

Zeroing in on

Zero Waste



By Scot Case

Cities join the effort to divert waste before it reaches the landfill

San Francisco, Seattle, Austin and a few other cities have declared zero waste goals. Broadly defined, that means the cities are attempting to eliminate the need to send any waste to landfills, ensuring that all waste is reused, recycled, composted, or, as a last resort, incinerated to generate electricity.

It also means that purchasing professionals are modifying specifications to emphasize recycled-content, recyclable, and compostable requirements.

What is zero waste?

Popular among some well-known companies such as Wal-Mart, Honda, Kimberly-Clark and GM, zero waste seeks to stem the constant flow of waste to landfills by diverting it before it gets there. A handful of cities across the country are attempting to do the same.

The idea of reducing the amount of trash a city sends to landfills to zero sounds crazy to some, but is becoming more important than ever. Diminishing landfill capacity and rising costs are putting many cities in a squeeze.

Waste isn't going away any time soon, so new strategies to manage it are a must. Additionally, cities looking to highlight their environmental leadership can leverage their zero waste aspirations to attract like-minded businesses and residents.

Government procurement officials can make a huge difference in the ability of a city to recycle and repurpose its waste. By choosing the right products, zero waste can become not just an ideal, but a reality.

How much is zero?

Historically, zero waste claims have been limited to individual facilities in the private sector. Expanding the definition to municipalities requires a bit of perspective. Defining zero waste seems like a simple task – zero means zero. However, this is not always the case. Oftentimes, zero is an unattainable goal. Despite a community's best intentions, there are some materials that just cannot be recycled. In other cases, a facility may be able to divert 98 percent of its waste fairly easily, but the last 2 percent may be prohibitively expensive or require an unreasonable amount of treatment.

The Zero Waste International Alliance (ZWIA), a non-profit group started in 2003 to increase awareness of the zero waste ideology, has helped shape the landscape of zero waste claims over the past decade by outlining its vision of zero waste. Recognizing that it is not always possible to eliminate all waste, ZWIA recommends that organizations target a diversion rate of more than 90 percent of solid wastes from landfills and incinerators. As a result, when some organizations announce a zero waste goal has been met, they often cite the ZWIA's 90 percent threshold as a basis for the validity of their claim.

In 2004, ZWIA adopted the following definition of Zero Waste: "Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health."

Although this definition describes the ideology of zero waste, it does not provide any quantitative or normative references by which one can evaluate a company or facility. The lack of standard definition or verifiable criteria makes it more difficult for organizations to pursue zero waste

initiatives. It also makes it difficult for public purchasers to know what a supplier means when it claims it is or operates a zero waste facility.

In a recently published white-paper, UL Environment proposed a set of working definitions for zero waste that takes into account the complicated nature of these claims while maintaining strict requirements to avoid deception. "Virtually zero waste to landfill" is defined as a waste diversion rate of 90 percent or greater for a period of one year. "Zero waste to landfill" is defined as a waste diversion rate of 99 percent or greater for a period of one year.

The definitions differentiate between those facilities that are close to zero waste, but not quite there yet, and those that have truly achieved the zero waste designation. With these definitions in mind, it is easier to understand not only the goal of zero waste, but the journey as well.

Who is going zero waste?

One city that has publicly declared their zero waste ambitions is San Francisco. According to the Wall Street Journal, they already divert about 77 percent of their waste stream from landfills, which stands in stark contrast to the 34 percent average for the rest of the United States. San Francisco has aggressively pursued recycling and composting regulations to prod citizens and businesses into wasting less. In 2009, it became the first city in the United

CITIES STRIVING FOR ZERO WASTE

City	Goal
San Francisco	Zero Waste to Landfill by 2020
Seattle	Zero Waste – Long Term (70 percent diversion by 2022)
Austin, Texas	Zero Waste (90 percent) by 2040
Palo Alto, Calif.	Zero Waste to Landfill by 2021
Oakland, Calif.	Zero Waste to Landfill by 2020

States to require both businesses and residents to compost food waste – one of the many low-hanging fruits in the waste stream. They intend to reach the zero waste goal by the year 2020. Other cities are joining the effort, as seen in the table above.

Seattle has passed the halfway mark with a landfill diversion rate (54 percent) and is on track to reach 70 percent in 2022. They have used several innovative strategies to reduce their landfilled materials. The city, for example, has banned the food-service industry from providing goods

in plastic-foam containers, and they require disposable goods such as utensils, plates and cups to be easily recyclable or compostable. In 2010, they also became the first major city to allow residents to opt out of the annual phone book delivery – saving 80 tons of paper waste in the first year alone. Given enough motivation, creative solutions to common waste streams are readily available.

Why go zero waste?

In 2009, the most recent year for which figures are available, Americans threw out roughly 243 million tons of trash – or about 4.34 pounds of garbage per person, per day, according to data from the EPA. After recycling, composting and incineration, about 132 million tons ended up in landfills that year. Landfill capacity while plentiful, is not infinite, and eventually capacity will be reached at our existing landfills, raising prices for everyone, especially those with the most waste. Going zero waste is an easy hedge against this foreseeable outcome.

Not only can going zero waste save money, it can earn money too. From a business perspective, turning what was once a financial liability into an asset seems like an obvious decision. Yet, many organizations don't realize that some of the waste that they are paying to have hauled away can actually be sold for good money. In the private sector, companies see considerable cost savings through the combination of reduced waste disposal fees and increased revenue on materials they can sell. Greenbiz.com reports a major U.S. auto manufacturer, for example, brought in \$2.5 billion in revenue over four years through their recycling efforts. It may take a bit of extra effort – storing some materials until you have enough; finding local partners who can utilize the waste – but there are very few materials with absolutely no market value.

Regardless of the financial benefits, going zero waste can reap rewards in community-building and citizen engagement. A city can't achieve a zero waste goal without the help of its two greatest assets – local businesses and residents. By inviting both these parties to contribute to the common goal of zero waste and allowing them to take action, individuals can play a direct role in the planning and implementation of new zero waste initiatives. The whole community must be united around going zero waste for it to work.

How can government purchasers help?

Going zero waste is not a simple process. It requires time, effort and usually some initial costs. Yet, cities have elected to tackle the challenge, frequently starting with the procurement office.

Look at what you have. Instead of buying new materials as soon as any need arises, investigate whether it is possible to repurpose materials that already fulfill the need. Every piece of trash counts when calculating your city's landfill diversion rate. Avoiding purchases saves money twice, the cost of buying it and the cost of disposing of it. Reusing materials not only adds nothing to

your waste stream, but actually reduces it because those materials are now counted as diverted. Saving money doesn't hurt either.

Look at what you need. When new items are needed, take a systematic approach now to enable easy diversion later on. When buying items made of plastic, for example, seek products made of a single type of recyclable plastic to make it easier to recycle at the end of its useful life or look for products in which all of the plastic components are clearly labeled with the type of plastic to facilitate future recycling. Similar approaches are appropriate for metals and other recyclable materials.

Make responsible choices. Instead of buying now, and figuring out how to divert it from the landfill later, plan ahead. Make a checklist of attributes that you require for a product to be easily diverted, and stick to the checklist when choosing among a variety of products. Examples could include:

- Choose products with high recyclability (aluminum, steel, PETE, PP, PS, glass, cardboard, etc...)
- Choose products that can easily be composted (disposable utensils, containers, packaging, etc...)
- Choose products whose manufacturers have "extended producer responsibility" so that they are required to take the product back at the end of its life.
- Minimize incoming material (lower mass means less mass to divert)

Implement tracking systems and set goals. As the old adage goes, "if you can measure it, you can manage it." Setting waste-reduction goals and making people accountable for meeting them is essential to making long-term improvements in the waste diversion rate. Keeping track of not only improvements in waste diversion of government-purchased materials, but also in cost savings and increased revenues, helps to reinforce the benefits of zero waste to all constituents during the long process.

The future of zero waste

Going zero waste is an important development in the push towards a more sustainable society. By lowering the dependence on cheap landfill space, reducing costs while increasing revenue, and engaging constituents in a rewarding and critical mission, communities will feel the powerful advantages of going zero waste. As the trend becomes more popular, it will almost certainly become a more regulated environment in which standards and certification programs will be available to increase the transparency of zero-waste organizations. At some point, it may become so widespread that it is seen as best practice for modern municipalities. And, once again, government purchasers will be the ones making it happen.

About the author

Scot Case has been researching and promoting responsible purchasing issues for 17 years. He is market development director for UL Environment. Contact him via e-mail at scot.case@ulenvironment.com or in Reading, PA, at 610 779-3770.