

U.S.

**zerowaste**  
BUSINESS COUNCIL

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# “Throwaway Society”

Solid Waste = 4.4 *lbs/person/day*

Recycled = -1.3 *lbs/person/day*

Net Waste = 3.1 *lbs/person/day*

= 1,132 *lbs/person/yr*

[www.storyofstuff.com](http://www.storyofstuff.com)

USEPA 2001

Photo Credit: Peter Stackpole, Aug 1, 1955 (Getty Images)



# Waste Prevention in Action



## Food Waste Prevention

**HOW MUCH** OF THIS PROBLEM STEMS FROM U.S. FOODSERVICE OPERATIONS?

**4-10%** of food purchased is **THROWN OUT** before reaching a plate.



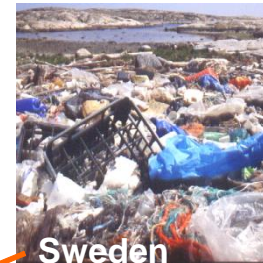
**\$8-20** BILLION of pre-consumer waste generated by the U.S. out-of-home restaurant and foodservice industry every year.

Pre-consumer waste is the kitchen waste that occurs before the food even reaches a guest, from **OVERPRODUCTION, SPOILAGE, EXPIRATION** and **TRIMMINGS**. It's within the control of the foodservice operator and can be prevented!

# Global Markets

# Global Growth

# Global Regulations



# Definition of Zero Waste\*

\* [www.zwia.org/standards.html](http://www.zwia.org/standards.html)

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.

# New Laws and policies

- ▶ **Mandatory Commercial Recycling AB341**
- ▶ **Organics out of landfill**
- ▶ **Bans, bans, bans....**
- ▶ **Product Stewardship & Producer Responsibility**
- ▶ **Increase in food packaging alternatives**
- ▶ **Every-other-week garbage collection**

# The Zero Waste Economy

Designing a Full-Cycle system – Upstream and Downstream

Expand City Outreach & Technical Assistance and Lead by Example



Provide Incentives Before Ban or Mandate



Eliminate Waste by Designing Out of Products and Processes



Jobs from Design & Discards



Foster Sustainable and Green Businesses



Resource Recovery Park



Producer Responsibility



Empowered Consumer

Retailers Take Back Difficult to Recycle Materials



## Why US Zero Waste Business Council?

To create a solid foundation that advances the integrity and credibility of Zero Waste



*Zero Waste is not recycling*

Reduce

Reuse

Recycle

= Zero Waste

**GOING BEYOND RECYCLING**

## EVOLUTION OF RETURNABLES

Since 2002, Toyota's parts and accessories returnable container program has saved over 220 million pounds of wood and over \$1 billion in packaging costs. These savings equal more resources for the future and lower costs for our parts and accessories.



JAPAN INBOUND

1990's

Parts distribution centers begin using returnables for dealer deliveries

2000

TMC begins using returnable containers to ship parts from Japan to California

2002

North American central parts centers begin using returnable containers to ship service parts to regional parts distribution centers

2005

North American suppliers begin using returnables to ship parts into central parts centers and directly to vehicle distribution centers

2012

Returnables are now used by more than 1400 dealers, 160 suppliers, 15 parts distribution centers and 2 parts centers

Approximately  
**11 million** parts  
through the program  
per year

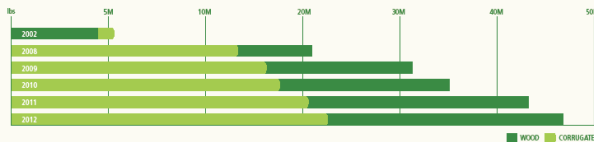
### OVERALL SAVINGS

**220 million lbs** of wood,  
**145 million lbs** of cardboard

That's the equivalent of

**2.7 billion trees\***

**\$1 billion**  
in packaging costs savings



TOYOTA  
NORTH AMERICAN  
Environmental

\*Environmental Impact Estimate: www.fruite.com using the Environmental Paper Network "Paper Calculator" Version 3.2.

# Toyota's Stages of Zero Waste

Recycle Some  
Recycle More  
Recycle Less

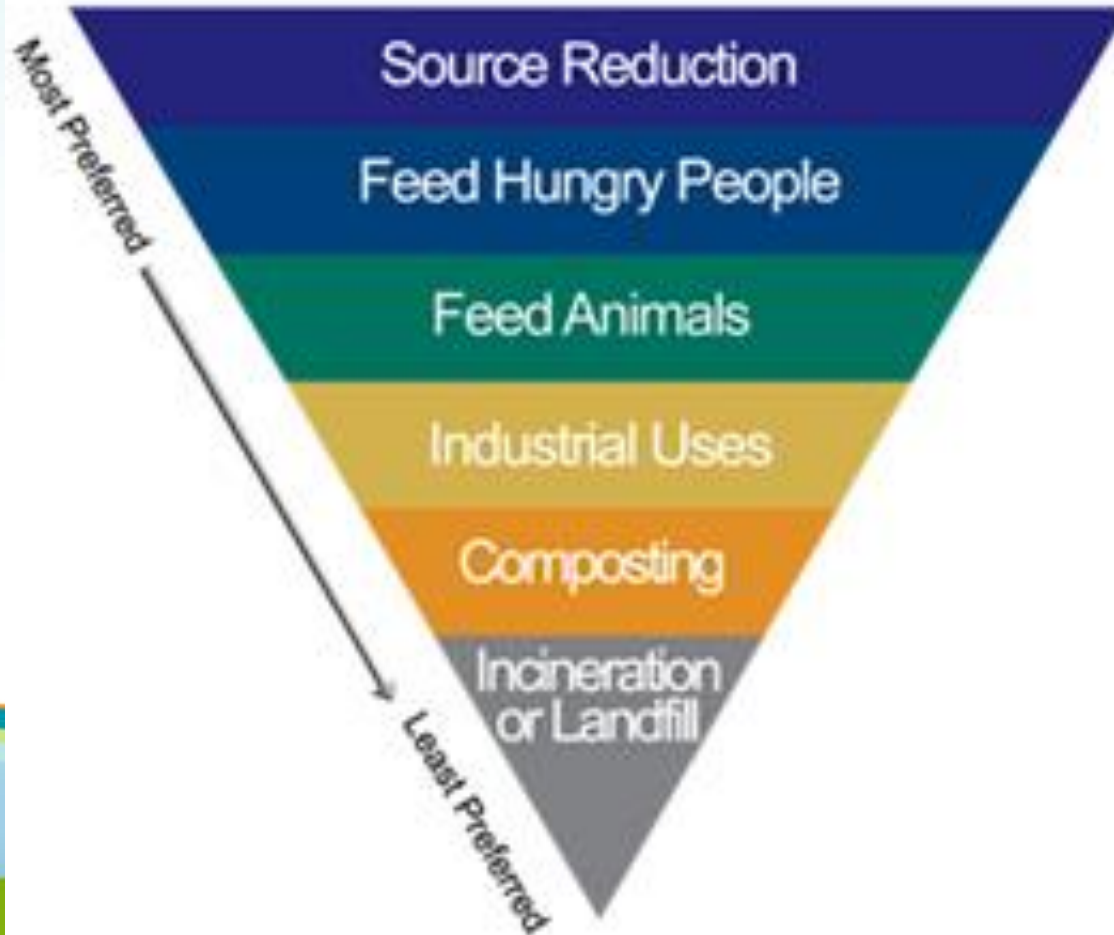
Saved \$1 million recycling cardboard boxes  
Saved \$13 million switching to reusable containers

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# Food Recovery Hierarchy



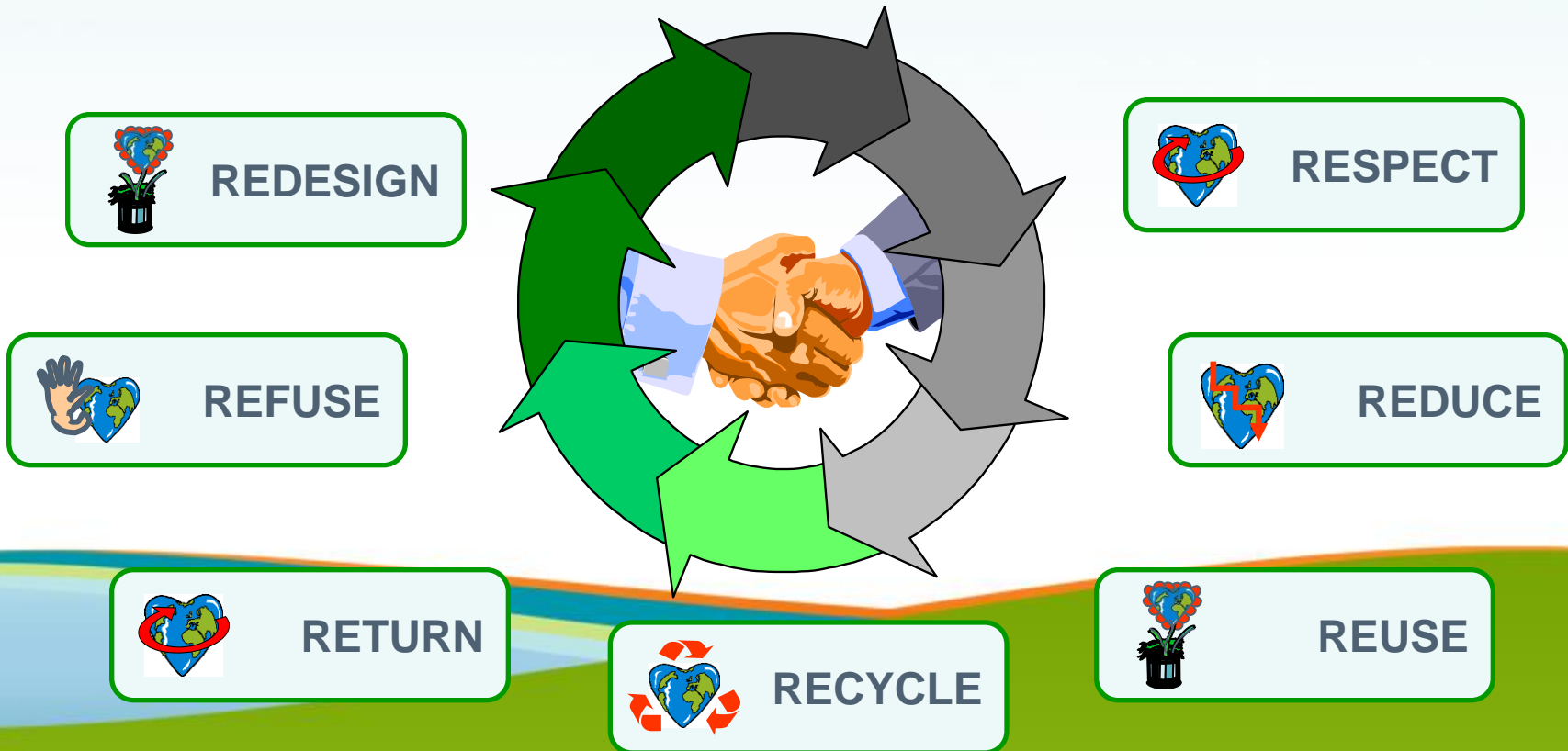
# Reducing Waste has Benefits

- Reduce operating costs (garbage bills, purchasing costs)
- Healthier workplace & employees
- Increase long-term landfill capacity
- Improve employee & tenant morale
- Reduce carbon footprint: Waste = Inefficient materials
- Promote environmental & efficiency efforts
- Improve public image (branding) & recognition
- Possible revenue stream (& start-up funding)
- Higher better use of materials upstream



# Partnership With Suppliers

## Green Procurement



**Reduce total cost within Supply Chain**

# US Zero Waste Business Council Mission

To educate, inform and document the performance of Zero Waste Businesses using scientific methods to help businesses and communities become more healthy and sustainable

*A California Public Benefit Corporation and an IRS 501 (c) 3 nonprofit*

# US Zero Waste Business Council Services

- **Business Advisory Board**
- **Certify businesses as Zero Waste**
- **Annual National Zero Waste Business Conferences**
- **Workshops – Food Scraps Policies and Practices**
- **Professional Training – Zero Waste Business Associate**
- **Advocate for a Zero Waste Economy**
- **Education Resources and technical assistance (books, workshops, webinars)**
- **Specialty levels of certification (e.g., for retail, hospitality, and manufacturing)**
- **Chapters in U.S. & Internationally**

# US Zero Waste Business Upcoming Events

- **Webinar – TODAY! Making Zero Waste Happen: Tools for Communicating to Staff and Stakeholders - 11 am to noon PST**
- **2015 4<sup>th</sup> Annual National Zero Waste Business Conference – Los Angeles – May 6<sup>th</sup> & 7<sup>th</sup>**
- **Preconference workshops and tours May 5<sup>th</sup>, 2015**
- **Zero Waste Business Associate – Trainings**
  - **April 8<sup>th</sup>, Chicago, IL**
  - **May 5<sup>th</sup>, Los Angeles, CA**
  - **June 1<sup>st</sup>, Sacramento, CA**
  - **June 16<sup>th</sup>, Austin, TX**
- **For more information: [www.uszwbc.org](http://www.uszwbc.org)**



# Why Zero Waste Certification?

- **Credible point of differentiation**
- **Establish Best Practices**
- **Not reinventing the wheel**
- **Meeting the Highest Bar for Zero Waste**
- **Championing Highest and Best Use of Resources**
- **Protecting the Brand from Inappropriate use**

# Categories & Points

Facility Totals (Pre Certification Estimates)			Points
Bronze: 31-37 points Silver:38-45 points Gold: 46-63 points Platinum 64-80 points			80
Overview of Categories & Points			
Redesign	4	Leadership	6
Reduce	7	Training	7
Reuse	7	ZW Analysis	5
Compost (Re-earth)	7	Upstream Management	4
Recycle	3	Hazardous Waste Prevention	5
ZW Reporting	4	Closed Loop System	4
Diversion (Min 90%)	5	Innovation	3
ZW Purchasing	9	Total Points	80

# Diversion from landfill, incineration and the environment

	<b>Baseline Discussion</b>
Credit 1	<b>Diversion is 90.1-94.9%</b>
Credit 2	<b>Diversion is 95%-96.9%</b>
Credit 3	<b>Diversion is 97%-98.9%</b>
Credit 4	<b>Diversion is 98-99.9%</b>
Credit 5	<b>Diversion is 100%</b>

# Reduce

Credit 1	<b>Documented Materials Reduced (establish the baseline) by commodity</b>
Credit 2	<b>Tracking material flow programs are in place to eliminate waste before it occurs (e.g. Kaizen, LeanPath for food waste reduction in restaurants, TrendTrax)</b>
Credit 3	<b>Goals are in place to reduce the overall size/amount of product packaging (i.e. Sierra Nevada reduced case boxes 11% by eliminating the internal divider and shrinking the box size.)</b>
Credit 4	<b>Implemented paperless-office programs for at least one major office function (e.g., billing, scheduling, payroll, etc.) for any/ all feasible operations</b>
Credit 5	<b>Duplex printing is a default setting on all company printers that have the capability.</b>
Credit 6	<b>Grass-cycling is standard practice for all mowed surfaces</b>
Credit 7	<b>Yard trimming waste are reduced through native landscaping, xeriscaping and grasscycling.</b>

# 5R – Reduce Activity

Supported by our Suppliers & Customers

## Packaging Optimization- Joint Effort

Chemical came in many small cans...



...now in drums

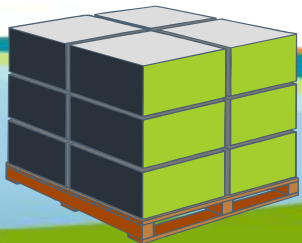


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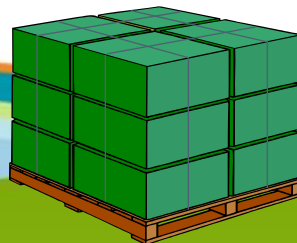
*Reduction of:*

- Labor time for switching cans and cleaning leftover chemicals
- Water usage
- Packaging material cost

6 individual cases were put into a master carton...



...no more master carton



=

*Reduction of:*

- Packaging cost
- Packaging time
- Freight cost



**REDUCE**



**Reduce Unnecessary Packaging Material**

# Reuse

Credit 1	<b>Development of systems that emphasis reuse (e.g. Toyota shipping containers)</b>
Credit 2	<b>A system is in place to document reused pallets and shipping containers (incoming or outgoing) including the ability to track reuse numbers for documentation - 1 point for each: pallets, incoming shipping containers and outgoing shipping containers</b>
Credit 3	<b>Implement reusable transportation options through an assessment tool</b>
Credit 4	<b>Implemented formal or informal program for reusing office supplies or other materials no longer useable by the business</b>
Credit 5	<b>Reusable/durable alternatives to disposable service ware are provided in employee break rooms and common areas</b>
Credit 6	<b>Donate food for all food safe for human consumption</b>
Credit 7	<b>Participation in feed program for food that is un-edible for people but still has nutritional benefits for animals - food going for animal feed needs to be documented according to the food hierarchy as unfit for human consumption</b>

# Recycling for Re-Use and Donation

## Hilton San Francisco



**San Francisco  
Hotel / Non-Profit Collaborative**

# What can be recycled or donated?

## ➤ Conference Give-Aways

- Mugs
- Tee-shirts
- Tote Bags

## ➤ Conference Displays

- Foamcore
- Decor
- Sets and Scrim





# What can be recycled or donated?

- **Hotel Supplies and Equipment**
  - **Renovation and Remodeling**
    - all furnishings, accessories and carpeting
  - **De-construction, building & plumbing supplies**
  - **Outdated amenities, china & glassware**
  - **Linen and Mattresses**
  - **Uniforms**
  - **Office supplies**



# Compost (Re-earth)

Credit 1	<b>Compostables collected separately from trash and recyclables and the food waste hierarchy is followed (edible food is given to humans, then animals, then composted or digested)</b>
Credit 2	<b>Yard trimmings are composted, digested or reused (mulch)</b>
Credit 3	<b>Onsite food scraps and soiled paper composting</b>
Credit 4	<b>Offsite food scraps and soiled paper composting</b>
Credit 5	<b>Utilize/reuse compost or mulch onsite</b>
Credit 6	<b>Implemented other process technologies: digestion</b>
Credit 7	<b>Close the Loop by growing food onsite for company use (i.e. cafeteria, restaurant, employees, etc...)</b>

# The Straus Difference

## Healthy Farm & Production Practices

These are other practices of ours, though they are not necessarily required by organic regulations we have always operated this way

- 🍁 Pasture-based Feeding
- 🍁 Balanced Diet
- 🍁 Milking 3x A Day (vs. 2x)
- 🍁 Pasteurized, Not Raw
- 🍁 Not Homogenized
- 🍁 Kosher
- 🍁 Returnable Glass & Recyclable Plastic









# Recycle

- |            |  |
|------------|--|
| Credit 1   | <b>At least 80% of the 12 market categories of recyclable materials follow the Highest and Best Use philosophy. Each material has been evaluated according to the hierarchy of Reduce first, then Reuse, and finally Recycle</b> |
| Credit 1.2 | <b>100% of the 12 market categories of recyclable materials follow the Highest and Best Use philosophy. Each material has been evaluated according to the hierarchy of Reduce first, then Reuse, and Recycle third.</b>          |
| Credit 2   | <b>Business has written documentation from service provider on where recyclable commodities leaving the facility are taken to and requests that as much materials remains in local markets as possible.</b>                      |

# 5R – Recycle Activity Supported by Our Supplier



**RECYCLE**

**Optimized Packaging Style & Recycle waste**



**After**



**Results**

1. No glue to buy and store
2. No drying time



1. Much easier to separate Styrofoam from liner
2. No more use of a knife to cut the glued joint



# Zero Waste Reporting

Credit 1	<b>Reporting that documents by commodity and waste fields that shows 90% diversion or better</b>
Credit 2	<b>Tracking of landfill disposal costs, avoided costs from diversion efforts, and revenue from recycling commodities sales. Data should be available for baseline year as well as all further reporting years.</b>
Credit 3	<b>Incorporate Climate Change Report using the US EPA WARM Model</b>
Credit 4	<b>Member of USEPA Waste Wise Program and provide data annually to their web site</b>

# Zero Waste Profiling

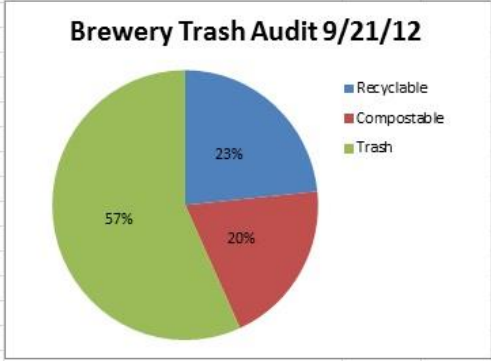


**Identify Waste**



# Trash Audit Results

	A	B	C	D	E	F	G	H
1	<b>Main Brewery Trash Audit 9/21/12</b>							
2								
3		<b>LBS</b>	<b>% of total</b>			<b>LBS</b>	<b>% of total</b>	
4	Glass/Trash	134.2	7.45%	Broken Buckets		8.4	0.47%	
5	Misc	114.2	6.34%	Rusty pipe		12.4	0.69%	
6	Labeler/packaging area/keg etching	100.6	5.58%	Cans, bottles, paper		26.4	1.47%	
7	Lab	73	4.05%	Cardboard		19.2	1.07%	
8	Insulation Waste	71	3.94%	Glass		253.6	14.08%	
9	Littlefoot	52.6	2.92%	Ag (drip line, recyclable jugs, cardboard, plas		39.4	2.19%	
10	Mylar Filtration Polyclar bags	49	2.72%	Paper		60.6	3.36%	
11	Painters	42.9	2.38%	Shrink wrap		1.2	0.07%	
12	Truckshop	39.8	2.21%	<b>TOTAL RECYCLABLE</b>		<b>421.2</b>	<b>23.38%</b>	
13	Packaging/Floor Sweepings	34.8	1.93%					
14	Breakroom / Bathroom	33.4	1.85%	Paper towels		20.4	1.13%	
15	Terra Alba bags	26.4	1.47%	Big Room (food, BOH packaging, paper)		201.8	11.20%	
16	Maintenance	25.6	1.42%	Breakroom (food, packaging, paper towels)		135.4	7.52%	
17	Employee Personal Trash	23.4	1.30%	<b>TOTAL COMPOSTABLE</b>		<b>357.6</b>	<b>19.85%</b>	
18	10 gal glue trash cans (x2)	20	1.11%					
19	Ken	16.2	0.90%					
20	Concrete	14.4	0.80%	Recyclable		421.2	23.38%	
21	Calcium bags	14.4	0.80%	Compostable		357.6	19.85%	
22	Wax Cardboard	14.2	0.79%	Trash		1022.5	56.76%	
23	Smoking Area	12.8	0.71%	<b>GRAND TOTAL</b>		<b>1801.3</b>	<b>100.00%</b>	
24	Bathroom	11.6	0.64%					
25	Contractor	11.6	0.64%					
26	Air Filters	11.4	0.63%					
27	Mylar Hop Bags	9.6	0.53%					
28	Broken mustard container	9.2	0.51%					
29	S Conf Rm/Facilities Office	9	0.50%					
30	Warehouse	8.8	0.49%					
31	Styrofoam packing blocks	8.2	0.46%					
32	Facilities Office	7.6	0.42%					
33	POS	6.2	0.34%					
34	IT	5.8	0.32%					
35	Filtration (brushes, gloves)	2	0.11%					
36	Shipping Bag (truck)	2	0.11%					
37	Plastic Bollard	2	0.11%					
38	Bag of bags	2	0.11%					
39	Keg cap sticker backings	1.4	0.08%					
40	Transportation Gate	1.2	0.07%					
41	<b>TOTAL TRASH</b>	<b>1022.5</b>	<b>56.76%</b>					



# *Recycling saves money?*

	Total lbs Diverted	Potential Disposal Cost	Revenue
<b>Cardboard</b>	<b>713,916</b>	<b>\$45,691</b>	<b>\$29,286</b>
<b>Plastics*</b>	<b>134,536</b>	<b>\$8,610</b>	<b>\$8,805</b>
<b>Paper</b>	<b>104,029</b>	<b>\$6,658</b>	<b>\$0</b>
<b>Scrap Metal</b>	<b>50,100</b>	<b>\$3,206</b>	<b>\$13,557</b>
<b>Scrap Glass</b>	<b>718,048</b>	<b>\$45,955</b>	<b>\$1,262</b>
<b>HotRot</b>	<b>650,371</b>	<b>\$41,624</b>	<b>\$0</b>
<b>Co-Mingle Recycling</b>	<b>14,296</b>	<b>\$915</b>	<b>\$0</b>
<b>Other Recycling</b>	<b>16,616</b>	<b>\$1,063</b>	<b>\$7,859</b>
<b>Wood**</b>	<b>265,480</b>	<b>\$16,991</b>	<b>\$0</b>
<b>Green Waste</b>	<b>1,759,320</b>	<b>\$112,596</b>	<b>\$0</b>
<b>2013</b>	<b>4,426,712</b>	<b>\$283,310</b>	<b>\$60,769</b>

Slide courtesy of Sierra Nevada Brewing Co.

# *Zero Waste Purchasing: Credit 7.3*

**In order to reduce packaging, time, fuel, and money, Sierra Nevada built a private rail spur in order to purchase malt in bulk. Bulk transport means malt isn't packaged in individual polypropylene sacks and transported by multiple truck trailers.**



# Leadership

Credit 1	<b>A company and/or facility Zero Waste goal has been adopted by upper management and disseminated to all employees</b>
Credit 2	<b>Upper management reviews monthly diversion activities with priority on recognizing cost savings and revenue generation from Zero Waste activities</b>
Credit 3	<b>A program is in place to encourage Zero Waste recommendations and award those who make outstanding contributions to waste reduction activities</b>
Credit 4	<b>People leading the way care and do these things: Take physical and/or financial responsibility for all products and packaging's produced and/or marketed under all company brands</b>
Credit 5	<b>People leading the way care and do these things: Require Suppliers to take financial and/or physical responsibility for all the products and packaging received at business seeking certification</b>
Credit 6	<b>Upper management representative(s) works beyond their internal operational boundaries to encourage and promote Zero Waste action that includes but is not limited to: beach/stream clean ups, community involvement etc.</b>

# *Zero Waste Certification*

## **Sierra Nevada Brewing Co. receives first Zero Waste Platinum Certification from USZWBC**

*by Jason Morgan December 2, 2013*



U.S. **zerowaste**  
BUSINESS COUNCIL

[www.uszwbc.org](http://www.uszwbc.org)

Slide courtesy of Sierra Nevada Brewing Co.

# Training

- |          |   |
|----------|---|
| Credit 1 | <b>Established mission statement/policy about Zero Waste provided to all employees in some form (employee handbook, addendum to handbook, posted on a policy bulletin board, posted on website, etc.)</b>   |
| Credit 2 | <b>Incorporate Zero Waste into Orientation.</b>   |
| Credit 3 | <b>Minimum Quarterly communication with associates about Zero Waste activities (electronic, verbal, or visual communication such as newsletter articles, tips of the month, bulletin board postings, workshops, etc.)</b>   |
| Credit 4 | <b>Receptacles for collected recyclables, compostables, and landfill material are clearly labeled and identified (written labels, photos, etc.) and employees, contractors, vendors, consultants or anyone else working onsite are trained on what is acceptable in those receptacles (posters, verbal notification, training sessions, etc.)</b> |
| Credit 5 | <b>Training programs have been developed to enable/incentivize purchasing agents to identify and prefer purchasing of environmentally preferred products</b>  |
| Credit 6 | <b>Employees contributions to Zero Waste activities are included as part of employee evaluations process and/or bonus structure</b>   |
| Credit 7 | <b>Dedicated roles for Zero Waste leadership (green team leader, recycling champion, recycling manager, etc.) is included in at least one job description. Job Description to also include training as one of this person's responsibilities</b>  |
| Credit 8 | <b>Internal website (i.e. a portal) incorporates Zero Waste training for employees</b>  |





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



**Stephanie Barger, Founder & Executive Director**

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