

Zero Waste Business Principles

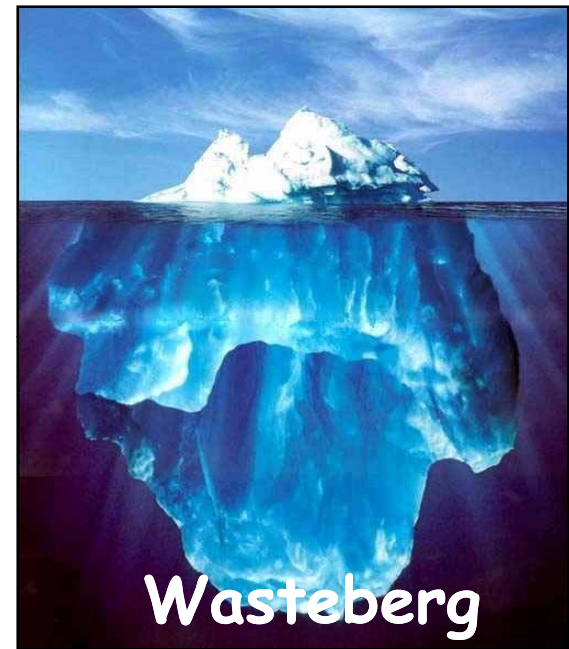
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Zero Waste Business Project
GrassRoots Recycling Network

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Zero Waste

- A Policy, Path, Direction
- A Target, Process, Way Of Thinking
- Recognizes 71 Tons "Upstream" For Every Ton MSW
- From Waste Mgt. To Resource Mgt.
- Stops Climate Change as landfills are one of largest sources of Greenhouse Gases



Definition of Zero Waste*

- Zero Waste is a goal that is both pragmatic and visionary, to guide people to emulate sustainable natural cycles, where **all discarded materials are resources** for others to use.
- Zero Waste means designing and managing products and processes to reduce 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 may be a threat to planetary, human, animal or plant health.

* www.zwia.org/standards.html

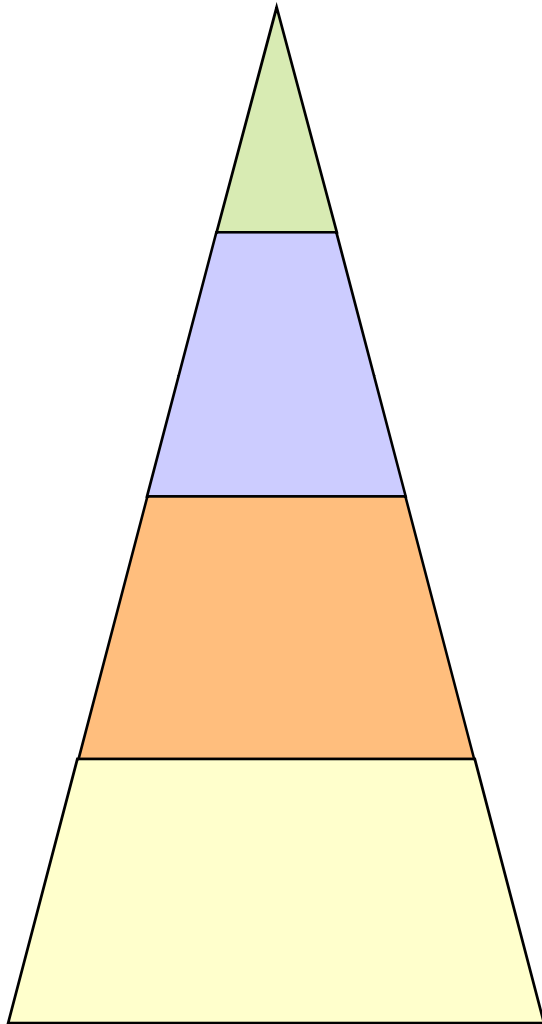
Upstream

- Reduce volume and toxicity of raw materials and manufactured products
- Rethink and redesign products and processes to reduce wasting and planned obsolescence
- Embodied energy savings (upstream) are greater than energy produced
- Communities can adopt policies, fees, rates and bans to impact

Downstream

- Ensure the **highest and best use** of products and packaging at the end of their useful lives
- **Reuse** products and packaging, retaining their **original form and function**
- Recycle materials that are not reduced or reused
- Compost materials that are not recycled

Highest and Best Uses



- End Subsidies for Wasting
- Clean Production and EPR
- Reduce, Refuse & Return
- Reuse
- Recycle
- Regulate
- Not OK: Incineration and Subtitle D Landfills

ZW Business Principles

1. Commitment to the triple bottom line
2. Use Precautionary Principle
3. Zero Waste to landfill or incineration
4. Responsibility: Take back products & packaging
5. Buy reused, recycled & compost
6. Prevention pollution and reduce waste
7. Highest and best use
8. Use economic incentives for customers, workers and suppliers
9. Products or services sold are not wasteful or toxic
10. Use non-toxic production, reuse and recycling processes

Commitment to the triple bottom line

- We ensure that social, environmental and economic performance standards are met together.
- We maintain clear accounting and reporting systems and operate with the highest ethical standards for our investors and our customers.
- We produce annual environmental or sustainability reports that document how we implement these policies.
- We inform workers, customers and the community about environmental impacts of our production, products or services.

Use Precautionary Principle

- We apply the precautionary principle before introducing new products and processes, to avoid products and practices that are wasteful or toxic.

Zero Waste to landfill or incineration

- We divert more than 90% of the solid wastes we generate from Landfill and Incineration from all of our facilities.
- No more than 10% of our discards are landfilled.
- No mixed wastes are incinerated or processed in facilities that operate above ambient biological temperatures (more than 200°F.) to recover energy or materials.

Responsibility:

Take back products & packaging

- We take financial and/or physical responsibility for all the products and packaging we produce and/or market under our brand(s), and require our suppliers to do so as well.
- We support and work with existing reuse, recycling and composting operators to productively use our products and packaging, or arrange for new systems to bring those back to our manufacturing facilities.
- We include the reuse, recycling or composting of our products as a design criteria for all new products.

Buy reused, recycled & compost

- We use recycled content and compost products in all aspects of our operations, including production facilities, offices and in the construction of new facilities.
- We use LEED-certified architects to design new and remodeled facilities as Green Buildings.
- We buy reused products where they are available, and make our excess inventory of equipment and products available for reuse by others.
- We label our products and packaging with the amount of post-consumer recycled content and for papers, we label if chlorine-free and forest-friendly materials are used.

Prevention pollution and reduce waste

- We redesign our supply, production and distribution systems to reduce the use of natural resources and eliminate waste.
- We prevent pollution and the waste of materials by continual assessment of our systems and revising procedures, policies and payment policies.
- To the extent our products contain materials with known or suspected adverse human health impacts, we notify consumers of their content and how to safely manage the products at the end of their useful life.

Highest and best use

We continuously evaluate our markets and direct our discarded products and packaging to recover the highest value of their embodied energy and materials according to the following hierarchy:

- Reuse of the product for its original purpose;
- Reuse of the product for an alternate purpose;
- Reuse of its parts; reuse of the materials;
- Recycling of inorganic materials in closed loop systems;
- Recycling of inorganic materials in single-use applications;
- Composting of organic materials to sustain soils and avoid use of chemical fertilizers; and
- Composting or mulching of organic materials to reduce erosion and litter and retain moisture.

Use economic incentives for customers, workers and suppliers

- We encourage our customers, workers and suppliers to eliminate waste and maximize the reuse, recycling and composting of discarded materials through economic incentives and a holistic systems analysis.
- We lease our products to customers and provide bonuses or other rewards to workers, suppliers and other stakeholders that eliminate waste.
- We use financial incentives to encourage our suppliers to adhere to Zero Waste principles.
- We evaluate our discards to determine how to develop other productive business opportunities from these assets.

Products or services sold are not wasteful or toxic

- We evaluate our products and services regularly to determine if they are wasteful or toxic and develop alternatives to eliminate those products which we find are wasteful or toxic.
- We evaluate all our products and offer them as services whenever possible.
- We design products to be easily disassembled to encourage reuse and repair.
- We design our products to be durable, to last as long as the technology is in practice.

Use non-toxic production, reuse and recycling processes

- We eliminate the use of hazardous materials in our production, reuse and recycling processes, particularly persistent bio-accumulative toxics.
- We eliminate the environmental, health and safety risks to our employees and the communities in which we operate.
- Any materials exported to other countries with lower environmental standards are managed according to the current standards in the United States .

Why would a business DO this?*

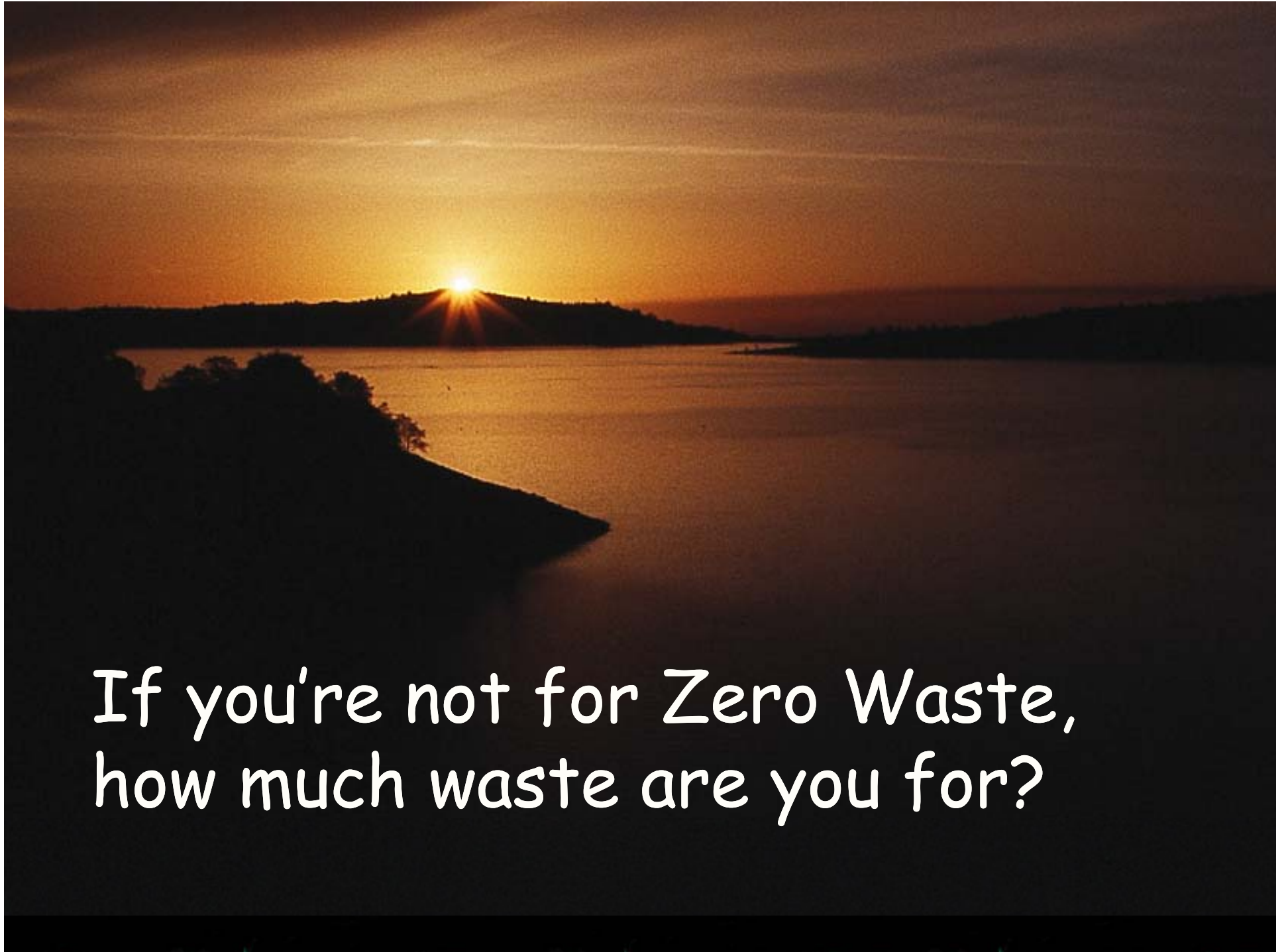
- **Reducing Waste Saves Money \$\$\$**

- Trash service is expensive!
- Trash takes up valuable 'real estate'
- Wasted resources can be a commodity

- **Reducing Waste is "Right Thing To Do"**

- EMS Corporate Policies may require this
- Businesses gain political capital with investment and community groups by being "good" citizens

* Margaret Bruce, Silicon Valley Manufacturing Group, Presentation to CRRA Annual Conference, Oakland, CA, July 16, 2002



If you're not for Zero Waste,
how much waste are you for?

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