



Zero Waste Business Meeting

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Zero Waste, Sustainability, and the Triple Bottom Line

**Presented to
Alameda Zero Waste Business Meeting**

**Presented by
Gary Liss, Gary Liss & Associates
916-652-7850, gary@garyliss.com
www.garyliss.com**

Zero Waste

- Redefines concept of "waste" in our society
- Goes beyond recycling
- Stimulates redesign of products and processes to eliminate waste, improve efficiency
- Conserves and recovers resources (vs. burning or burying them)

The Zero Waste Economy

Designing a Full-Cycle System—Upstream AND Downstream



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www.ecocycle.org/zerowaste/zwsystem

Pillars of Zero Waste

- **Upstream**
- **Downstream**
- **Green Businesses and Jobs**

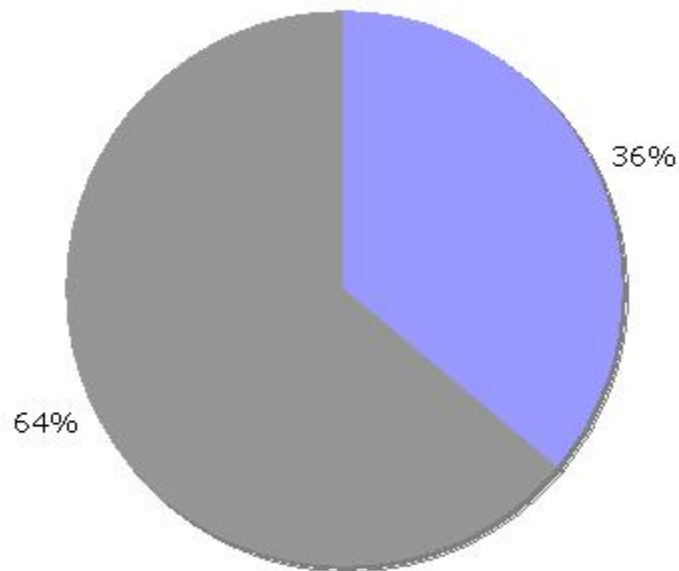
Upstream

- Recognizes 71 Tons “Upstream” For Every Ton of MSW landfilled
- Reduce volume and toxicity of raw materials and manufactured products
- Rethink and redesign products and processes to reduce wasting and planned obsolescence
- Promote lower impact or reduced consumption lifestyles

Extended Producer Responsibility (EPR)

- Goal: Shift product waste management from government and ratepayer funded to producers being responsible
- Encourages Redesign of Products and Processes that Increases Efficiencies
- Takeback of products and packaging is perceived as GREEN and results in Customer Loyalty, repeat customers, and free advertising

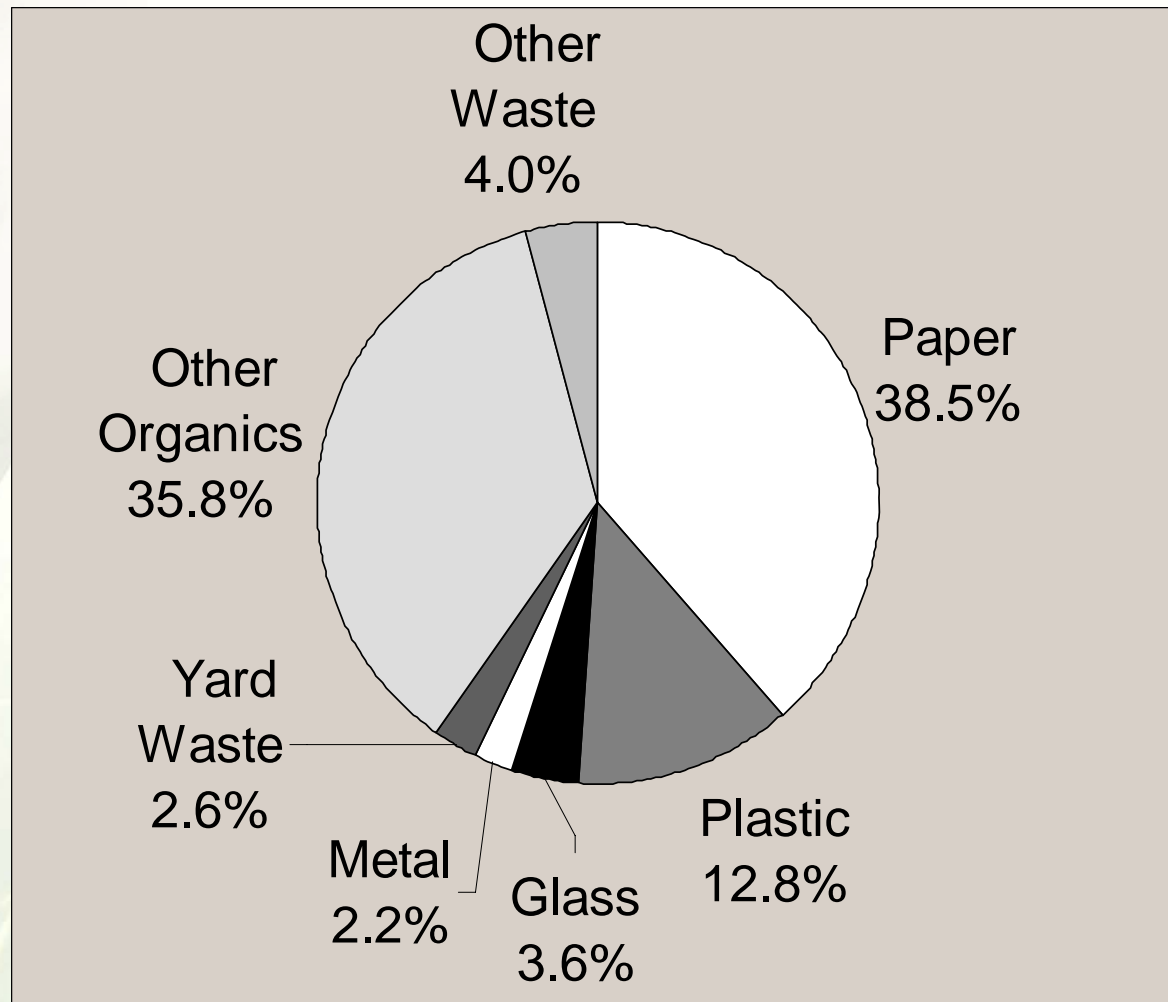
Typical Business Throughput Pie



**Blue = Output
Related to Product**

**Grey = Output NOT
Related to product**

Alameda Commercial Waste Composition



Source: Alameda County Waste Management Authority Waste Characterization Study, 2000

New study currently underway!

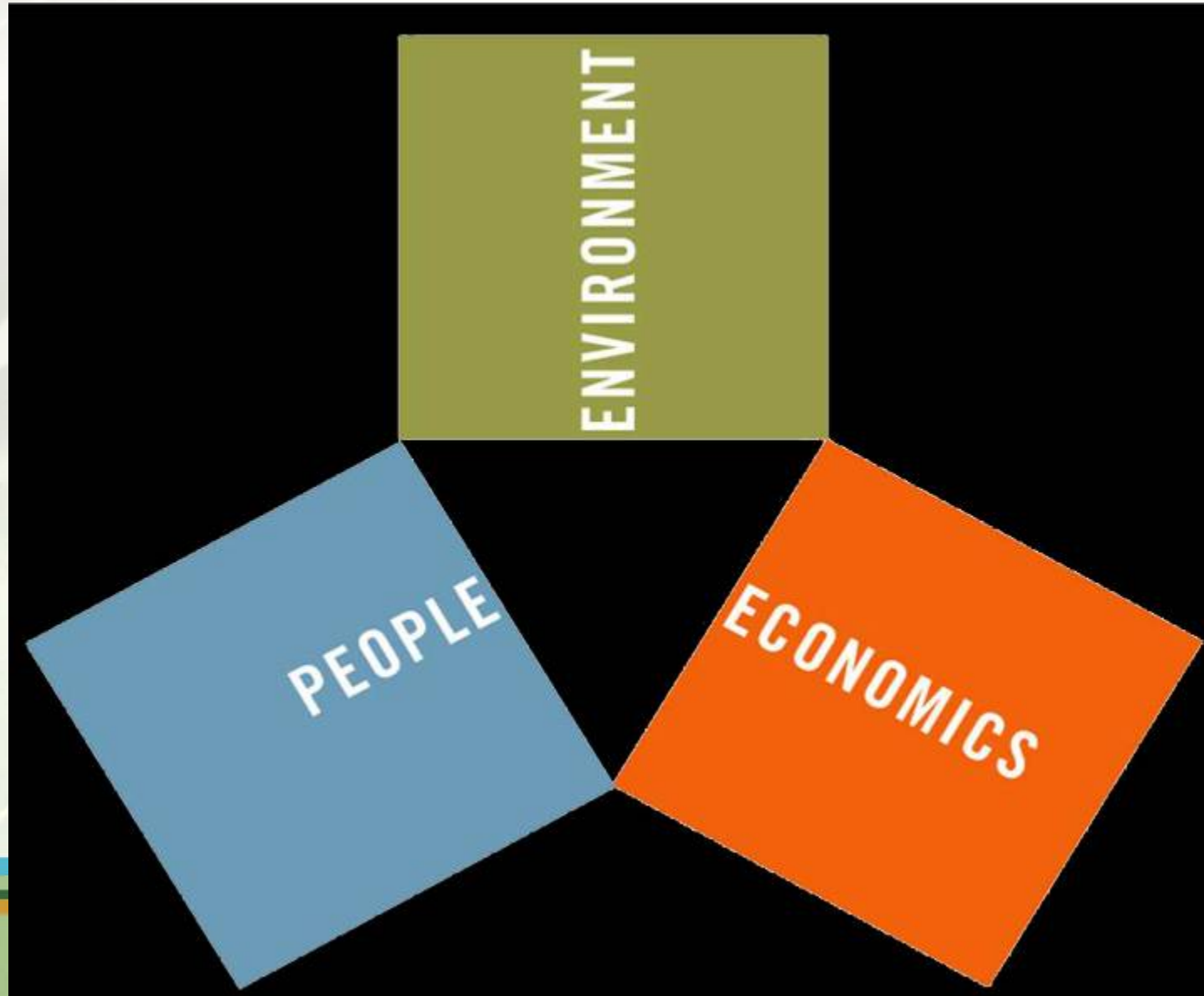
Downstream

- 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

Green Businesses and Jobs

- Support, expand and attract green businesses and job opportunities, including Green Building
- Reserve sufficient land for Zero Waste infrastructure
- Buy green goods and services

Zero Waste and the Triple Bottom Line



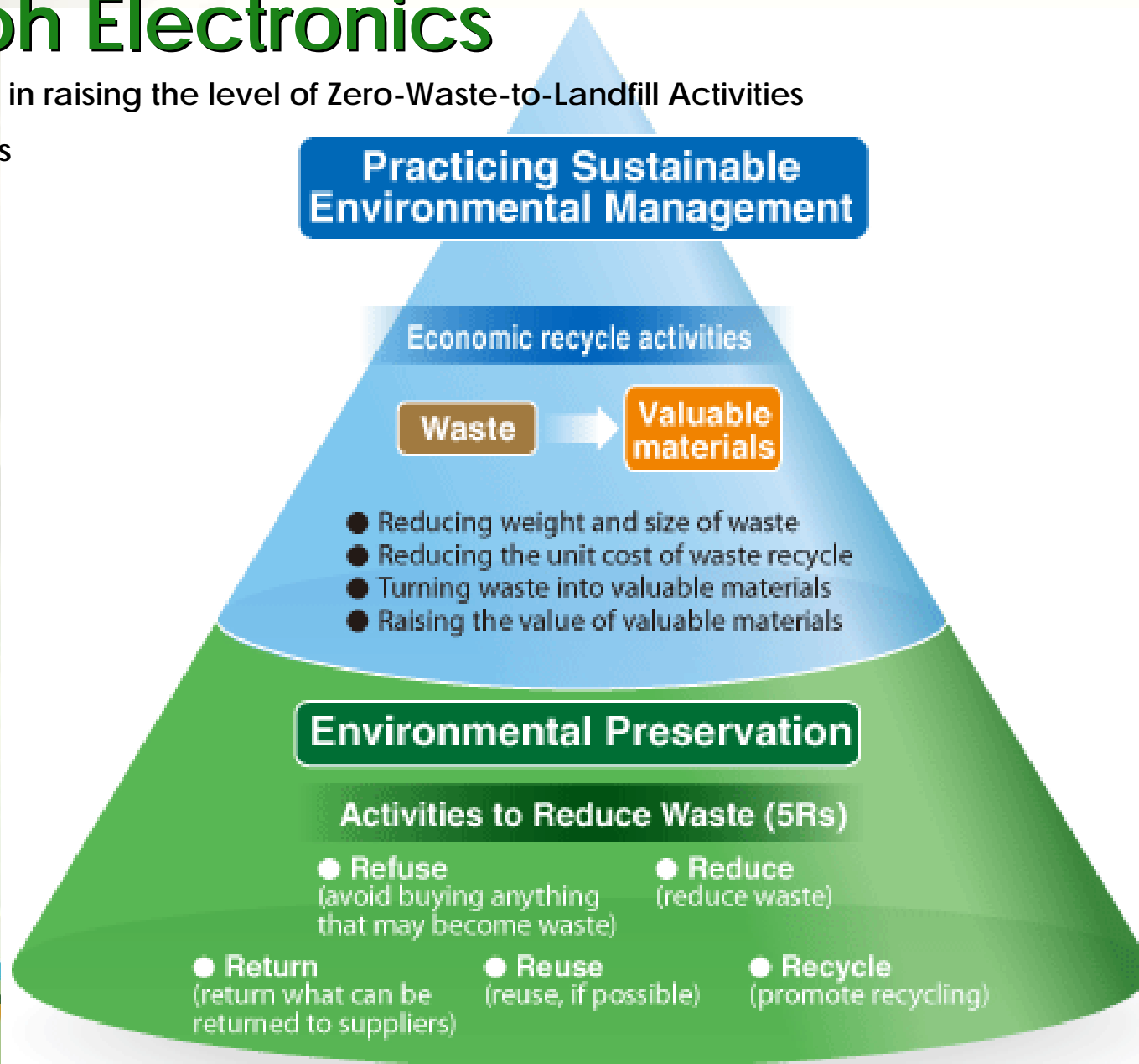
Can we Afford Zero Waste?

- Decentralized approach
- Shifts costs and responsibility to producers, providing clearer choices for consumers
- Costs to decline over time for cities or ratepayers
- Businesses save \$ by:
 - Product & process Improvements
 - Eliminating waste
 - More reuse, recycling and composting

Ricoh Electronics

Concepts in raising the level of Zero-Waste-to-Landfill Activities

\$\$ Savings



Toyota

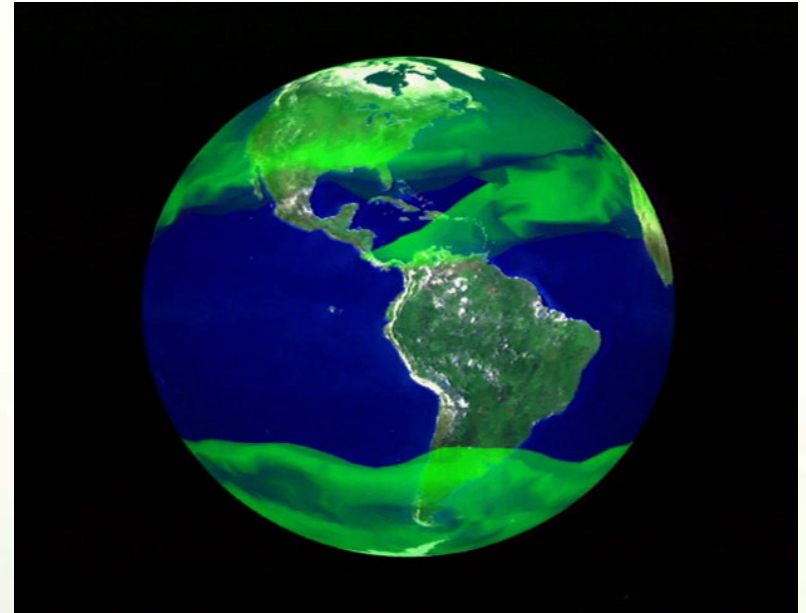
- 10 “Zero Waste” Plants (95% reduction of waste to landfill from 1999)
- 1 HQ and 3 Distribution Centers are “Zero Waste to Landfill”
- 8 Distribution Centers > 90% Recycling Rate

Toyota

- \$1.3 million in net savings on waste management
- Returnable shipping modules saved \$5.3M in costs and 3.4M pounds of cardboard, 9.8M pounds of wood

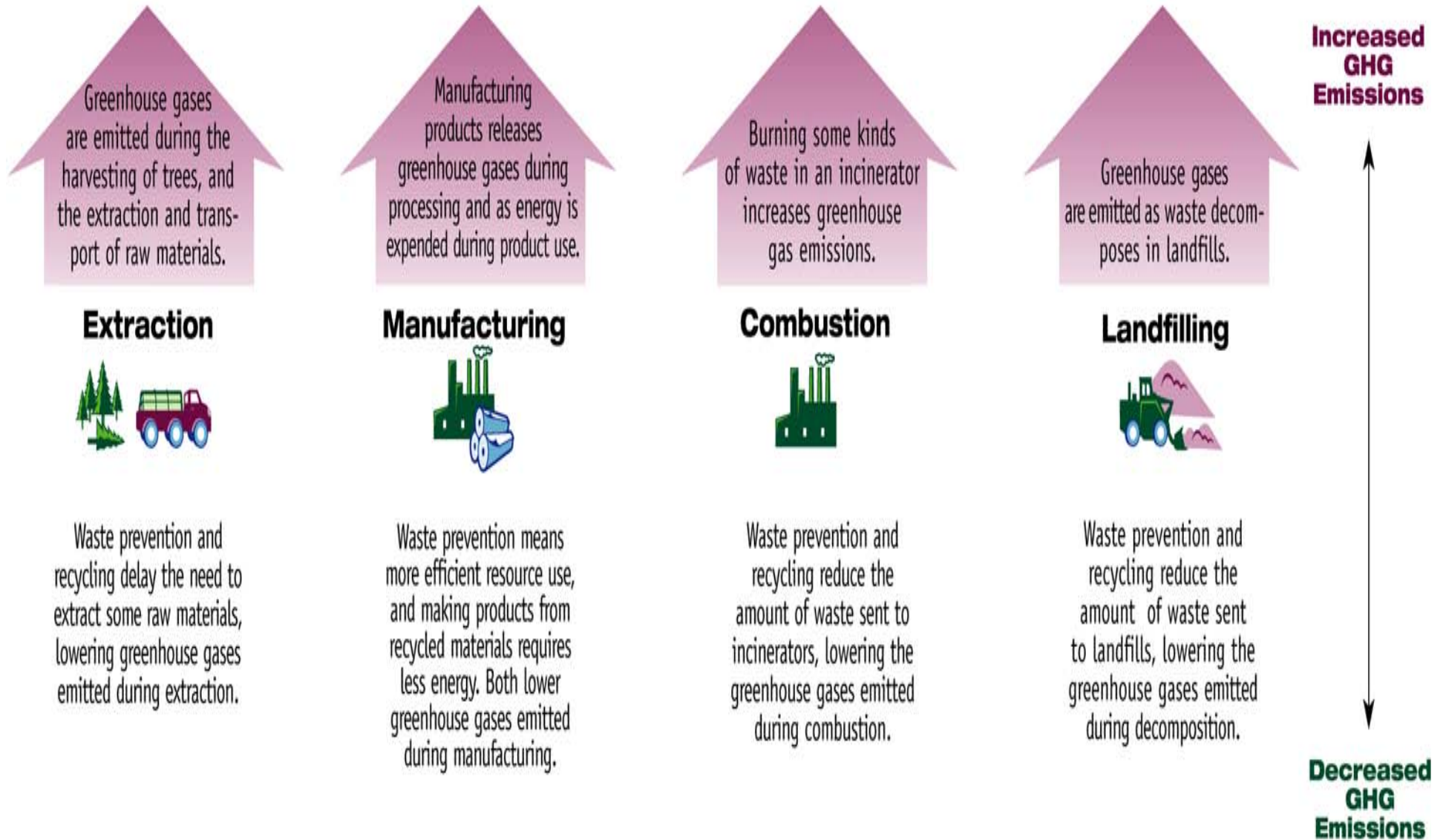
Is Zero Waste Attainable ?

- Nature Is The Model
- Zero Waste, Or Darn Close
- Businesses Have Achieved over 90% Waste Diversion



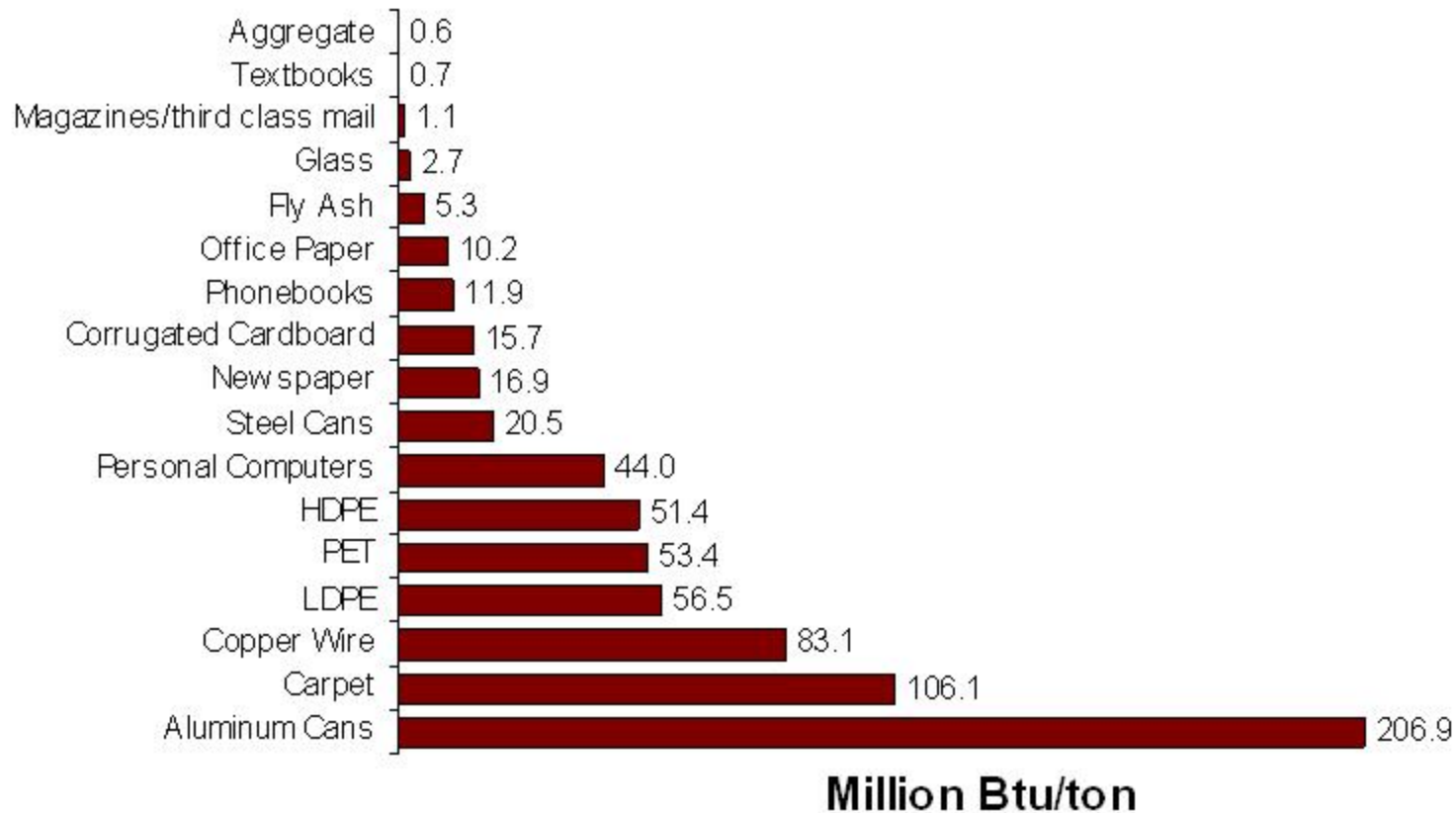
Picture: Methane Earth; Credit: [GISS](#), [NASA](#)

The Link Between Waste Management and Greenhouse Gases

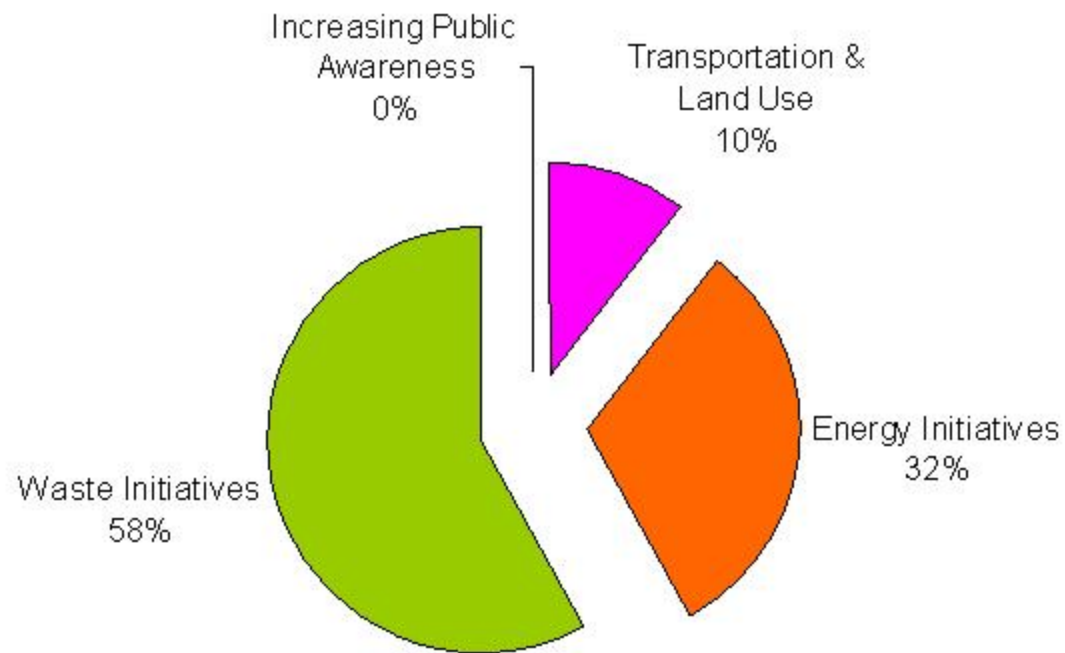


Energy Savings from Recycling

Energy Savings Per Ton Recycled
(Million Btu)



City of Alameda GHG Reduction Analysis



Waste Management offers the
most effective GHG reduction potential

Zero Waste Businesses are Leading the Way (>90% Waste Diversion)

- Anheuser-Busch, Fairfield, CA
- Apple Computer, Elk Grove, CA
- Epson (OR)
- Fetzer Vineyards
- Frankie's Bohemian Café, SF
- Greens Restaurant, SF
- Hewlett-Packard, Roseville, CA
- Mad River Brewery
- New Belgium Brewery
- NUMMI, Fremont, CA
- Pillsbury
- Playa Vista, LA, CA
- Ricoh Electronics
- San Diego Wild Animal Park
- Scoma's Restaurant, SF
- Toyota
- Vons-Safeway
- Xerox Corp
- Yost Printer, Monrovia, CA
- 2,800 Businesses in Japan

Source: www.grn.org/zerowaste/articles/companies_zw.html

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 CRRRA Annual Conference, Oakland, CA, July 16, 2002

Beyond Compliance

- Manage Risks and Decrease Liabilities
- Avoid Penalties and Benefit from Incentives
- Marketing Edge (“Green” Business)
- Pressure from Shareholders and Consumers

Key Policies & Programs for Zero Waste

- Know Your Waste
- Design it Out
- Help Local Business Be Green
- End Subsidies for Wasting
- Build Infrastructure Beyond Recycling

Know Your Waste

- Conduct Waste Characterization Study
- Determine how and where materials are discarded
- Identify service opportunities

Master Categories*

1. Reusables
2. Paper
3. Plant Debris
4. Food Scraps
5. Wood
6. Ceramics (C&D)
7. Soils
8. Metals
9. Glass
10. Polymers
11. Textiles
12. Chemicals

*Urban Ore developed these.

Design It Out

- Incentives adopted to eliminate wasting
- Producers and retailers take back products and packaging
(Extended Producer Responsibility)
- Products designed for:
 - Durability
 - Reusability
 - Recyclability
 - Compostability

Help Local Business Be Green

- Adopt Zero Waste goals and plans (including Zero Waste Business Principles*)
- Source separate designated materials
- Reuse and recycle construction and demolition debris
- Buy green products, rent space in green buildings and obtain green services
- Ban non-recyclable products

*See www.grn.org/zerowaste/business/

End Subsidies for Wasting

- Local government should adopt ZW policies and economic incentives in:
 - Garbage rate structures
 - Permits and zoning
 - Contracts and franchises
 - General Plans
 - Ordinances
- Support state and federal policies to enhance Zero Waste

Incentives

- Change Economics So What Was Marginal Is Now Economic
- Pay For What You Want:
Waste Prevention, Reuse, Recycling & Composting
- Don't Pay For Wasting (Or Much Less)
- Recognize Waste As Symptom Of Inefficiency
- Harness Forces Of Marketplace To Achieve Goals

Plan for and Build Zero Waste Infrastructure

- Build on Existing Reuse, Recycling and Composting Businesses and Nonprofits
- Preserve Enough Industrial Land for Key Zero Waste Facilities
 - Reusables
 - Food Scraps
 - C&D Materials
- Offer incentives for services needed
- Resource Recovery Parks

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

