The View from Here to Zero

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There Are Many Views of Zero Waste
How Do You Plan for Zero Waste?

- Review and summary of current policies, programs, facilities, and rate structure.
- Review and compilation of existing zero waste principles in the industry, and development of zero waste guiding principles relevant to the City.
- Compilation of existing and projected waste generation and composition data.
- Identification, evaluation, and selection of policy, program, and infrastructure options.
- Calculation of potential diversion and greenhouse gas emission reductions.
- Analysis of program costs and rate structure impacts.
<table>
<thead>
<tr>
<th>Goal Areas, Indicators &amp; Targets</th>
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<tbody>
<tr>
<td>Waste Reduction</td>
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<tr>
<td>Environmental Benefits</td>
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<td>Economic Benefits</td>
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<td>City Leadership</td>
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<td>Producer Responsibility</td>
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<tr>
<td>Zero Waste Culture Change</td>
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Existing Generation and Diversion Rate

\[
\text{Tons Diverted} \div \text{Tons Generated} = \% \text{ Diversion}
\]
Multi-Phase Implementation

Short Term 2013-2015
• Material Bans
• Product Stewardship
• Behavior Change Marketing

Medium Term 2016-2022
• Collection Modifications
• Mandatory Recycling
• Diversion Requirements

Long Term 2023-2030
• Expansion of Mandatory Recycling
• Wet/Dry Collection
• Residuals Processing
Potential Collection Programs

**Weekly Organics & Recycling Bi-Weekly Refuse**

**Benefits**
- Reduced Operations Costs
- Fewer Collection Truck Trips
  - Reduced Vehicle Air, Noise and GHG Emissions
- Increased Efficiency in labor time and maintenance

**Phased In**
- Single Family
- Multi-Family

**Wet/Dry Collection and Processing**

**Wet** – Processed via anaerobic digestion or composting
- Yard Trimmings
- Food Scraps
- Soiled Paper

**Dry** – Reused or Recycled
- Paper
- Glass

*Medium term*

*Long term*
Additional Collection Programs

- Mandatory commercial and residential food scraps/organics collection
- Bulky Item Collection; Move-in/Move-out Program
- Mandatory Commercial Recycling
- New recycling programs for mattresses, carpet, textiles
**Policy & Facility Options**

**Mandatory Requirements - Bans**

- **Disposal Bans**
  - Plastic Water Bottles
  - Yard Trimings
  - C&D
  - Single-use Carry-Out Bags
  - Disposable Containers

- **C&D Ordinance**
  - Diversion requirements for new construction and demolition projects

**Diversion Rate Minimums for all sectors**

**Facilities**

- **Regional Resource Recovery Centers (RRCs)**
  - Drop off centers for hard to recycle items
  - Buyback Options

- **Alternative Technology Facilities**
  - Thermal & Biological Processes
    - Anaerobic Digestion
    - Gasification
    - Pyrolysis
Upstream/Downstream Diversion Policies and Programs

Upstream
- Extended Producer Responsibility
- Packaging Legislation
- Behavior Change Marketing

Upstream – Policies and programs to support re-design strategies to reduce the volume and toxicity of discarded products and materials, and promote low-impact or reduced consumption lifestyles.

Downstream
- Expanded Blue Cart Acceptable Items
- Multifamily Outreach
- Self-haul Waste Origin Reporting
- Regional Collaboration
- Environmental Directory
- Rewards Program – Resident Recognition
- Centralized Garage Sales
- Business/Restaurant Food Donation
- HHW Collection at public events

Downstream – Policies and programs to address reuse, recycling and composting of end-of-life products and materials to ensure their highest and best use.
## Program Options - Diversion Estimates

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<tbody>
<tr>
<td>Diversion (tons)</td>
<td>28,569</td>
<td>16,271</td>
<td>17,387</td>
<td>62,227</td>
<td>9,537</td>
<td>71,765</td>
<td>19.6%</td>
<td>19.6%</td>
</tr>
<tr>
<td>Diversion (%)</td>
<td>7.9%</td>
<td>4.4%</td>
<td>4.7%</td>
<td>17%</td>
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</tbody>
</table>
Environmental Benefits

**Indicator**
- Greenhouse gas emissions reduction through waste reduction & recycling
- Conversion of fleet to clean fuels

**Target**
- 50% contribution to GHG reduction by 2022
- 100% of all City fleet vehicles to clean fuels by 2030
Economic Benefits

**Indicator**

- Creation of new jobs
- Local Market Development

**Target**

- 20% increase in local jobs from waste prevention and recycling
- 3 new local partnerships by 2015
- 5 new partnerships by 2022
City Leadership

Indicator

- Zero waste at City offices and facilities

Target

- Recycling and composting at all City facilities by 2015
- 80% diversion rate at City facilities by 2015
- 95% diversion rate at City facilities by 2030
Producer Responsibility

Indicator

☐ Producer responsibility for problem products (advocacy at state level or implementation of City ordinances)

Target

☐ State legislation or City ordinance to address pharmaceuticals, sharps, batteries, fluorescent bulbs by 2022

☐ State legislation to address packing of products and additional disposal fees for packaging materials.
Zero Waste Culture Change

Indicator

- Customer participation and reduced contamination
- Zero waste awareness at home, at work, at school, at play

Target

- 80% participation in City programs by 2015
- 90% participation in City programs by 2022
- 100% participation in City programs by 2030
- Contamination reduced to 2% by 2015
- Contamination reduced to 1% by 2022
- 80% of residents and businesses aware of Zero Waste by 2015
- 90% of residents and businesses aware of Zero Waste by 2022
## How Much Will This Cost?

<table>
<thead>
<tr>
<th>Program</th>
<th>Single Family</th>
<th>Multi-family</th>
<th>Commercial</th>
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<tbody>
<tr>
<td></td>
<td>Phase</td>
<td>Rate Change</td>
<td>Phase</td>
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<tr>
<td>Food Collection - carts</td>
<td>short</td>
<td>3.8%</td>
<td>medium</td>
</tr>
<tr>
<td>Behavior Change</td>
<td>short</td>
<td>1.5%</td>
<td>short</td>
</tr>
<tr>
<td>Bulky Move In-Out</td>
<td>short - med</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Weekly Organics/Recycling &amp; Bi-Weekly Refuse Service</td>
<td>short - med</td>
<td>(0.5)%</td>
<td>short - med</td>
</tr>
<tr>
<td>Food Collection - bins</td>
<td>medium</td>
<td>2.5%</td>
<td>medium</td>
</tr>
<tr>
<td>Wet/ Dry Collection</td>
<td>med - long</td>
<td>(9.3)%</td>
<td>med - long</td>
</tr>
<tr>
<td>Mandatory Recycling</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Residual Processing</td>
<td>long</td>
<td>0.4%</td>
<td>long</td>
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<tr>
<td>Total Rate Impact 2012-2030 Carts</td>
<td></td>
<td>(4.5)%</td>
<td></td>
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<tr>
<td>Total Rate Impact 2012-2030 Bins</td>
<td></td>
<td>(0.5)%</td>
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How Do We Pay For It?

SF Fees

- **Integrated Waste Management Fee**
  - Based on all commodities (waste, recycling & organics)
  - Incentivize customers to increase recycling and reduce disposal
  - Potential reduction in collection costs

Commercial Refuse Rate

- A uniform “per cubic yard” rate for the whole range of bin or container sizes and collection frequency offered to customers.
- The cubic yard rate would ensure that sufficient revenues are generated to cover the City’s costs.

Recycling Rate

- A recycling rate would be established, measured by the full service costs for recycling materials.
- Based upon the quantity of recycling, this rate could be less than the refuse rate.
The View is Definitely Changing...