



Zero Waste Implementation Plan

August 25th, 2010

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



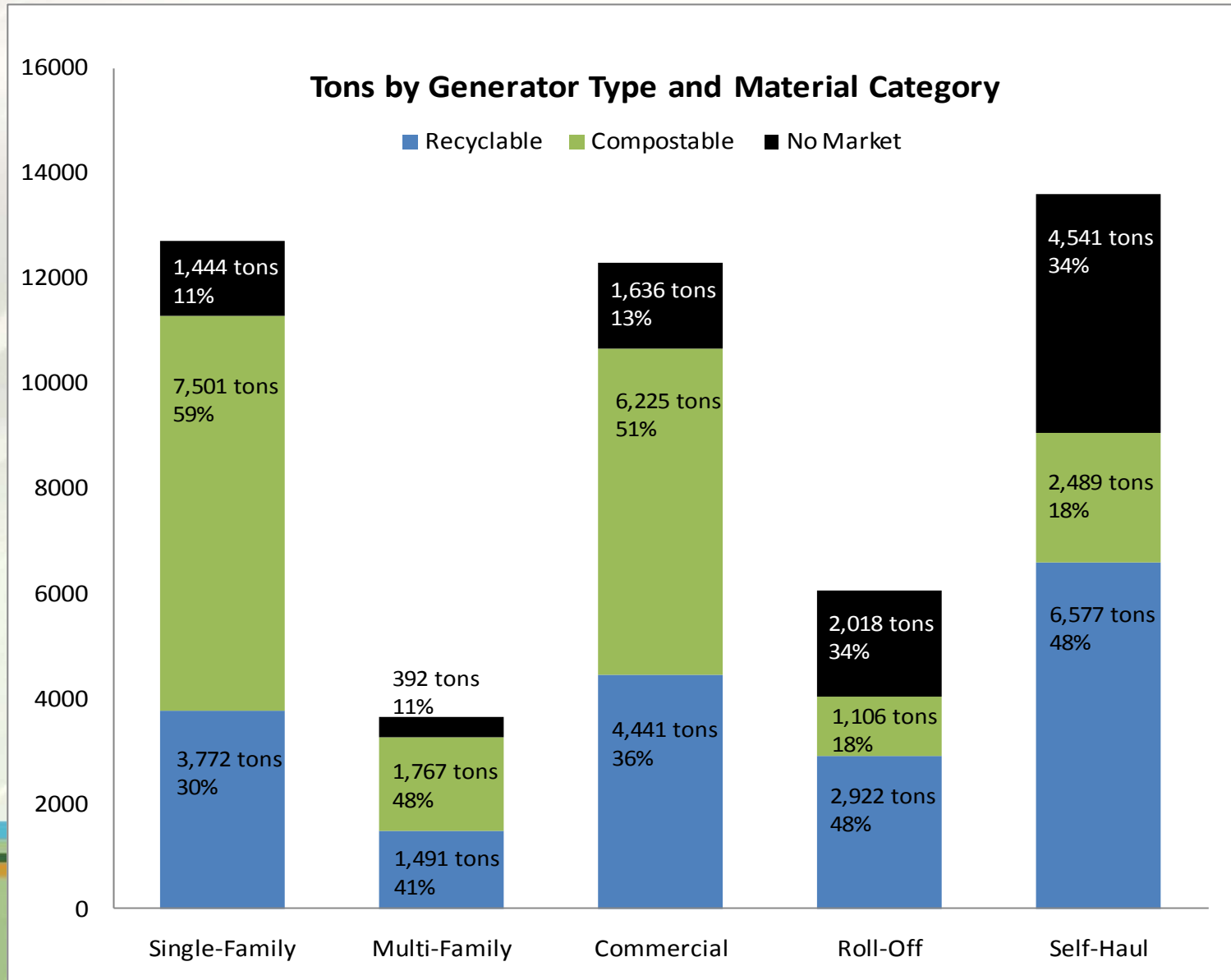
Zero Waste Workshops

- **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)

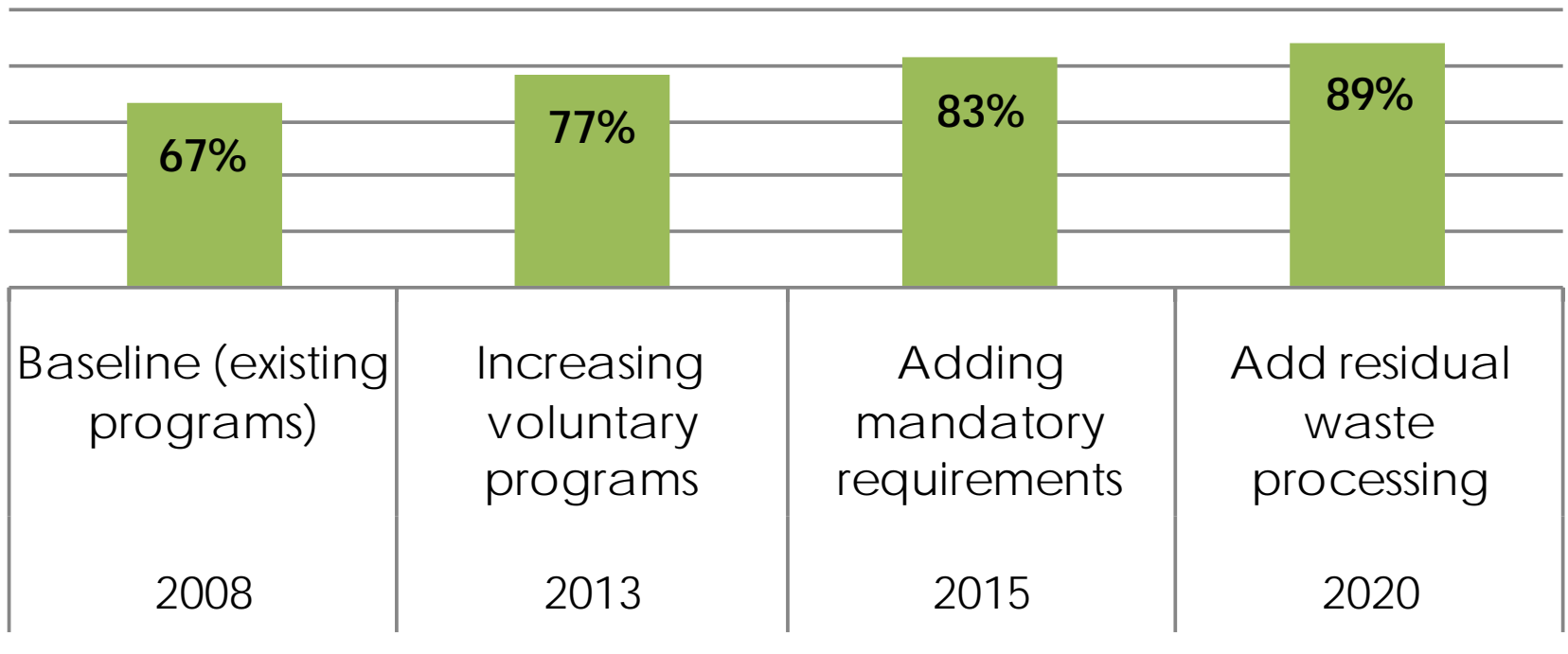
Alameda Disposed Waste by Generator Type 2008



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

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 ₂ E ¹	(24,120)	(38,374)	(44,424)
Equivalent number of cars removed from the road	4,418	7,028	8,137

¹Metric tons of carbon dioxide equivalent

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

Local Action Plan estimated 44,114 MTCO₂E reduction through zero waste initiatives

Zero Waste Program Cost Estimates

Program	Annual Cost	Cost per household or business establishment per month
New materials ¹	\$80,000	\$0.19
Social Marketing	\$85,000	\$0.20
Producer Responsibility	\$5,000	\$0.01
Commercial Technical Assistance ²	\$85,000	\$0.20
C&D Ordinance	\$0	\$0
Mandatory Requirements ³	\$0	\$0
Residual Waste Processing ⁴	\$1,000,000	\$2.40
Total	\$1,255,000	\$3.00⁵

¹Assumes \$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.

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

³Assumes current levels of City and ACI staff to address compliance issues.

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

⁵This represents a 10% increase for a standard residential 32-gallon service.

Costs per Ton Diverted and MTCO₂E Reduced

	Increasing voluntary programs	Adding mandatory requirements ¹	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 ₂ E) (net new reductions)	(24,120)	(14,254)	(6,050)
Costs per MTCO ₂ E reduced	\$11	\$0	\$165

¹Assumes current levels of City and ACI staff to address compliance issues.

Zero Waste Implementation Plan

Voluntary Programs 2011-2013

2011 – Year I Activities

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

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

Mandatory Programs 2014-2016¹

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

¹Implementation 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

