Agenda

- Introduction - What is Zero Waste? / Why Focus on Zero Waste?
- Status of Zero Waste Planning Process
- How are We Doing?
- Current Supporting Policies and Programs
- Sunnyvale Zero Waste Vision
- Existing Waste Stream
- Zero Waste Options
- What Could Zero Waste Look Like in Sunnyvale?
- Discussion / Closing

What is Zero Waste?

The focus of Zero Waste is to:

- Reduce volume and toxicity of waste
- Ensure products are designed to be reused, repaired or recycled
- Encourage recycling to the maximum extent possible
- Conserve and recover all resources

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Why Focus on Zero Waste?

- Using up the earth's resources
  - 2/3 of the materials we use are burned or buried
- Landfill space is not infinite
- Producers need to take responsibility
  - Tons of valuable resources are wasted each year because products are increasingly designed to be used only once
- Waste generation is increasing, recycling and composting is slowing
- Extraction of resources contributes to greenhouse gas emissions

-For every item that is landfilled, a new one must be extracted, process, and manufactured from raw or virgin resources

Starting to Think about Zero Waste

- Beyond recycling
- Broaden thinking to "front-end" solutions and a holistic approach

Status of Zero Waste Planning Process

- December 2008--Zero Waste Policy adopted by Council and Zero Waste Strategic Plan approved
- December 2010--Waste Characterization Study completed
- February 2011 to September 2011--Long-term Strategic Plan (in progress)
- Late 2011 to Early 2012--Make recommendation to Council to determine next steps

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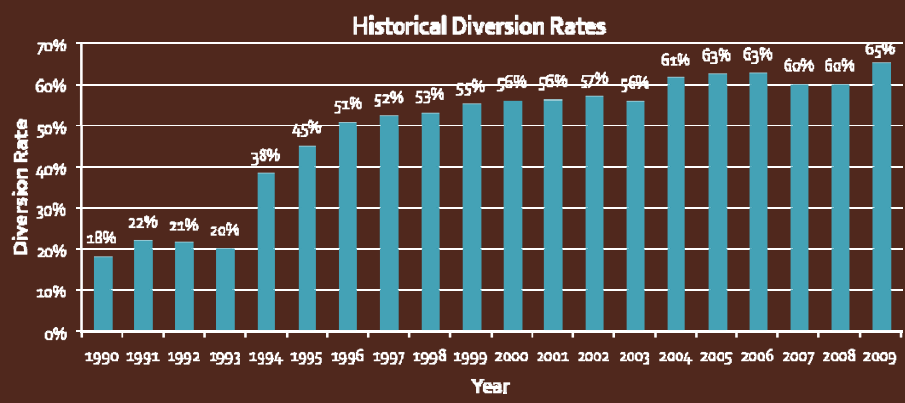
How are We Doing?

- 65% Diversion Rate (State Mandate = 50%)



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Current Supporting Policies and Programs

- Policies
  - Zero Waste Policy
  - Extended Producer Responsibility
  - Cloth Diaper Policy
  - Single-use Water Bottle and Polystyrene Food Container Policy (internal-no City funds spent on these items)
  - Environmental Procurement Policy
  - CO_2 Emissions Policy
- Programs
  - Curbside , School, Commercial Recycling Programs
  - Pay-As-You-Throw Rate System
  - SMaRT Station
    - MRF
    - Recycling
    - Drop-off

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City's Zero Waste Vision

- Quantifiable Diversion Goal
- Emphasis on Upstream Programs
- Downstream-Focus on Low Hanging Fruit
- Pursue more Aggressive / Costly Options as Warranted

Major Question = Cost / Benefit of Available Options to Increase Diversion

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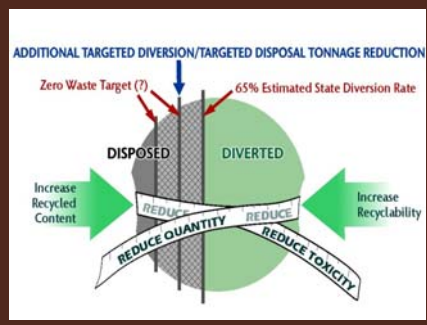
What is City's Diversion Goal

- To Be Determined
  - 75% State Reported Diversion Rate
  - 50% Reduction in Disposal Tonnage
  - 100% Reduction in Disposal Tonnage
- How do we Measure Success?
  - Per State Reported Figures
  - Based on Actual Disposal Tonnages



Challenges / Opportunities

Challenges

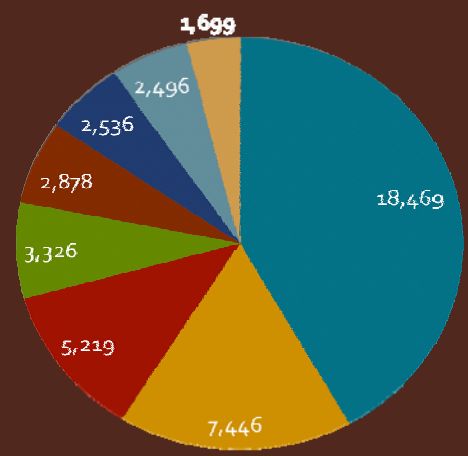
- Cost
- Realizing Upstream Potential
- Increasing SMaRT Station Diversion
  - Mixed Waste
  - Small Organics
  - C&D

Opportunities

- Positive Working Relationship with SMaRT Station Partner Cities (Palo Alto and Mountain View)
- New Emerging Technologies

Eight Most Prevalent Disposed Materials Overall, Sunnyvale 2010

- Food (18,469 tons)
- Compostable and Other Misc Paper (7,446 tons)
- Leaves, Grass, Prunings and Trimmings (5,219 tons)
- Bulky Items (3,326 tons)
- Remainder/Composite Construction and Demolition (2,878 tons)
- Diapers (2,536 tons)
- Uncoated Corrugated Cardboard (2,496 tons)
- Treated Dimensional Lumber (1,699 tons)



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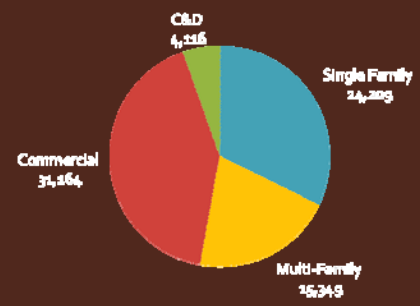
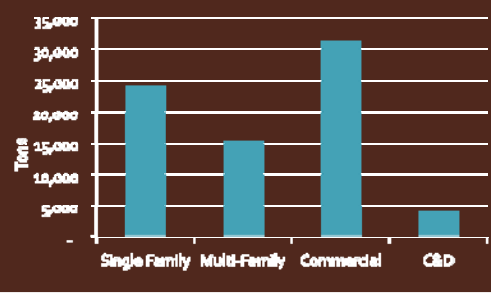
Tons by Sector





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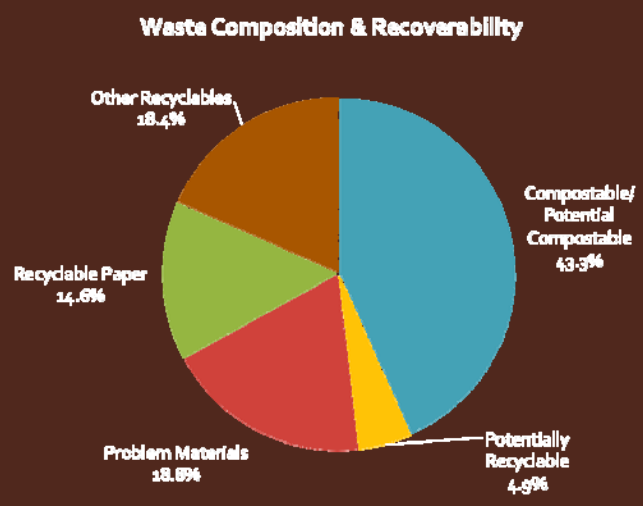
Single Family Waste Stream



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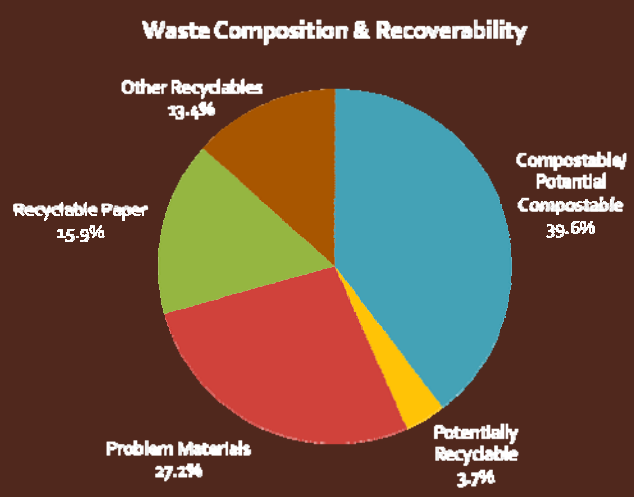
Multi-Family Waste Stream



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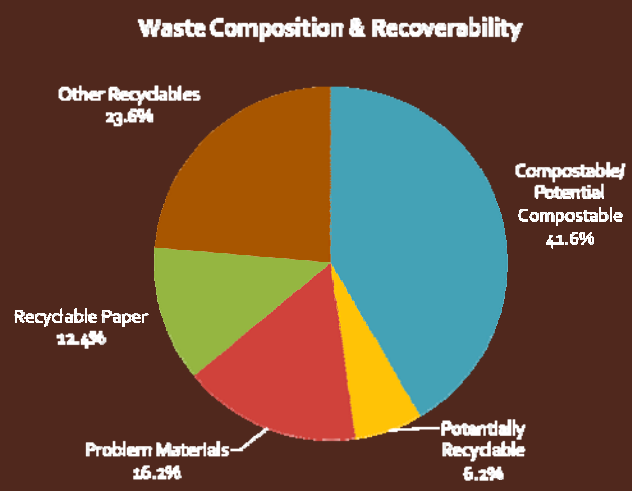
Commercial Waste Stream



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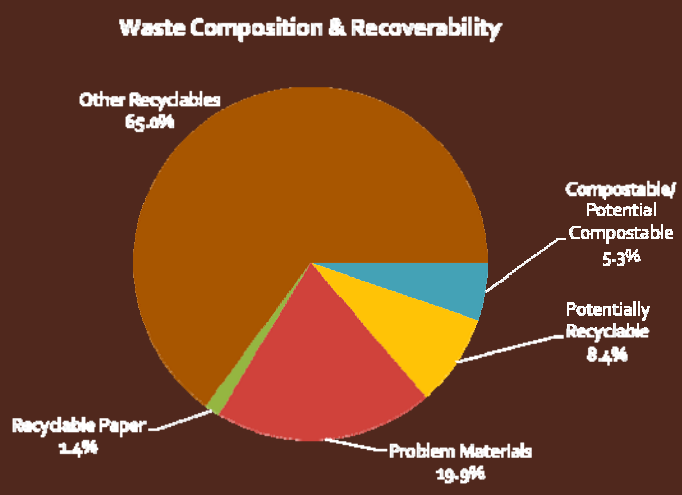
Construction & Demolition Waste Stream



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How Do we Achieve our Zero Waste Vision?

- Aggressively Support Extended Producer Responsibility
- Target Low Hanging Fruit
- Consider Conversion Technologies or Pursue More Aggressive Diversion Options as Needed

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Low hanging fruit:

Small Organics not Currently Diverted

Increased Diversion of Multi-Family Yard Waste

Enhanced SMaRT Station Recovery

Other Programs based on Cost / Benefit

Upstream Options (Waste Reduction)

- Policies
- Contracts / Procurement
- Resolutions / Ordinances
  - Mandatory Residential/Commercial Recycling
- Product Bans (e.g., Plastic Bags)
- Disposal Bans (e.g., Yard Waste)
- Public Outreach

Midstream Options (Reuse)

- Reuse
  - Promote to Residential and Businesses
  - Identify Opportunities through Business Audits
  - Identify and Implement Programs for City Facilities

Downstream Options (Waste Diversion)

- Increased Source Separation Programs
- Increased SMaRT Station Diversion
  - Increased Recovery of Mixed Waste
  - Diversion of SMaRT Station Residue
    - Small Organics
    - Mixed Waste Processing Residue

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Downstream Options -

Increased Source Separation Programs

- Residential
  - Add New Curbside Materials
  - Add Food Waste to Yard Waste Program
- Commercial
  - Implement Fully Commingled Commercial Recycling Program
  - Implement Food Waste / Mixed Organics Collection Program

Waste is sorted at the SMaRT Station for recycling/composting before heading to the landfill!

SMaRT Station
City of Sunnyvale, California

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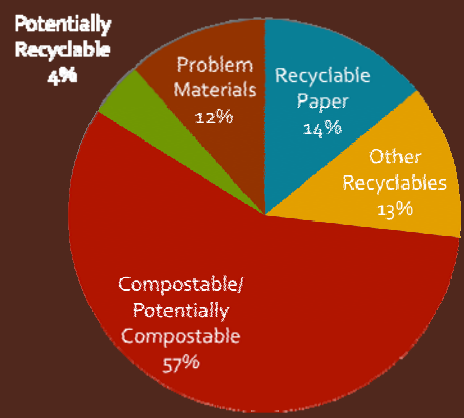
What's left over after it gets sorted? Residue…



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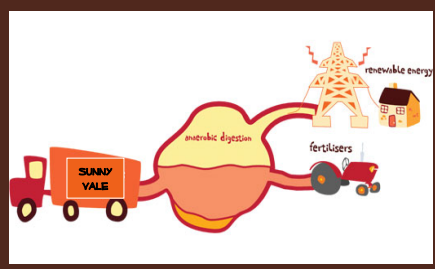
Downstream Options -
Increased SMaRT Station Diversion

- Increased Mechanical/Manual Recovery of Mixed Waste
  - Enhanced C&D Recovery
  - Increased Mixed Waste Recovery / Contract Incentives
- Diversion of SMaRT Station Residue
  - Small Organics
    - Additional On-Site Processing
  - Mixed Waste Processing Residue
    - Anaerobic Digestion
    - Gasification / Pyrolysis



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Keeping in Mind the City's Zero Waste Vision…

- Waste Reduction
- Reuse of Materials and Products
- Expanded Recycling and Composting Services to Recover Material for Highest and Best Use
- Advocate for Zero Waste Policies and Regulations
- Work Locally/Regionally to Assist in Zero Waste Planning
- Lead by Example
- Adopt Policies and Incentives to Help Achieve Zero Waste in Sunnyvale

What Option/Ideas Would You Like to Share?

Reference handout – open to questions

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