



Zero Waste Issue Brief

By Andrea Denka

This issue brief provides an overview of zero waste, including an explanation of zero waste, how it can be implemented, and examples of zero waste programs around the country.

Zero Waste

Zero waste is the concept of composting, reusing, and recycling all materials so no waste is sent to landfills, incinerators, or the ocean. The goal of zero waste is to prevent unnecessary pollution in order to improve human and environmental health by reducing greenhouse gas emissions and conserving energy. This concept also aims to minimize excess natural resource consumption by maximizing the recovery of resources.

Zero waste expands on the reduce, reuse, recycle philosophy by examining the entire life cycle of products instead of focusing on how products are discarded. Zero waste aims to eliminate all waste generated during a product's life cycle. Resources used in the design, packaging, use, and disposal of all products must be reusable or recyclable to achieve zero waste. Materials that would end up as unusable waste, or are not economically viable to reuse or recycle, are eliminated in a zero waste program.

Single-use plastic product life cycle example.

Straws are commonly made from polypropylene plastic resin, a man-made material derived from propylene gas, which is obtained during gasoline refinement. Colorants and other chemical additives can be added to the resin to create an aesthetically pleasing appearance and to prevent cracking. The plastic resin is then mixed, stamped out into individual straws, wrapped in plastic or

paper, and shipped. Once a straw is used, it is thrown into the garbage and transported to a landfill where it may take decades to decompose.

A plastic straw's life cycle creates waste at every stage. Gasoline is needed to first create the straw, which when burned, is harmful to the environment. Straws are also often wrapped in plastic, which is not designed to be reusable, cannot be recycled, and cannot be safely composted because of the chemical additives. All of the waste generated from a plastic straw ends up in either a landfill, an incinerator, or in the ocean.

Implementation of Zero Waste

The principles of zero waste can apply to numerous processes that create waste. Examples of applying the principles of zero waste include compostable wrapping, limiting the amount of waste that can be transported to a landfill, and improving a recycling center's capabilities to recycle more materials. Zero waste is being adopted and promoted by private organizations, governments, and communities around the country.

EPA transforming waste streams tool. The Environmental Protection Agency (EPA) has created the managing and transforming waste streams tool, which gives local communities best practices to implement successful zero waste policies. The tool lists 100 different measures that communities can employ to reduce waste and to recover more usable materials. The list includes information on measures to reduce specific materials, like food waste and plastics, how receptive the local community will be to that

measure, and how impactful the measure will be for waste diversion. The tool can be accessed here: <https://www.epa.gov/transforming-waste-tool/managing-and-transforming-waste-streams-tool>

Examples of Zero Waste Programs

The EPA also lists examples of communities across the United States that have implemented zero waste measures and created successful programs.

Fort Collins, Colorado. The Fort Collins City Council adopted waste reduction goals in 2013 to achieve zero waste in the community by 2030. The city aims to divert 90 percent of its waste from landfills by 2025 and have zero waste entering landfills by 2030. The city promotes its zero waste plan by focusing on product redesign, education about what materials can be composted, and by funding recycling facility upgrades to allow more materials to be recycled locally. The plan aims to benefit the entire city by reducing the costs of current waste management, decreasing the amount of greenhouse gases the city produces, and adding more jobs to benefit the local economy. A Fort Collins representative stated that the city implemented a successful program that requires grocery stores within its jurisdiction to have composting infrastructure on site. The city also is planning on requiring all businesses and apartment buildings to recycle by 2020. More information about Zero Waste Fort Collins can be accessed here: <https://www.fcgov.com/zerowaste/>

Los Angeles. The Los Angeles City Council developed a zero waste program called Zero Waste LA in 2017. The program is a public-private partnership between the city and a private waste disposal organization. The program aims to reduce the waste the city produces by providing all commercial, private, and public organizations access to recycling bins and services. Zero Waste LA also has goals to reduce landfill disposal by one million tons per year by 2025, invest \$200 million to build and improve resource infrastructure, and decrease the amount of food waste produced in the

city. More information about Zero Waste LA can be found here: <https://www.lacity.org/blog/city-council-passes-zero-waste-la-program>

Austin. The Austin City Council approved the adoption of the Zero Waste Strategic Plan in 2011. This plan aims to divert 75 percent of waste going to landfills by 2025, and have zero waste entering landfills by 2040. The plan addresses the move toward zero waste by increasing the recycling services offered, increasing the home composting incentive program, and promoting the use of more reusable products in the state. The city of Austin hopes to increase jobs, decrease greenhouse gas emissions, and reduce the city's energy usage through its zero waste plan. According to the city's community diversion study, in 2015 the city had a 42% diversion rate. The study also concluded that more than 90% of the waste diversion in Austin resulted from composting and recycling. More information on the Zero Waste Strategic Plan and the community diversion study can be found here: <https://austintexas.gov/sites/default/files/files/Tra sh and Recycling/ZeroWastePlan- fullversion - CouncilAdoptedw- resolution.pdf> and here: <http://www.austintexas.gov/sites/default/files/file s/Resource Recovery/Austin s 2015 Community Diversion Study-Final-04.29.16.pdf>