

PRINCIPLES OF ZERO WASTE

ZERO WASTE: A NEW WAY TO LOOK AT OUR NATURAL RESOURCES

	Principles Guiding Current Practices	Guiding Principles for Pursuing Zero Waste
Systemwide Principles	<ul style="list-style-type: none"> • Limitless flow of resources from nature to dumps. • Lack of producer responsibility for environmental and social impacts of products and packaging. • Focus on increasing production and productivity of labor. • Focus on large-scale, centralized, capital-intensive industries (resource extraction and waste management). • Many environmental costs and benefits not accounted for. 	<ul style="list-style-type: none"> • Flow of resources viewed as a cycle with minimized input and output. • Responsibility by producers for the life-cycle impacts of products and packaging, creating incentive to design more benign products. • Focus on increasing benefits to communities and optimizing productive use of resources. • Focus on locally owned, independent industries. • Accounting for environmental costs and benefits.
Government Policies	<ul style="list-style-type: none"> • Manage waste at taxpayer expense. • Regulate specific environmental emissions at facilities. • Subsidize virgin extraction firms and waste management firms. 	<ul style="list-style-type: none"> • Eliminate waste by holding producers responsible for impact. • Systematically optimize environmental, economic and social impacts of the production and consumption cycle. • Create level playing field or outright subsidies to promote resource conservation industries.
Raw Material Supply	<ul style="list-style-type: none"> • Emphasis on virgin resources with harvests determined by commodity cycles. • Toxic materials managed. 	<ul style="list-style-type: none"> • Emphasis on recycled material use and sustainable harvesting of natural resources. • Emphasis on use of non-toxic materials.

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“Wasting resources wastes jobs because it removes resources from commerce.”

— Dan Knapp, Urban Ore, Inc.

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Product and Packaging Design	<ul style="list-style-type: none"> • Guided by competitive innovation, with emphasis on marketing and sales. • Some attention to design-for-recycling, clean production, or design-for-environment where public attention is focused. • Focus on short product lifespans to maximize sales. 	<ul style="list-style-type: none"> • Guided by design-for-environment principles to reduce resource use and environmental emissions, and to minimize recycling or reuse costs. • Focus on waste minimization, durability, repairability, and recyclability. • Maximized lifespans of products.
Manufacturing Practices	<ul style="list-style-type: none"> • Companies strive to minimize compliance costs with end-of-pipe emission regulations. 	<ul style="list-style-type: none"> • Companies redesign entire operations to minimize resource use and environmental emissions and maximize product reuse and recycling. • Producing companies are responsible for end-of-life management of their products and packaging. • Producers influence Zero Waste throughout the system by adjusting specifications for suppliers and by taking responsibility for end-of-life management.
Sales and Distribution	<ul style="list-style-type: none"> • Wholesalers and retailers assume no responsibility for environmental management. • Emphasis on large-scale distribution and international trade. 	<ul style="list-style-type: none"> • Where feasible, products are leased, with ownership retained by the producer. • Wholesalers and retailers are active partners in product take-back and marketing environmentally sound products. • Emphasis on regional distribution and sales.
Consumption	<ul style="list-style-type: none"> • Consumers select products based on price and quality. 	<ul style="list-style-type: none"> • Consumers select products based on environmental performance, price, and quality. • Consumers participate in recycling and reuse programs.
End-of-Life Management	<ul style="list-style-type: none"> • Many environmental costs and benefits hidden. • Secretive and complicated accounting processes. • Taxpayers bear most costs of disposal, including landfilling and recycling. 	<ul style="list-style-type: none"> • Programs create strong incentive to maximize diversion. • Programs incorporate full cost accounting principles. • Producers bear most costs of disposal.