



# Zero Waste Implementation Plan

## August 25<sup>th</sup>, 2010

City of Alameda  
**Public Works  
Department**  
*Public Works Works for You!*



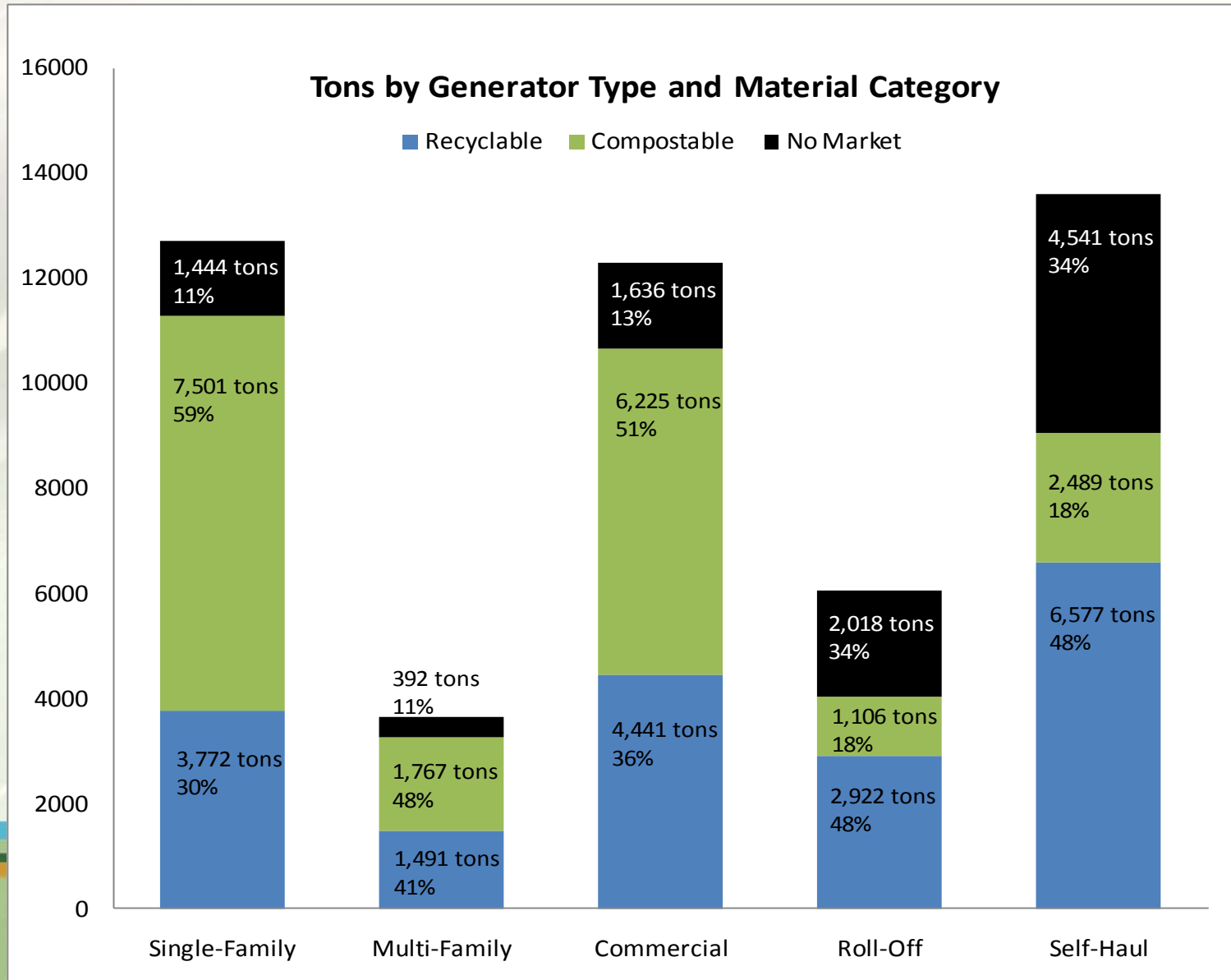
# Zero Waste Workshops

- **March**
  - Opportunities and constraints
- **April**
  - Sustainable Living Symposium
- **June**
  - Policies and programs
- **August**
  - Draft plan elements
- **November**
  - CASA Town Hall meeting

## Featuring:

- ✓ Business meeting
- ✓ School site meeting
- ✓ Community meeting  
(co-sponsored with CASA)

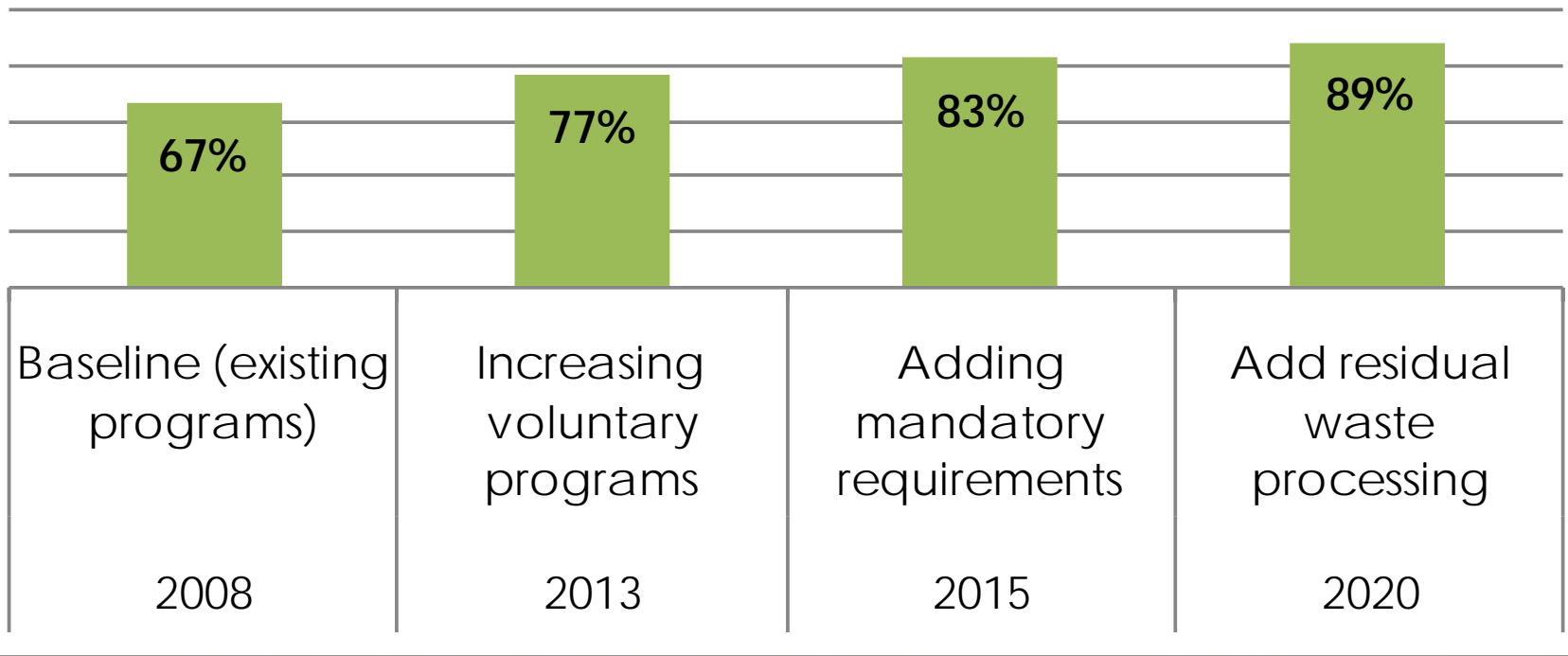
# Alameda Disposed Waste by Generator Type 2008



# Phased Approach based on Stakeholder Input

Short Term	Medium Term	Long Term
Optimizing voluntary programs	Implementing mandatory	Processing residual waste
<ul style="list-style-type: none"><li>• Add materials to the blue and green cart</li><li>• Undertake a stakeholder marketing campaign</li><li>• Advocate for producer responsibility at the state level and work with local retailers to increase take-back programs</li><li>• Increase commercial technical assistance</li><li>• Increase construction and demolition debris ordinance requirements and increase C&amp;D technical assistance</li></ul>	<ul style="list-style-type: none"><li>• Support countywide disposal bans</li><li>• Consider mandatory source-separation requirements</li></ul>	<ul style="list-style-type: none"><li>• MRF first</li></ul>

# Projected Diversion Rate by Program by Year



# Diversion Estimates by Scenario

	Baseline (existing programs)	Optimizing voluntary programs	Adding mandatory requirements	Add residual waste processing
Diversion (tons)	98,108	112,199	122,054	130,260
Disposal (tons)	48,323	34,231	24,376	16,170
Diversion rate	67%	77%	83%	89%

# GHG Reduction Estimates by Scenario

	Optimizing voluntary programs	Adding mandatory requirements	Add residual waste processing
MTCO <sub>2</sub> E <sup>1</sup>	(24,120)	(38,374)	(44,424)
Equivalent number of cars removed from the road	4,418	7,028	8,137

<sup>1</sup>Metric tons of carbon dioxide equivalent

Calculated using: U.S. EPA Waste Assessment Model (WARM)

Local Action Plan estimated 44,114 MTCO<sub>2</sub>E reduction through zero waste initiatives

# Zero Waste Program Cost Estimates

Program	Annual Cost	Cost per household or business establishment per month
New materials <sup>1</sup>	\$80,000	\$0.19
Social Marketing	\$85,000	\$0.20
Producer Responsibility	\$5,000	\$0.01
Commercial Technical Assistance <sup>2</sup>	\$85,000	\$0.20
C&D Ordinance	\$0	\$0
Mandatory Requirements <sup>3</sup>	\$0	\$0
Residual Waste Processing <sup>4</sup>	\$1,000,000	\$2.40
<b>Total</b>	<b>\$1,255,000</b>	<b>\$3.00<sup>5</sup></b>

<sup>1</sup>Assumes \$3.15 per ton increase in green cart processing and transportation costs for 25,000 tons per year. No net new costs for handling more plastics are assumed.

<sup>2</sup>Assumes one additional part-time staff person hired by the City or ACI.

<sup>3</sup>Assumes current levels of City and ACI staff to address compliance issues.

<sup>4</sup>Assumes \$50 per ton increase in gray cart processing costs for 20,000 tons per year.

<sup>5</sup>This represents a 10% increase for a standard residential 32-gallon service.

# Costs per Ton Diverted and MTCO<sub>2</sub>E Reduced

	Increasing voluntary programs	Adding mandatory requirements <sup>1</sup>	Add residual waste processing
Tons diverted per year (net new tons)	14,091	9,855	8,206
Annual costs	\$255,000	\$0	\$1,000,000
Costs per ton	\$18	\$0	\$122
GHG emissions reductions (MTCO <sub>2</sub> E) (net new reductions)	(24,120)	(14,254)	(6,050)
Costs per MTCO <sub>2</sub> E reduced	\$11	\$0	\$165

<sup>1</sup>Assumes current levels of City and ACI staff to address compliance issues.

# Zero Waste Implementation Plan

## Voluntary Programs 2011-2013

### 2011 – Year I Activities

<p><b>Add materials to blue and green cart</b></p> <ul style="list-style-type: none"> <li>--More recyclable plastics</li> <li>--More compostable materials</li> </ul>	Public Works	ACI
<p><b>Social Marketing</b></p> <p><b>Year I Activities</b></p> <ul style="list-style-type: none"> <li>--Marketing plan</li> <li>--Media buys</li> <li>--Volunteer training</li> <li>--Outreach materials</li> </ul>	Public Works	ACI CASA School groups Business groups Contract assistance (if needed)
<p><b>Trash Talker Program</b></p>	Public Works	Recreation and Parks ACI
<p><b>City Facility Zero Waste</b></p> <p><b>Year I Activities</b></p> <ul style="list-style-type: none"> <li>--Department goal setting (e.g., 75% diversion)</li> <li>--Increase recycling and organics collection, decrease solid waste collection</li> <li>--Quarterly report to the Green Team on Department progress</li> </ul>	Public Works	Green Team All Department Heads
<p><b>Alameda Green School Challenge</b></p> <ul style="list-style-type: none"> <li>--Provide outreach and technical assistance, as requested</li> <li>--Participate in quarterly meetings coordinated by CASA with AUSD facilities staff and other private and parochial schools</li> </ul>	Public Works CASA	AUSD CASA Public Works
<p><b>Producer responsibility</b></p> <ul style="list-style-type: none"> <li>--Develop Council Resolution to support Product Stewardship</li> <li>--Support California Product Stewardship Council</li> <li>--Continue voluntary take-back efforts with local retailers</li> </ul>	Public Works	Green Team
<p><b>Commercial Technical Assistance</b></p> <p><b>Year I Activities</b></p> <ul style="list-style-type: none"> <li>--Participate in quarterly meetings coordinated by CASA with Stopwaste and ACI to identify specific generators for technical assistance (such as restaurants and large generators)</li> <li>--Share information on priority generators</li> <li>--Concentrate activities on generators without blue cart and green cart services</li> </ul>	Public Works CASA	ACI Stopwaste.org

# 2012 – Year 2 Activities

## C&D ordinance changes

- New non-exclusive franchise agreements
- Modify C&D ordinance

Public Works

City Attorney

## Social Marketing

### Year 2 Activities

- Provide Support to School and Community Organizations to assist with environmental stewardship, outreach and education efforts

Public Works

ACI  
CASA  
School groups  
Business groups

## City Facility Zero Waste

### Year 2 Activities

- Department technical assistance
- Program monitoring
- Quarterly report to the Green Team on Department progress

Public Works

Green Team  
All Department Heads

## Commercial Technical Assistance

### Year 2 Activities

- Participate in quarterly meetings coordinated by CASA with Stopwaste and ACI to identify specific generators for technical assistance (such as restaurants and large generators)
- Target generators without blue cart and green cart services
- Set initial goal of 25 percent diversion for commercial sector
- Monitor progress toward goal

Public Works  
CASA

ACI  
Stopwaste.org

# 2013 - Year 3 Activities

## Social Marketing

### Year 3 Activities

- Business recycling recognition awards event
- “Emerald Effect” recognition
- Green restaurant list published
- Case studies publish on website, newspaper, Chamber newspapers

Public Works

ACI  
CASA  
School groups  
Business groups

## City Facility Zero Waste

### Year 3 Activities

- Department recycling recognition awards event
- “Emerald Effect” recognition for City Departments
- Program monitoring
- Quarterly report to the Green Team on Department progress

Public Works

Green Team  
All Department  
Heads

## Commercial Technical Assistance

### Year 3 Activities

- Audit progress in obtaining the 50% participation rate
- Monitor and adjust program to achieve 75% participation
- “Emerald Effect” recognition for new business recyclers

Public Works

ACI  
Stopwaste.org

## 2013 - Year 3 Activities (cont.)

<b>Re-evaluate marketable materials that can be included in blue cart and green cart</b>	Public Works	ACI
<b>Evaluate the effectiveness of C&amp;D ordinance changes</b>	Public Works	
<b>Evaluate the effectiveness of Social Marketing Activities</b>	Public Works	ACI CASA School groups Business groups Contract assistance (if needed)
<b>Evaluate the effectiveness of City Facility Zero Waste Activities</b>	Public Works	Green Team All Department Heads
<b>Evaluate the effectiveness of Commercial Technical Assistance Activities</b>	Public Works	ACI CASA Stopwaste.org
<b>Add new materials to the blue cart and green cart</b>	Public Works	ACI City Attorney
<b>Update Social Marketing tools</b>	Public Works	ACI CASA School groups Business groups Contract assistance (if needed)
<b>Implement new City Facility Zero Waste tasks, as developed</b>	Public Works	Green Team All Department Heads
<b>Implement new Commercial Technical Assistance tasks, as developed</b>	Public Works	ACI CASA Stopwaste.org

# Mandatory Programs 2014-2016<sup>1</sup>

## 2014 – Year 4 Activities

**Consider implementation of additional product bans, such as single-use plastic bags**

Public Works

## 2015 – Year 5 Activities

**Consider implementation of mandatory recycling and composting requirements**

Public Works

**Work with Stopwaste.org to identify and implement new Disposal Bans**

Stopwaste.org

Public Works

**Monitor and support Product Stewardship Council and League of California Cities on issues pertaining to integrated waste streams**

Public Works

## Residual Waste Processing 2016-2020

**Support regional and private development of Residual Waste Processing**

Public Works

<sup>1</sup>Implementation of mandatory programs may need to be expedited if required by State or County legislation.

# Zero Waste Plan Schedule

- **October 2010**
  - Zero waste implementation plan to City Council

Check for updates at:  
[www.planetalameda.com](http://www.planetalameda.com)

