, but these events can be used to educate employees on the company's waste reduction goals and to determine the effectiveness of the recycling program.

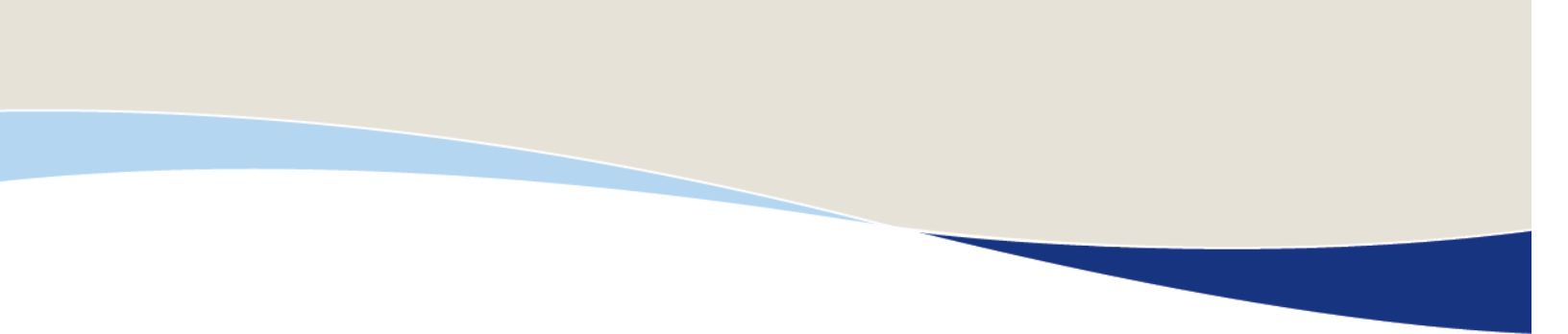
A general discussion is given of this topic below, followed by a number of case studies. The lessons learned from these case studies will help your business perform a waste audit in the most efficient, effective and safest manner possible. Each of these stories contains valuable information about how to reduce the waste or divert it to a more productive destination than the local landfill.

### ***Basic Concepts***

The dumpster dive is an excellent first step in assessing the status of existing waste management practices. It provides insight into how much and what type of waste is being sent to the landfill. A dumpster dive involves accumulating a container of waste then spreading it into a large enough area to allow sorting by the type of material. If the current practice for waste pickup is based on a set schedule, facilities may wish to revise current practices to measure the weight of all waste loads leaving the site. Before emptying the first dumpster, be sure to weigh the waste. Enlisting the support of your waste management company may help.

The main process of the dumpster dive involves safely sorting waste into common material categories. After sorting is complete, the weights and volume of each waste type can be measured to get a sense of the percentage contribution of each type of waste. In addition to documenting other





possible recyclable materials, companies may find they are not capturing as many recyclables as possible. With baseline data in hand from the dumpster dive, facilities can then implement measures to collect and divert more materials. Gathering data during the dumpster dive and measuring waste hauled from the site may become sufficient methods to help track progress towards zero waste-to-landfill goals.

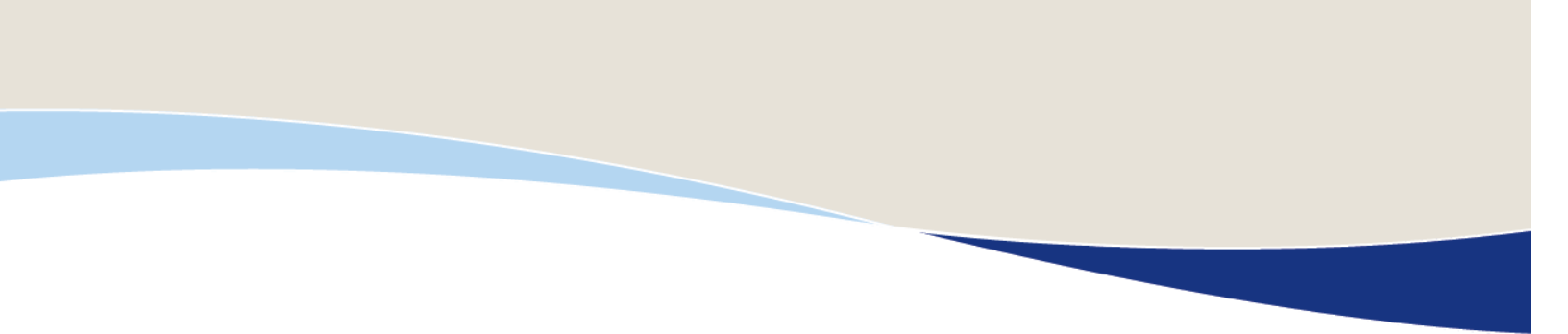
### ***Preparation***

There are a number of key preparation points to dumpster diving that help ensure success. These include designating sufficient areas for dumping and sorting, recruiting sufficient workers to perform the waste sorting effort, scheduling sufficient time to perform the required activities, ensuring the availability of essential personal protective equipment, and having access to scales and potentially secondary containers to allow the measurement of the separated waste materials. Choosing a time of year when the weather is mild allows parking lot areas to be used and reduces the potential for rain, wind and pest insects. Suggested personal protective equipment includes gloves, goggles, Tyvek suits, and possibly hats. If the sorting is conducted outside, be sure to make sunscreen, hats, and water available for volunteers. The waste hauler should be able to assist in the unloading of the dumpster. And arrangements should be made for prompt pickup of the full container once the dumpster dive and associated measurements are complete.

Individual waste components may be collected on 4 mil plastic tarp. Use of video and/or photography equipment allows documentation of the event for managers and others unable to participate. Some companies prefer to conduct the dumpster dives at times when the plant is not operating, so they don't interfere with the plant's operations. Others use the occasion for a social event and encourage as much employee participation as possible. These decisions depend on the culture of the company and the production demands on the personnel.

### ***Implementation***

During the day of the event, following the emptying of the dumpster into a convenient area, green team members and other volunteers will sort the materials. It is recommended that people set aside between two hours and four hours for sorting and staging piles for display. Sorting should be done by the type of material. For example, materials your facility recycles, prominent materials that could potentially be reduced/reused/recycled, and wastes that can only be landfilled should be sorted. Once the waste is sorted, people will need to weigh each class of material and determine its volume. Pictures may also illustrate to potential material processors and market specialists the materials available. Facility staff can use the resulting data and do simple extrapolations based on hauling schedules and records to project the amount of generation of any given material.



It may be worthwhile to pay the waste hauler to clean up after the waste sorting event. Finally, assistance may be available through the N.C. Division of Environmental Assistance and Customer Service or Waste Reduction Partners, if training or briefing is required before the dumpster dive.

### **Case Studies**

The case studies below are examples of successful dumpster diving events:

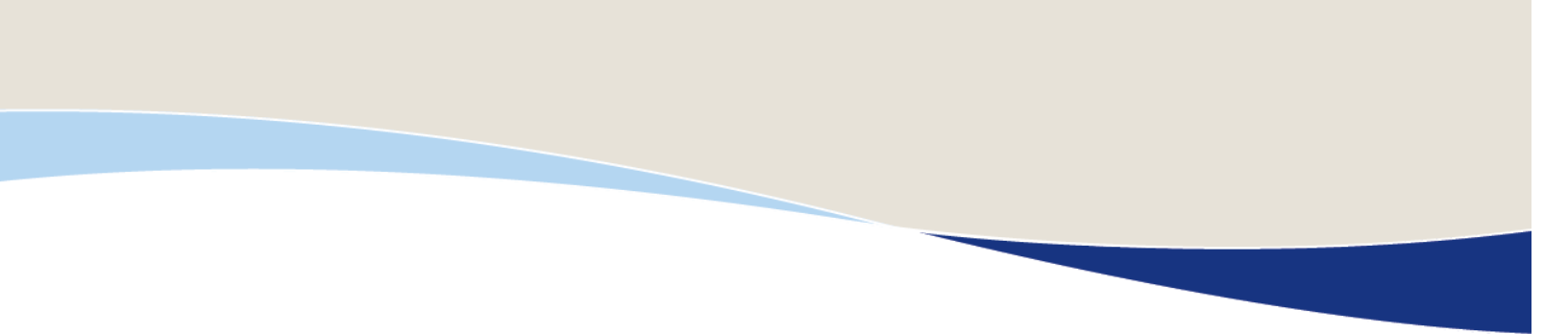
#### *Burt's Bees Dumpster Day – Durham, N.C.*

Burt's Bees was one of the first businesses to ramp up its waste audit to include the entire contents of the dumpster. The Burt's Bees Green Team, the ECOBEES (Environmentally Conscious Organization Bringing Ecologically Empowered Solutions), chose to use the dumpster audit to educate employees about the size and scale of the Burt's Bees waste stream and to encourage avoiding the creation of the waste altogether.

On their "Dumpster Day" the ECOBEES arranged for their waste hauler to dump the contents of the dumpster onto a plastic tarp in the company parking lot. The dumpster contained two weeks of waste, or about 5.6 tons, generated from the administrative and manufacturing buildings. The ECOBEES arranged three piles: currently recyclable, potentially recyclable, and not recyclable. They found that roughly 25 percent of the waste by volume should have been recycled in the company's existing recycling program, while another 25 percent could be recycled if they had a suitable outlet. After the waste was sorted, the ECOBEES served as tour guides, inviting the 300 employees working at the plant to walk through pathways between the piles and discussing what could have been reduced or recycled. The ECOBEES were pleasantly surprised by the number of employees who pointed out specific components of the waste stream while devising ways to avoid the waste. Burt's Bees saw immediate results after its dumpster day. During the next year, the amount of waste generated by the facility decreased by 50 percent.

#### *ThermoFisher Day of the Dive – Asheville, NC*

To continue progress towards their zero waste-to-landfill goal, ThermoFisher's Green Team organizes an annual "Day of the Dive" during its Earth Week celebration. ThermoFisher also chose to sort through its 40-yard compactor, representing as much as three days of waste from the manufacturing facility. ThermoFisher's preparation was similar to Burt's Bees, but ThermoFisher also decided to invite its recycling and compost vendors to participate. The vendors were able to help identify items that could have been recycled, and they set up booths to help educate employees about their programs. ThermoFisher encouraged employees to visit the Day of the Dive by coordinating it with



their Earth Week raffle. Plant management gave employees an extra 15-minute lunch break in order to have time to attend the event. The most eye-opening aspect of the Day of the Dive has been the amount of packaging from ThermoFisher's suppliers that enters the waste stream. As a result, ThermoFisher has focused on these materials, some of which was already recyclable in the company program, as they educate employees further and seek their input on waste reduction ideas.

#### Final Note

If a full dumpster dive is not feasible, or practical, companies are encouraged to conduct multiple inspections of its disposed waste stream to visualize what is being discarded. If a company is using rolloff containers for waste hauling, consider accompanying the container to the landfill and, with permission from the disposal facility, taking pictures of the contents after dumping them. Staff can also do visual inspections of materials in dumpsters just before dumping and can get a sense of disposed streams through facility walk-through inspections of full waste containers. Although a dumpster-dive is the best way to get a thorough sense of the discarded material stream, these kinds of inspections can approximate the visualization of a dumpster dive and help identify additional waste reduction opportunities.