

## GETTING STARTED

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

Waste reduction through source reduction, material reuse, and recycling has been the target of industrial pollution prevention programs for many years. Recently, as companies have focused further on process optimization, lean-and-green manufacturing, and environmental management, the potential for eliminating materials sent to the landfill has become a target for many and a reality for some. The commitment to divert waste from landfills demonstrates an organization's far-sighted view of materials management and economic resiliency.

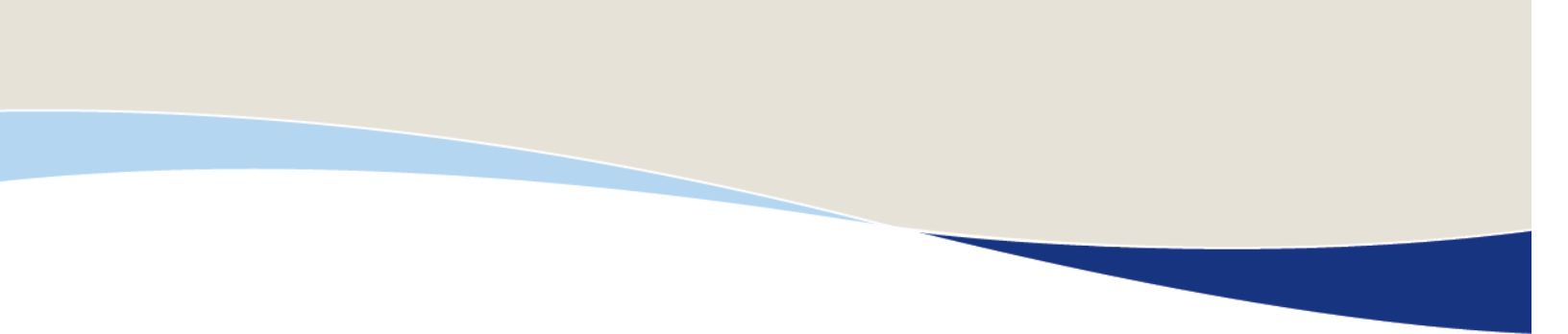
As part of continuing efforts to promote environmental stewardship, the N.C. Division of Environmental Assistance and Customer Service, or DEACS, has teamed up with the [Waste Reduction Partners](#) to assist businesses in North Carolina in their pursuit of zero waste-to-landfill, or ZWTL. Many companies in the state's Environmental Stewardship Initiative have pursued ZWTL and more are adopting this goal every year. This document presents information for companies interested in becoming a [\(ZWTL\)](#) facility.

### ***Why ZWTL?***

Many companies with ISO 9001 or ISO 14001 programs are motivated to promote a quality-focused, sustainable manufacturing environment. Attaining a zero waste-to-landfill operation is arguably the ultimate objective of waste reduction programs and effective resource utilization. Depending on the specific corporate and facility condition, there can be several motivating factors in the decision to promote zero waste-to-landfill. These may include the following:

- *Cost Savings:* There are many levels of direct and indirect cost savings when focusing on ZWTL. Any material not captured within a product is lost value, even if it is recycled. Why pay for a feed stock material to be processed, shipped, handled by staff, sent through the production process, and then just sent off as scrap and hauled off as waste?
- *Sustainability Programs:* In a world where resources are limited and the costs of materials and services continue to rise, the economic case for a sustainability program is a practical reality. By maximizing the use of resources and minimizing the associated waste, a company can reign in the costs of operating a facility and contribute toward the broader goals of sustainability. For many organizations, corporate sustainability or corporate social





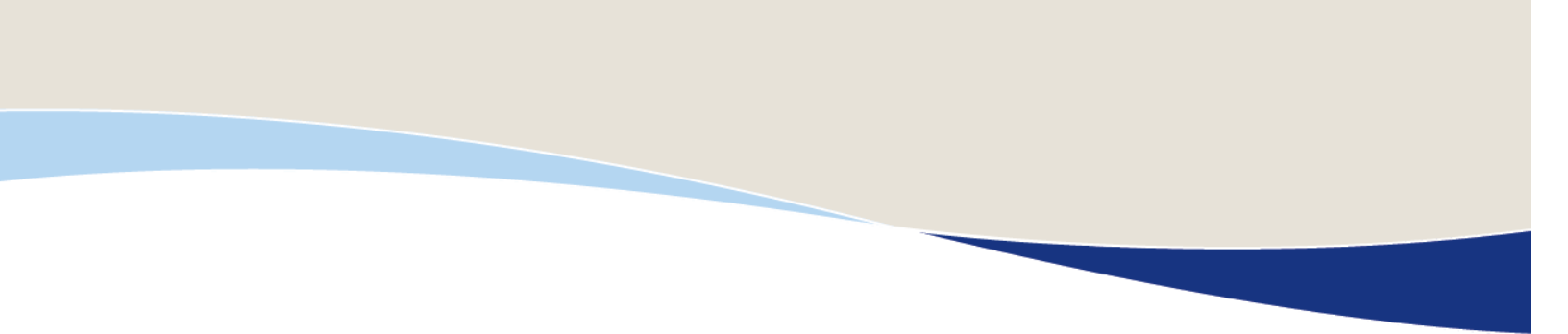
responsibility programs are a principal reason for accepting the zero waste-to-landfill challenge. The driver may also come from public investors or stakeholders.

- *LEAN Manufacturing* - Lean manufacturing has led many companies to the goal of ZWTL. LEAN is a practice that instills an on-going consideration of waste and how to eliminate it. Waste is considered in all activities and includes expended time, labor, space, and the inefficient use of materials. The path to being LEAN can coincide nicely with the path to ZWTL.
- *Supply Chain Drivers*: Some companies, such as Wal-Mart, Kroger and Daimler, are promoting waste reduction by requiring suppliers to provide sustainability assessments. These types of programs help promote waste reduction towards zero waste by eliminating excess and increasing recyclability, as well as recycled content of raw materials or packaging. For more details, check out the Purchasing and Supply Chain BMP.
- *Regulatory Drivers*: Landfill disposal bans and universal waste management programs are examples of regulations passed to prevent certain materials from entering landfills and potentially impacting groundwater resources. Also, landfills are subject to a variety of regulations that make them expensive to build and operate long-term. With the competition for land resources, the use of landfills is becoming problematic for society.
- *Marketing and Public Relations*: Reaching a zero waste to landfill goal is a difficult accomplishment that shows drive and dedication at all levels of an organization. Also, the average person has an easier time understanding the achievement associated with zero waste-to-landfill than other environmental goals, such as lowering one's carbon footprint. For these reasons, reaching a zero waste-to-landfill goal can be a valuable tool in a company's marketing strategy.

### **How to Start**

The first step in assessing the status of existing waste management practices is to review how much waste and what type of waste is being sent to the landfill. If current practice for waste pickup is based on a set schedule for pickup, facilities may wish to revise current practice to measure the weight of all waste loads leaving the site.

An analytical tool used by many facilities striving for zero waste is the dumpster dive, which basically involves accumulating a container of waste then dumping it into a large enough area to allow sorting by the type of material. 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. What many



companies have found is that the dumpster dive is a good way of evaluating the strength of existing recycling efforts.

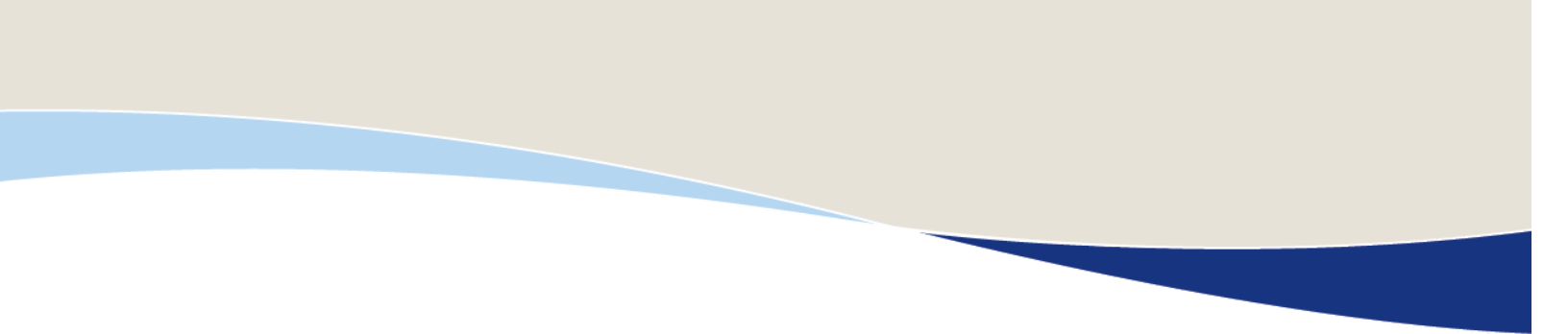
Based on the initial metrics and the results of the initial effort to characterize the facility's waste, facility-wide waste reduction goals can be set. The dumpster dive and measurements of waste hauled off site then become regular program components to track progress.

***Factors for Success:***

- *Support from Senior Management:* It is important for any company goal to be embraced by all levels of an organization, but support from the top is necessary. Senior management support for a zero waste-to-landfill goal is no exception. The goal should be formally adopted, and all employees and managers should be included in the responsibility of achieving the goal.
- *Green Team:* Since the successful implementation of facility wide waste reduction to zero waste requires cooperation on all levels of a facility, the formation of a “green team” and the establishment of a corporate ZWTL mission is recommended. By including representatives from cross functional areas, the green team promotes cooperation throughout the company. This program of inclusive representation helps ensure that all employees are stakeholders in the process.

A function of the green team will also be to develop briefing materials for contractors and other site visitors on the facility's recycling program and zero waste to landfill objective. Also, the green team will monitor the facility's metrics and work collectively to find effective solutions to problems identified along the way.

- *Create a Baseline and Goal:* From the data collected on waste creation, a current state or baseline can be created. Recent waste reduction efforts should be analyzed to form a long term stretch goal, as well as milestone goals to realistically guide future reduction efforts.
- *Launch and Train:* Now that your path and destination are in plain view, it is time to lift the curtain and collaborate with your fellow employees. Get them involved in the movement. Let everyone know why this effort is being done and how it will affect their job. Most importantly, listen to the feedback for improvements.
- *Metrics:* On the journey to a ZWTL operation, the adage “You can’t manage what you don’t measure” rings soundly. Milestone accomplishments gained through new projects, programs or equipment should be validated by data.

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- *Report and Promote:* Senior management should be updated on progress and challenges toward the organization's goal. It is vital at this stage to communicate to the stakeholders the progress of the project.
  - *Continual improvement:* Once the celebration of the current milestone or even the goal itself is complete, re-evaluate the baseline and work with senior management on the next milestone, or develop a new goal. Are your teams working effectively? Do you need more training? Are you collecting too much or too little data? What is your next challenge?

### ***Service Providers***

A company's existing recyclers or even waste haulers may be able to play a role in the goal of zero waste-to-landfill. Approach the companies that you already have a relationship with first. However, keep in mind that there are now a number of waste service companies who help facilities find markets for materials and find waste-to-energy services for materials without markets. They can provide a comprehensive resource management service rather than an average recycling service provider.

For information on service providers or launching a zero waste-to-landfill goal, contact the state Division of Environmental Assistance and Customer Service at one of the contacts listed on the following web page: <http://portal.ncdenr.org/web/deao/contacts>.