ZERO WASTE?

Practical ideas to Implement on the Road to Zero Waste
Zero Waste Approach
E=MC²

“Stuff Exists”
Zero Waste is a goal.
It is ethical, economical, efficient & visionary.
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It guides people to change their lifestyles & practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.
Zero Waste Means:
Avoid and Eliminate Toxicity of Waste
Zero Waste Means:
Conserve & Recover Resources
Zero Waste Means:
Not Burn or Bury
Zero Waste Eliminates Discharges That Threaten Planetary Health
Nature is the Model
There is No “Away”
Wasteberg
Wasteberg
12 Market Categories for Discards

- Paper
- Putrescibles
- Soils
- Wood
- Plant Debris
- Textiles
- Polymers
- Reuse
- Chemicals
- Metals
- Glass
- Ceramics
50% = Compostable
Methane

Photo: Nasa
Methane 23x CO₂

Photo: Nasa
Zero Waste Management

UPSTREAM

• Clean Production
• Product Redesign
• Product Stewardship
Zero Waste Management

DOWNSTREAM

- Reuse
- Composting
- Recycling
- Resource Recovery Parks
Zero Waste or Darn Close!
NEW RULES
MANDATORY RECYCLING AND COMPOSTING
BOULDER, COLORADO
UNIVERSAL ZERO WASTE ORDINANCE
- All single-family homeowners must subscribe to waste hauling services

- All property managers provide adequate trash, recycling and composting service to their tenants and occupants

- All businesses separate recyclables and compostables from the trash; providing properly placed containers and signage to facilitate the collection of recyclables and compostables

- All special events in Boulder provide both recycling and composting collection
AUSTIN, TEXAS
UNIVERSAL RECYCLING ORDINANCE
RECYCLABLE MATERIALS: Provide recycling for plastics #1 & #2, paper, cardboard, glass, and aluminum.

CONVENIENCE: All trash collection service containers (i.e. dumpsters, carts, or compactors) or other collection points (i.e. chutes) should have a recycling container within 25 feet.

SIGNAGE: All signs must indicate recyclable materials accepted, use graphic illustrations, and include both English and Spanish.

ANNUAL EDUCATION: Educate new employees and tenants within 30 days of hire or move-in and annually thereafter.

ANNUAL REPORT: Submit online each year between Oct. 1 and Feb. 1.
PRODUCT POLICIES
TOP 10 ITEMS COLLECTED

1. Cigarette Butts: 2,043,470
2. Food Wrappers (Candy, chips, etc.): 1,685,422
4. Bottle Caps (Plastic): 847,972
5. Straws, Stirrers: 555,007
6. Grocery Bags (Plastic): 441,493
7. Beverage Bottles (Glass): 394,796
8. Other Plastic Bags: 389,088
9. Paper Bags: 368,746
10. Beverage Cans: 339,170

Ocean Conservancy
New Rules

- Plastic bag ban
- Polystyrene ban
- Plastic straw ban
- Cigarette butt fee
Plastic Bag Bans
Californians throw away 14,000,000,000 plastic bags every year. By some estimates, the number is more than 1 trillion annually worldwide.
YES ON 67
PROTECT THE BAN ON PLASTIC BAGS
Polystyrene Bans
150+ communities have polystyrene bans
19 ban all retail sales of polystyrene
Plastic Straw Bans
U.S. Consumption = Enough Straws to Wrap Around the Earth's Circumference 2.5 Times a Day!
Plastic Straw Bans
TAKE THE LAST STRAW CHALLENGE

When you’re out to eat... **SKIP THE STRAW**

**TOGETHER...**
25,000 people can save 5,000,000 straws in one year!

“Straws on Request”
Cigarette Butt Fee
San Francisco — 2 cents per butt
New policies in the works

- Expansion of Local Ordinances
- Statewide Polystyrene Ban
- Leash the Lid!
Leash the Lid Campaign
SAVE-AS-YOU-THROW
FAYETTEVILLE, ARKANSAS

32 gallon - $9.47/MONTH
64 gallon - $14.46/MONTH
96 gallon - $20.52/MONTH
<table>
<thead>
<tr>
<th>Downsize Your Cart</th>
<th>Your Yearly Savings</th>
<th>Gallons Diverted from Landfill</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 to 32 gallons</td>
<td>$132.60</td>
<td>768</td>
</tr>
<tr>
<td>96 to 64 gallons</td>
<td>$72.72</td>
<td>384</td>
</tr>
<tr>
<td>64 to 32 gallons</td>
<td>$59.88</td>
<td>384</td>
</tr>
</tbody>
</table>
**GAINSVILLE, FLORIDA**

<table>
<thead>
<tr>
<th>Cart Size</th>
<th>Approximate Capacity</th>
<th>Curbside Rate</th>
<th>% of Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini Cart</td>
<td>1 bag</td>
<td>$14.53</td>
<td>10%</td>
</tr>
<tr>
<td>35 gallon</td>
<td>2 bags</td>
<td>$18.90</td>
<td>27%</td>
</tr>
<tr>
<td>65 gallon</td>
<td>5 bags</td>
<td>$23.25</td>
<td>48%</td>
</tr>
<tr>
<td>95 gallon</td>
<td>7 bags</td>
<td>$29.06</td>
<td>15%</td>
</tr>
</tbody>
</table>

In the first 2 years:
– Solid waste disposed decreased 14 percent
– Recyclables recovered increased 25 percent
CONSTRUCTION & DECONSTRUCTION
Demolition Permit Publication

**Cotati, CA**

Any entity seeking to demolish a structure required to publicly advertise the hours and dates that materials will be available for salvage and make such materials available for at least 10 days
Mandatory Source Separation

**Orange County, NC**
Mandates source separation and recycling of scrap metal, clean wood waste, corrugated cardboard, and pellets.
Fitchburg, WI
70% of C&D material produced on site be recycled or reused.
Preliminary and final Construction and Demolition Reuse/Recycling Plan
Green Building Policy & Density Bonuses

Arlington County, VA
Green Building Incentive Program allows commercial and residential projects earning LEED Silver certification or higher to develop at higher density than conventional projects
Expediting Permitting

Chicago, IL

Expediting permitting for projects that earn LEED or Green Globe certification
Reclaimed Asphalt

Eugene, OR
The Pavement Preservation Program incorporates warm-mix asphalt, increased use of reclaimed binder, and in-place recycling into pavement projects.
Construction Salvage and Recycling Toolkit

Portland, Metro, OR

Toolkit – 135 pages, provides information on deconstruction and companies that accept materials for reuse and recycling
Refundable Fees

Plano, TX
Collects a deposit, calculated on a cost per square footage basis, which is refundable in full or in part based on the C&D project's documented diversion rate
PROGRAMS THAT WORK