Bob Gedert, Director
Austin Resource Recovery Department
Bob.Gedert@AustinTexas.gov
What is Zero Waste???

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Zero Waste means designing and managing products and processes to systematically avoid and eliminate 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 are a threat to planetary, human, animal or plant health.

Zero Waste International Alliance
Municipal Implementation of Zero Waste

Zero Waste as a municipality goal requires:

- A Diversion Goal and Target Date
- Establishing Benchmark Goals
- “Aggressive” & “Universal” Recycling
- Organics (with food waste) Collection
- Waste Reduction Actions (smaller carts)
- Reuse Collection / Redistribution
- Community & Business Partnerships
- Extensive Public Education/Awareness

Long-term Commitment – It’s a Journey!
Austin Resource Recovery Master Plan: Zero Waste Diversion Goals

Waste Shed Studies every 5 years
Diversion Assessments of
Residential Stream
Commercial Stream
Industrial Stream

2010 35%
2015 50%
2020 75%
2025 85%
2030 90%
2040 95+%

Diversion Assessment 2015
Diversion Assessment 2020
Diversion Assessment 2025
Diversion Assessment 2030
Diversion Assessment 2040
Development of the Austin Resource Recovery Master Plan:

Major Stakeholders

- Citizens
- Neighborhood Associations
- Solid Waste Advisory Commission
- Sustainable Food Policy Board
- Environmental Board
- Business Chambers
- Haulers/Recyclers/Composters
- City Council
Development of the Austin Resource Recovery Master Plan:

Stakeholder Listening Forums

- Charettes
- Small Group Feedback Sessions
- Workshops & Presentations
- Commission and Board Meetings
- Business Chamber Discussions
- Website documents and discussion
- Social Media (Facebook, Twitter, etc)
- Speak Up Austin (web blog for input)
Components of the Austin Resource Recovery Master Plan:

Importance of the Austin Resource Recovery Master Plan
– Guiding principle for providing future services
– On-going Community input and support

Zero Waste Services Component
– Policies & Ordinances
– New Diversion Programs
– Infrastructure Development

Operational Component
– Operational efficiencies
– Inter-departmental infrastructure synergies
– Long-term program commitments
Austin Resource Recovery Master Plan: Topical Chapters

- Zero Waste
- Sustainability
- Waste Reduction
- Reuse
- Recycling
- Materials Management
- Composting Organics
- Household Hazardous Waste
- Disposal Management
Austin Resource Recovery Master Plan: Topical Chapters

• Greening Special Events
• Recycling Economic Development
• Citizen and Community Partnerships
• Private/Public Partnerships
• University Partnerships
• City Departmental Partnerships
• Pilots and Demonstration Projects
• Policies & Ordinances
• Metrics and Measurements
• Financial Models
Austin Resource Recovery Master Plan: Distribution of Collection

- Serviced by City: 25%
- Serviced by Private Sector: 75%

Commercial & Industrial: Circle of Influence

Residential: Circle of Direct Control
Austin Resource Recovery Master Plan: Materials Management

Sustainability

Zero Waste Synergy with Sustainability Efforts
- Waste Reduction Targets
- Green Purchasing
- Carbon Footprint Reduction
- Routing Efficiencies
- CNG and Alternative Fuels

Waste Reduction and Reuse

Reuse and Repair Businesses
- Teacher Resource Centers
- Reuse Drop-off sites for reusables
Austin Resource Recovery
Department Master Plan

**Recycling**

**Single-Stream Recycling Collection**
- Long-Term Processing Contracts
- Add materials to Single Stream Program
- Provide 96 gal and 64 gal blue containers
- Transition from biweekly to weekly (2017)

**Organics**

**Single-Stream Organics Collection**
- Residential Backyard Composting
- Collect yard trimmings in 96 & 64 gal carts
- Adding food scraps and compostable paper
- Compost Grade Classification System
Austin Resource Recovery
Department Master Plan

Household Hazardous Waste
- Expanded Saturday and Daily Hours
- Battery Retail take-back program
- Enlarged door-to-door collection
- Pharmaceutical Take-back program
- North HHW Service Site

Disposal Management
- Post-Closure Care of City Landfill
- Methane Gas Capture
- Solar Farm
- Eco-Industrial Park
Austin Resource Recovery
Department Master Plan

Other Core Services & Special Events

- **Reuse Austin**: Bulk Collection / Reuse
- **Clean Austin**: Litter Collection
- **Storm Ready Austin**: Storm Debris Mgmt
- Downtown Alley Flushing
- Street and Boulevard Sweeping
- Dead Animal Collection
- Community Clean Ups with KAB
- City Sponsored Events Diversion Activities
Recycling Economic Development

- Support Recovery/Reuse Small Businesses
- Support By-Product Synergies / Waste Pairings
- Business Waste Reduction Assistance Program
- Green Business Leaders Advisory Council
- Incentives to Attract Recycling Re-processors
- Eco-Industrial Park at closed landfill

Partnerships

- Community & Non-Profit Partnerships
- Regional Cooperation & Inter-local Agreements
- Public / Private Partnerships
- Education Institution Partnerships
- Research and Development Program
Austin Resource Recovery
Department Master Plan

Policies & Ordinances
- Universal Recycling and Composting Ord.
  - Phase 1 multifamily complexes, offices
  - Phase 2 retail, restaurants and industrial
- Green Event Recycling Ordinance
- Construction, Demolition, and Deconstruction
- Single Use Disposable Products / Packaging
- Refundable Deposit (Bottle Bill)

Incentives and Rewards
- Business Assistance and Recognition
- Composting & Events Rebate Programs
- Annual “Going to Zero” Awards Recognition
- Rate Structure Incentives – Reduced cart sizes
Austin Resource Recovery Master Plan:
City Department Partnerships

- Austin Convention Center
- Austin Energy
- Austin Fire Department
- Austin Police Department
- Austin Water
- Aviation Department
- Communications and Technology Management
- Economic Growth and Redevelopment Services
- Fleet Services
- Government Relations Office
Austin Resource Recovery Master Plan: City Department Partnerships

- Health and Human Services Department
- Law Department
- Library Department
- Neighborhood Housing & Community Development Office
- Parks & Recreation Department
- Planning & Development Review Department
- Public Works Department
- Purchasing Office
- Transportation Department
- Watershed Protection
Cultural Differences Require Different Approaches
Varied Set Out Rates (85% to 10%)
Customer Education – Varied Needs
Container Labeling – Visual Graphics – Do’s/Don’ts
Routing Challenges with varied setouts
Contamination Challenges
Residuals = Customer Mistakes + MRF Inefficiencies
Truck Styles – Automated vs. Semi-Auto Side-Loaders
Convenience does not always yield higher participation
Austin Resource Recovery Master Plan: Best Practices

- Smart Routing = Reduced Fuel Consumption
- Seek Operational Efficiencies – use savings for new program development
- Waste Composition Study to determine opportunities
- Curbside Participation + Capture Rate – Residuals = Recycling Diversion
- Pilots offer new thoughts and learned observations
- Negotiate Recycling Processing Agreement: Recycling Market Share Revenues - Processing Fees
- Zero Waste – Include Residential, Commercial & Industrial, Education & Government Institutions
# Austin Resource Recovery Master Plan: Residential Diversion Totals

<table>
<thead>
<tr>
<th>Diversion Initiatives - CoA Controlled (tons)</th>
<th>FY10</th>
<th>FY15</th>
<th>FY20</th>
<th>FY25</th>
<th>FY30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Residential Diversion - Reuse, Recycling, Composting</td>
<td>135,000</td>
<td>200,000</td>
<td>330,000</td>
<td>412,250</td>
<td>477,000</td>
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<tr>
<td>Residential Waste Disposal</td>
<td>250,000</td>
<td>200,000</td>
<td>110,000</td>
<td>72,750</td>
<td>53,000</td>
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<tr>
<td>Residential Waste Generation (with population growth)</td>
<td>385,000</td>
<td>400,000</td>
<td>440,000</td>
<td>485,000</td>
<td>530,000</td>
</tr>
<tr>
<td>Residential Diversion Rate</td>
<td>35%</td>
<td>50%</td>
<td>75%</td>
<td>85%</td>
<td>90%</td>
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</tbody>
</table>

- Resources Recovered
- Waste Disposal
## Austin Resource Recovery Master Plan: New Diversion Programs

<table>
<thead>
<tr>
<th>New Diversion Programs</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuse Austin – Eco-Depots &amp; Teacher Resource Center</td>
<td>$0</td>
<td>$400,000</td>
<td>$410,000</td>
<td>$415,000</td>
<td>$420,000</td>
<td>$425,000</td>
<td>$430,000</td>
<td>$435,000</td>
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<tr>
<td>Recycling – Multi-Family expansion, Central Business District, &amp; C&amp;D Recycling</td>
<td>$400,000</td>
<td>$500,000</td>
<td>$520,000</td>
<td>$540,000</td>
<td>$560,000</td>
<td>$580,000</td>
<td>$600,000</td>
<td>$620,000</td>
</tr>
<tr>
<td>Composting Organics – Food Waste Collection, Storm Ready Austin, &amp; compost incentives</td>
<td>$400,000</td>
<td>$800,000</td>
<td>$2,000,000</td>
<td>$3,000,000</td>
<td>$3,250,000</td>
<td>$3,500,000</td>
<td>$3,750,000</td>
<td>$4,000,000</td>
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<tr>
<td>Household Hazardous Waste North Site</td>
<td>$0</td>
<td>$0</td>
<td>$875,000</td>
<td>$900,000</td>
<td>$925,000</td>
<td>$950,000</td>
<td>$975,000</td>
<td>$1,000,000</td>
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<tr>
<td>New Ordinances – Added Staffing &amp; Resources</td>
<td>$85,000</td>
<td>$90,000</td>
<td>$95,000</td>
<td>$100,000</td>
<td>$105,000</td>
<td>$110,000</td>
<td>$115,000</td>
<td>$120,000</td>
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<tr>
<td>Special Events Diversion – new ordinance &amp; services</td>
<td>$70,000</td>
<td>$75,000</td>
<td>$80,000</td>
<td>$85,000</td>
<td>$90,000</td>
<td>$95,000</td>
<td>$100,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Economic Development – Re-Made in Austin &amp; Eco-Industrial Park</td>
<td>$100,000</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$350,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Communications – Public Education &amp; Marketing</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
<td>$3,500,000</td>
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<tr>
<td><strong>Total Additional Expenses</strong></td>
<td>$4,555,000</td>
<td>$5,965,000</td>
<td>$8,080,000</td>
<td>$9,140,000</td>
<td>$9,450,000</td>
<td>$9,760,000</td>
<td>$9,820,000</td>
<td>$9,880,000</td>
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<tr>
<td><strong>Annual Disposal Savings</strong></td>
<td>$4,800,000</td>
<td>$4,400,000</td>
<td>$4,000,000</td>
<td>$3,600,000</td>
<td>$3,200,000</td>
<td>$2,800,000</td>
<td>$2,400,000</td>
<td>$2,000,000</td>
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<tr>
<td><strong>$ per Household per Month</strong></td>
<td>$0</td>
<td>$0.68</td>
<td>$1.74</td>
<td>$2.30</td>
<td>$2.52</td>
<td>$2.73</td>
<td>$2.83</td>
<td>$2.91</td>
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<td><strong>Increase in Monthly Rates</strong></td>
<td>$0</td>
<td>$0.68</td>
<td>$1.06</td>
<td>$0.56</td>
<td>$0.22</td>
<td>$0.21</td>
<td>$0.10</td>
<td>$0.08</td>
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</table>
# Austin Resource Recovery Master Plan:

## Pay-As-You-Throw Pricing Structure

<table>
<thead>
<tr>
<th>Trash Cart Size</th>
<th>Gal Rate</th>
<th>Monthly Rate</th>
</tr>
</thead>
</table>
| 24              | $0.16 \times 24 \text{ gallons}  
Plus $9.50 Base Rate | $13.35       |
| 32              | $0.16 \times 32 \text{ gallons}  
Plus $9.50 Base Rate | $14.60       |
| 64              | $0.16 \times 64 \text{ gallons}  
Plus $9.50 Base Rate | $19.75       |
| 96              | $0.25 \times 96 \text{ gallons}  
Plus $9.50 Base Rate | $33.50       |

Gallon Rate charged on trash can size – Bundled Rate for all services

Curbside Service includes trash, recycling, and organics collection
City of Austin
Austin Resource Recovery Department
Master Plan

www.AustinRecycles.com

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Feedback, Questions, & Answers