The TRUE Zero Waste certification system enables facilities to define, pursue and achieve their zero waste goals, cutting carbon emissions and supporting public health.
<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesign</td>
<td>4 points</td>
<td>Leadership</td>
<td>6 points</td>
</tr>
<tr>
<td>Reduce</td>
<td>7 points</td>
<td>Training</td>
<td>8 points</td>
</tr>
<tr>
<td>Reuse</td>
<td>7 points</td>
<td>ZW Analysis</td>
<td>5 points</td>
</tr>
<tr>
<td>Compost (Re-earth)</td>
<td>7 points</td>
<td>Upstream Management</td>
<td>4 points</td>
</tr>
<tr>
<td>Recycle</td>
<td>3 points</td>
<td>Hazardous Waste Prevention</td>
<td>5 points</td>
</tr>
<tr>
<td>ZW Reporting</td>
<td>4 points</td>
<td>Closed Loop System</td>
<td>4 points</td>
</tr>
<tr>
<td>Diversion (Minimum 90%)</td>
<td>5 points</td>
<td>Innovation</td>
<td>3 points</td>
</tr>
<tr>
<td>ZW Purchasing</td>
<td>9 points</td>
<td><strong>Total Points</strong></td>
<td>81 points</td>
</tr>
</tbody>
</table>
Redesign
Rethink
Retrain
Reduce
Reuse
Going Beyond
Recycling

**EVOLUTION OF RETURNABLES**

Since 2002, Toyota's parts and accessory 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.

**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

Currently, more than 60,000 reusable shipping containers travel through the Toyota parts and accessory network.
Waste audit vs. zero waste audit
Observe, interview and survey employees

- Current systems and practices
- Bin audits
- Daily activities and behaviors

- Managers vs Employees
- Behaviors and Attitudes
- Motivating Factors
- Policies vs Practices
Zero Waste Outreach, Promotions and Total Employee Involvement

- Give them a reason
- Training 100%
- Who’s on the Green Team?
- Internal & External promotion
- Finding the champions
  (surveys & observations)
“Throwaway Society”

RESOURCES:
www.storyofstuff.com
www.refed.com
www.wastenotoc.org
www.true.gbcic.org

Photo Credit: Peter Stackpole, Aug 1, 1955 (Getty Images)
The Zero Waste Economy
Designing a Full-Cycle System—Upstream AND Downstream

Design for the Environment, Not the Dump
All products must be recoverable through reuse, recycling or composting

Clean Production
More resource efficient and recoverable, less toxic to workers, environment and consumers

Retail Stores
Opportunity for consumer education and product take-back

Shifting Subsidies
Stimulating green practices rather than favoring waste and pollution

Consumer Buying Power
Creating market demand and a new manufacturing standard

Changing the Rules
Removing market barriers and inequities to support sustainable industry

Producer Responsibility
Manufacturers are part of the solution, taking back their own products or supporting recovery infrastructure

Jobs, Jobs, Jobs
Redesign and recovery create more jobs than resource destruction

Resource Recovery Parks
Community center for total recovery—recovery, recycling and composting—material exchange, and education

© Copyright, Eco-Cycle 2005
www.ecocycle.org/zerowaste/zwsystem
GOAL: Develop a simple Zero Waste marketing / education campaign based on your “R”

Step 1: Break into small groups of 6 to 8 people

Step 2: Choose a Facilitator, Note taker and Presenter

Step 3: Assign each member a different job title (accounting, purchasing, janitorial, chef, server)

Step 4: Choose your “R”

Step 5: Brainstorm on ideas based on your “R” to achieve Zero Waste – think big and small – HAVE FUN!

Step 6: Share with the larger group in 2 to 3 minutes
Points of generation: know where to start
9 typical points of generation

- Warehousing & Distribution
- Offices
- Food Services
- Grounds
- Construction
- Manufacturing
- Vehicular Maintenance
- Retail
- Housing & Hospitality
What is your R?

**Reduce:** Eliminate excess packaging or product that is ending in trash, recycling or composting. Saves time and money!

**Reuse:** Switch to packaging that can be used several times (pallets, shipping containers, service ware).

**Recycle:** Go beyond single stream to source separation and turn your recycling into a commodity.

**Re-Train:** Empower employees, vendors and customers to practice the Zero Waste principles and provide mechanism for immediate feedback. This should be an ongoing, every day exercise just as with safety and customer service.

**Re-Earth:** Your compost is more than a bin but new soil to grow the food you serve your clients. A great way to eliminate contamination.

**Redesign:** This can apply to your Zero Waste system or actual packaging and products. Practice reduce, reuse and must be recyclable.

**Repurchased:** If you are not purchasing materials with recycled content, the recycles will just end up in the landfill. Supply and demand – its up to you to create it, partner with other and make it affordable. Vendor involvement is critical and can save you both money.
Train and Communicate

Sustainability

Sierra Nevada finishes in 2nd place in California in the National Bike Challenge

Congratulations to everyone who participated in our first year of the National Bike Challenge. Because of your participation, we saved 97,732 calories, earned $5,209 in gas, and prevented 16,739 lbs of carbon dioxide from being emitted into the atmosphere. Cycling is great for you, your pocketbook, our community, and the environment. By saving money, getting more exercise, reducing traffic, and reducing congestion and eliminating CO2 and other pollutants from being emitted into the air, you and your bicycle are doing more than you think.

The Sustainability Department has a special prize to thank everyone who logged miles during the challenge! Stop by their office to get your saddle bag, Sierra Nevada patch kit, and the letter to keep with you while you ride.

Don't forget that Sustainability offers incentives and support to help you ride ALL year with the Green Machine program. It's almost too easy to participate and you get useful bike trails along the way, including a Green Machine bike just for signing up! To find out more or sign up email: bikerider@sierranevada.com

Focusing on Zero Waste

As many of you probably know, our Sustainability Department has a penchant for digging in the trash, and the past few weeks have been no exception. During the Oktoberfest and Bike to Work festivities, the Sustainability Department has been busy collecting and sorting waste from all corners of the brewery.

With the help of a team of bussers, the Sustainability Department sorted, weighed, and diverted from landfill more than 4,800 pounds of material. Oktoberfest alone saw 6,000 guests over two nights and generated 3,034 pounds of compostables, 788 pounds of recycling, and only 250 pounds of waste that went to the landfill. That's only 0.04 pounds of waste (not including recycling or compostables) per guest! Bike to Work generated only 61 pounds of waste, 95 pounds of compostables, and 76 pounds of recycling. In the end, 95.8% of total solid waste was diverted from landfill from Oktoberfest and 94.4% was diverted from Bike to Work. These are impressive numbers and are going to be valuable as the Sustainability Department goes through a third-party verification to become a Certified Zero Waste Business (more on that next month).

Thank you for your support!

It is the mark of an educated mind to be able to entertain a thought without accepting it.

~Aristotle~

Company diversion KPIs are posted monthly for all employees to see should they choose to view them. They are also discussed in monthly management KPI meetings. The sustainability department maintains two bulletin boards that allow for communication on sustainability information - zero waste included - and participates monthly in the company newsletter to provide tips, areas for improvement within the brewery, reminders about reusable coffee mugs/water bottles, etc.
Partnership With Suppliers

Green Procurement

Reduce total cost within Supply Chain

Recipe for Success 7: Use of 5R Concept

- REDESIGN
- REFUSE
- RETURN
- RECYCLE
- REUSE
- RESPECT
- REDUCE
Sierra Nevada Zero Waste Goal

- To **improve environmental health** by reducing landfill contribution, reducing greenhouse gas emissions, sustaining natural resources, and preventing the release of harmful chemicals into water and air systems.

- To **save money** by reducing the cost of utilities and resources (energy, water, solid waste management, packaging materials, raw ingredients, etc.) and to provide a revenue stream by selling recyclable materials (spent grain, cardboard, shrink wrap, glass, etc.).

**Potential Wastes**

- Energy
- Compressed Air
- Employee time/productivity
- Miscellaneous solid waste
- Water
- Packaging Materials
- Food
- Parts/Service
- Money

- And most importantly... BEER
IF YOU’RE NOT FOR ZERO WASTE, HOW MUCH WASTE ARE YOU FOR?
Less waste, higher efficiency, better savings

The TRUE Zero Waste certification system enables facilities to define, pursue and achieve their zero waste goals, cutting their carbon footprint and supporting public health.

What we do:

Rethink the resource life cycle

true.gbc.org

Stephanie Barger: sbarger@usgbc.org