State of Recycling and Disposal in California

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CalRecycle

Recycling Council of Alberta’s 2016 Conference
California at a Glance

- Land Area = 163,696 sq mi
  - Alberta = 255,541 sq mi
  - England = 50,346 sq mi
  - Spain = 195,364 sq mi
- Approximately 40 million people
  - 244 people/sq mi state-wide (Alberta = 14/sq mi)
  - Population density ranging from 2,100/sq mi (LA County) to 1.6/sq mi (Alpine County)
    - Calgary Region = 616/sq mi
- Climate ranges from desert to coastal to temperate rainforest to alpine mountains.
- Some of the wealthiest counties (Santa Clara and Marin) and most impoverished (Imperial)
California at a Glance

• Waste Generation
  • 75 million tons – 1.87 tons/capita

• Waste Disposal (Landfill)
  • 31.5 million tons - .78 tons/capita

• Recycling/Reuse/Compost rate
  • 50%
2014 Statewide Generation

- **Landfilled**: 42%
- **Source Reduction and Recycling**: 38%
- **Compost/Mulch**: 12%
- **ADC**: 4%
- **AIC**: <1%
- **Waste to Energy**: 1%
- **Other Beneficial Reuse**: 3%
- **Waste Tire Derived Fuels**: <1%
What’s in our waste?

<table>
<thead>
<tr>
<th>Material Class</th>
<th>Est. Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>17.4%</td>
</tr>
<tr>
<td>Glass</td>
<td>2.5%</td>
</tr>
<tr>
<td>Metal</td>
<td>3.1%</td>
</tr>
<tr>
<td>Electronics</td>
<td>0.9%</td>
</tr>
<tr>
<td>Plastic</td>
<td>10.4%</td>
</tr>
<tr>
<td>Other Organic</td>
<td>37.4%</td>
</tr>
<tr>
<td>Inerts and Other</td>
<td>19.9%</td>
</tr>
<tr>
<td>HHW</td>
<td>0.4%</td>
</tr>
<tr>
<td>Special Waste</td>
<td>5.0%</td>
</tr>
<tr>
<td>Mixed Residue</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Total: 100%

Numbers may not total exactly due to rounding.
<table>
<thead>
<tr>
<th>Material</th>
<th>Estimated Percent</th>
<th>Cumulative Percent</th>
<th>Estimated Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>18.1%</td>
<td>18.1%</td>
<td>5,591,179</td>
</tr>
<tr>
<td>Lumber</td>
<td>11.9%</td>
<td>30.0%</td>
<td>3,676,710</td>
</tr>
<tr>
<td>Remainder/Composite Paper</td>
<td>7.5%</td>
<td>37.6%</td>
<td>2,325,048</td>
</tr>
<tr>
<td>Bulky Items</td>
<td>4.4%</td>
<td>42.0%</td>
<td>1,365,340</td>
</tr>
<tr>
<td>Remainder/Composite Organic</td>
<td>4.3%</td>
<td>46.3%</td>
<td>1,323,465</td>
</tr>
<tr>
<td>Textiles</td>
<td>4.0%</td>
<td>50.3%</td>
<td>1,234,711</td>
</tr>
<tr>
<td>Other Miscellaneous Paper</td>
<td>3.9%</td>
<td>54.2%</td>
<td>1,215,919</td>
</tr>
<tr>
<td>Leaves and Grass</td>
<td>3.8%</td>
<td>58.0%</td>
<td>1,172,925</td>
</tr>
<tr>
<td>Uncoated Corrugated Cardboard</td>
<td>3.1%</td>
<td>61.1%</td>
<td>964,942</td>
</tr>
<tr>
<td>Prunings and Trimmings</td>
<td>3.1%</td>
<td>64.3%</td>
<td>962,262</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64.3%</strong></td>
<td></td>
<td><strong>19,832,501</strong></td>
</tr>
</tbody>
</table>
How much of the disposal stream is recyclable?

2014 Waste Characterization Study

- Curbside Recyclable, 13.6%
- Other Recyclable, 9.7%
- Compostable/Mulchable, 41.1%
- Recoverable Inerts, 5.7%
- Other Materials, 30.0%
California’s Recycling Programs

• Beverage Containers – 9 million tons recycled, 81% recycling rate
• Used Tires – 35.8 million waste tires recycled, 80.9% recycling rate
• EPR
  • Carpet – 172,500 tons generated
  • Mattresses - 1.9 million (48,000 tons) generated
  • Architectural Paint – 2.7 million gallons recovered
• Covered Electronic Waste – 87,500 tons recycled
• HHW
  • Used Lubricating Oil – 77.7 million gallons recycled, 80.7% recycling rate
  • U-Waste
How much recyclable material are we tracking?

Other Recycling, Composting, and Source Reduction, 96%

Beverage Container Recycling Program, 3%
EPR Programs, <1%
Tires, 1%
California’s Goals and Challenges

• 75% recycling by 2020
  • Mandatory Commercial Organics
  • Mandatory Commercial Recycling
  • Beverage container, tipping fee, used oil, e-waste reform

• Challenges
  • Decoupling disposal and economy
  • Decreasing commodity pricing worldwide
  • Reduced revenues with increased diversion
75% Recycling Goal

• Report to the Legislature August 2015

• Five Priority Strategies
  • Organics out of landfills
  • Increase recycling infrastructure
  • Sustainable funding
  • State procurement
  • Extended Producer Responsibility
California’s Challenges

• Focusing on “traditional” materials
  • Paper, food, lumber, C&D, plastic

• Worldwide commodity price decline

• CalRecycle recycling successes result in reduced funding

• Rebounding economy results in rebounding waste generation
California’s Future

• Mandatory Commercial Recycling (and organic recycling)
  • Businesses and multifamily residential dwellings of five or more units
  • 8 cubic yards per week now shifting to 4 cubic yards per week in 2019 for organics
  • 4 cubic yards per week for recyclables

• Beverage Container Reform

• Changes to E-Waste
  • Finding markets for CRT glass
California’s Future

• AB 901 – Disposal, Recycling, Composting reporting
• SB 1383 – Short-lived Climate Pollutants
  • Organics in landfills
  • New funding source consideration
• More Extended Producer Responsibility programs
  • Pharmaceuticals
• Thermal Resource Recovery
  • What is its role?
  • New technologies
Questions?

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