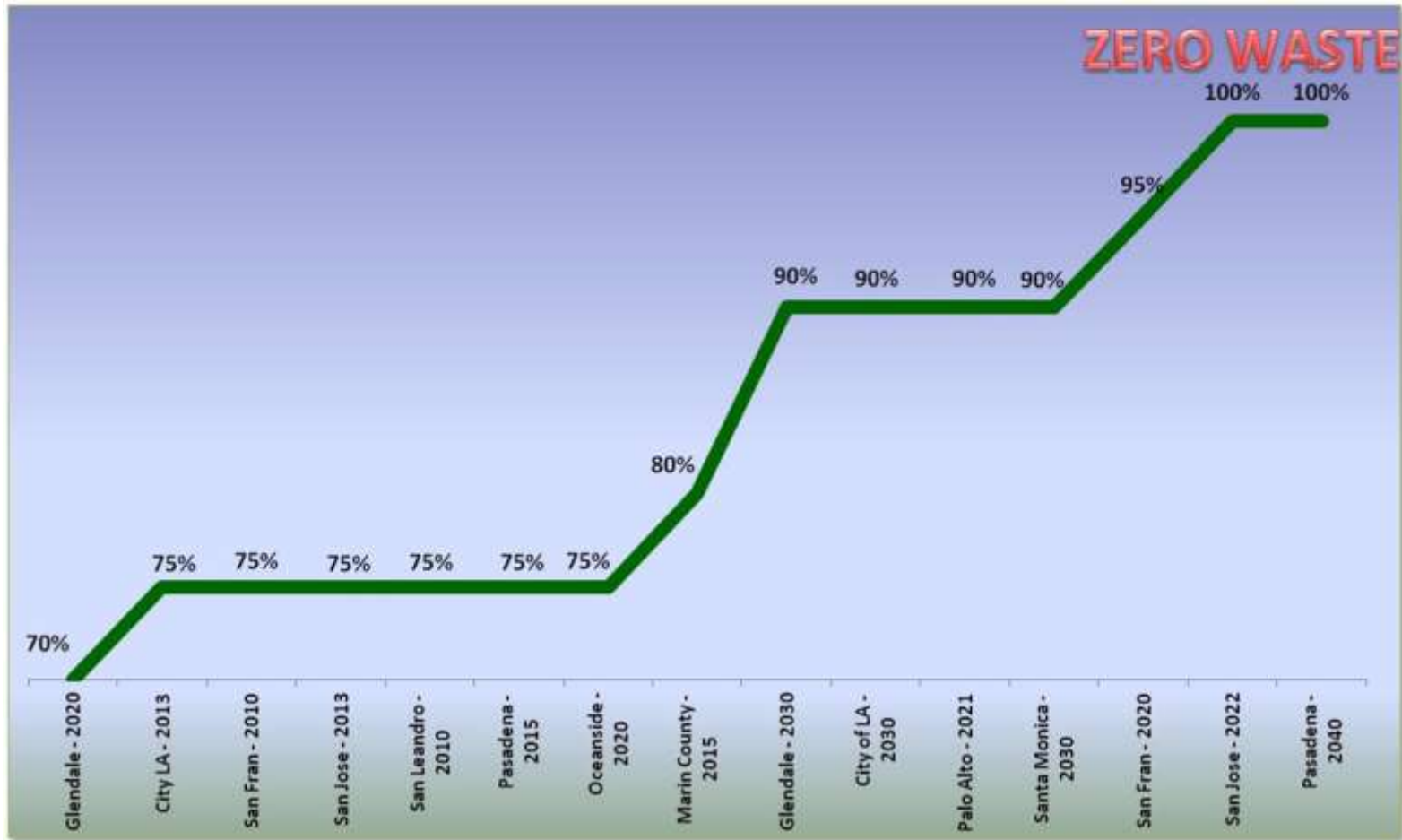




The View from Here to Zero

Michelle Leonard
SCS ENGINEERS

There Are Many Views of Zero Waste



How Do You Plan for Zero Waste?

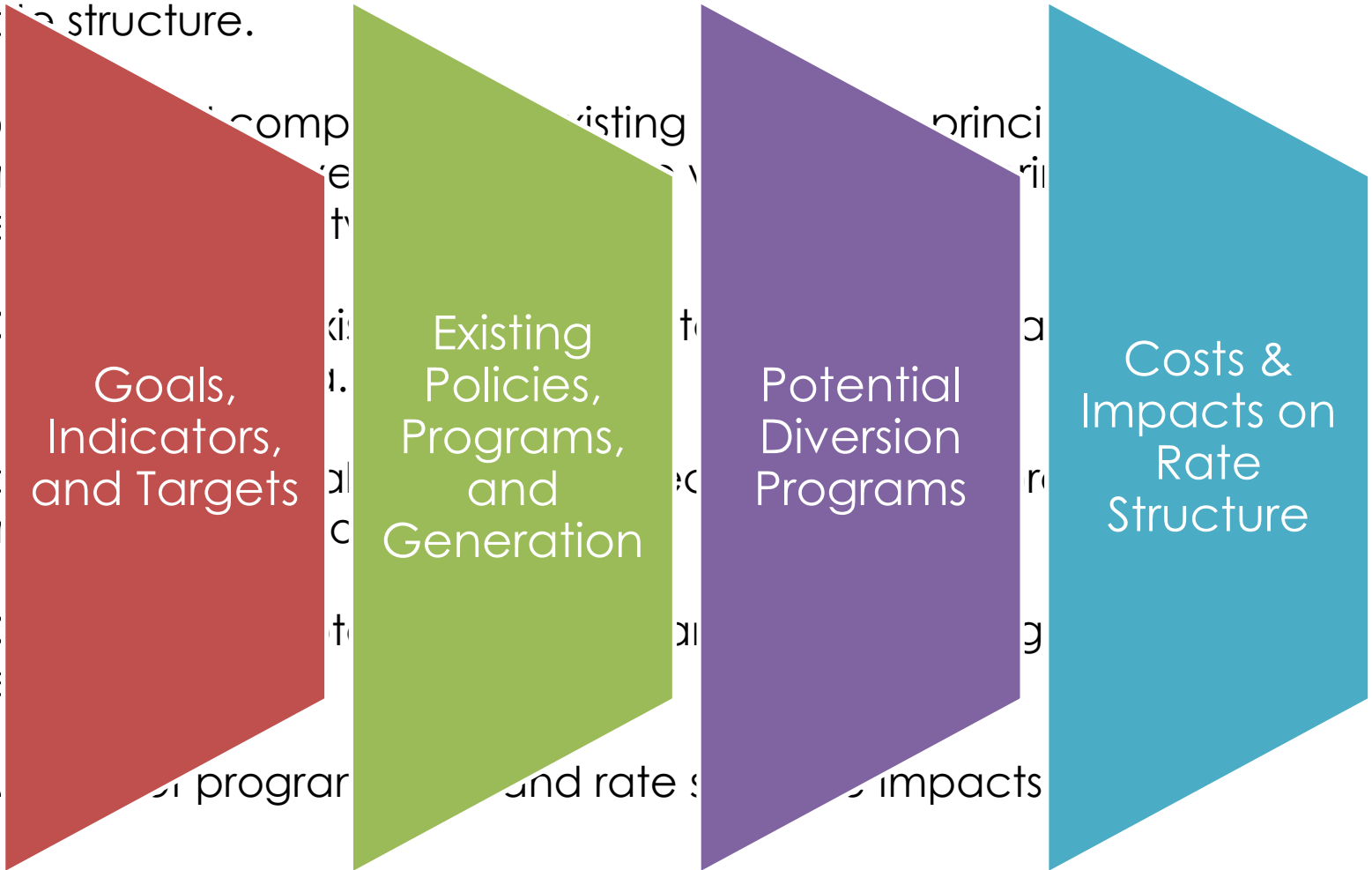
- Review and summary of current policies, programs, facilities, and rate structure.

- Review and summary of existing programs, facilities, and rate structure.

- Conduct a waste audit to determine the amount and type of waste generated.

- Conduct a cost analysis to determine the current cost of waste disposal.

- Analyze the data to determine the impact of waste on the rate structure.



Goal Areas, Indicators & Targets

Waste Reduction

Environmental Benefits

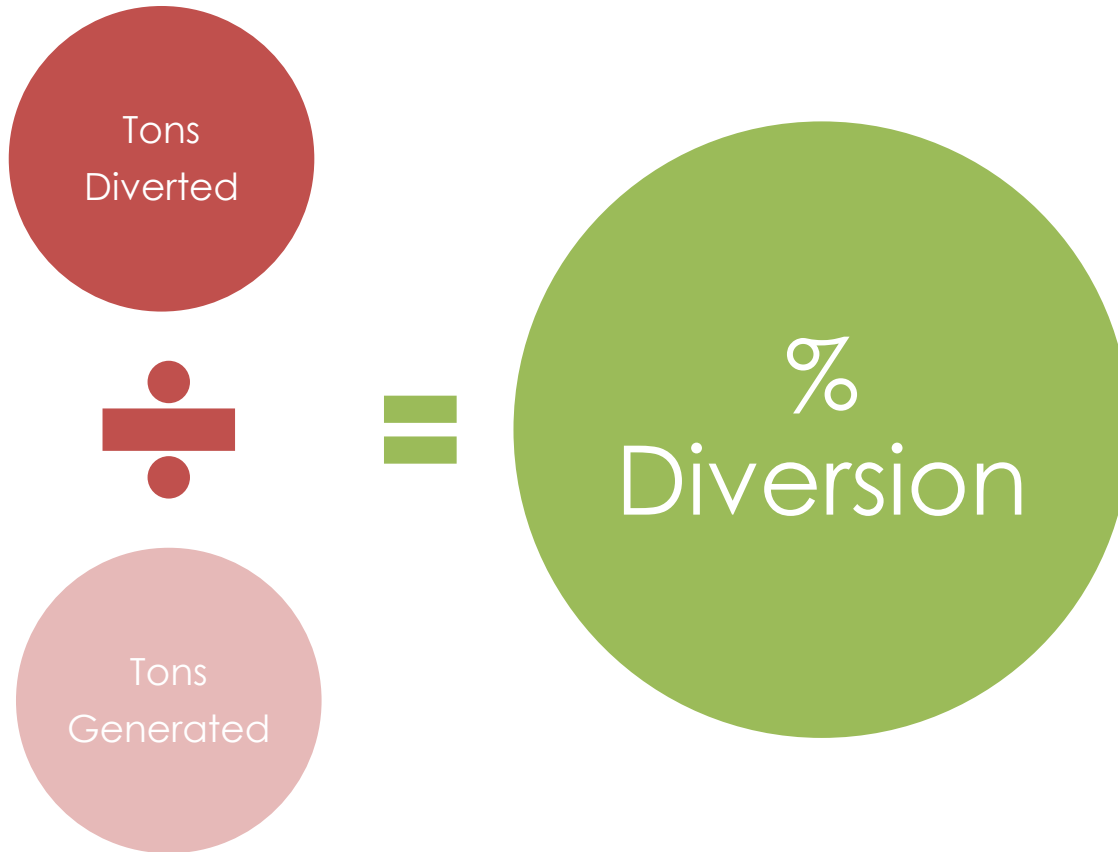
Economic Benefits

City Leadership

Producer Responsibility

Zero Waste Culture Change

Existing Generation and Diversion Rate



Multi-Phase Implementation

Short Term
2013-2015

- Material Bans
- Product Stewardship
- Behavior Change Marketing

Medium Term
2016-2022

- Collection Modifications
- Mandatory Recycling
- Diversion Requirements

Long Term
2023-2030

- Expansion of Mandatory Recycling
- Wet/Dry Collection
- Residuals Processing

Potential Collection Programs

Medium term

Weekly Organics & Recycling Bi-Weekly Refuse

Benefits

- Reduced Operations Costs
- Fewer Collection Truck Trips
 - Reduced Vehicle Air, Noise and GHG Emissions
- Increased Efficiency in labor time and maintenance

Phased In

- Single Family
- Multi-Family

Long term

Wet/Dry Collection and Processing

Wet – Processed via anaerobic digestion or composting

- Yard Trimmings
- Food Scraps
- Soiled Paper

Dry – Reused or Recycled

- Paper
- Glass

Additional Collection Programs

Mandatory commercial
and residential food
scraps/organics
collection

Mandatory
Commercial
Recycling

Bulky Item Collection;
Move-in/Move-out
Program

New recycling
programs for
mattresses, carpet,
textiles

Policy & Facility Options

Mandatory Requirements - Bans

Disposal Bans

- Plastic Water Bottles
- Yard Trimmings
- C&D
- Single-use Carry-Out Bags
- Disposable Containers

C&D Ordinance

- Diversion requirements for new construction and demolition projects

Diversion Rate Minimums for all sectors

Facilities

Regional Resource Recovery Centers (RRCs)

- Drop off centers for hard to recycle items
- Buyback Options

Alternative Technology Facilities

- Thermal & Biological Processes
 - Anaerobic Digestion
 - Gasification
 - Pyrolysis

Upstream/Downstream Diversion Policies and Programs

Upstream

- Extended Producer Responsibility
- Packaging Legislation
- Behavior Change Marketing

Upstream – Policies and programs to support re-design strategies to reduce the volume and toxicity of discarded products and materials, and promote low-impact or reduced consumption lifestyles.

Downstream

- Expanded Blue Cart Acceptable Items
- Multifamily Outreach
- Self-haul Waste Origin Reporting
- Regional Collaboration
- Environmental Directory
- Rewards Program –Resident Recognition
- Centralized Garage Sales
- Business/Restaurant Food Donation
- HHW Collection at public events

Downstream – Policies and programs to address reuse, recycling and composting of end-of-life products and materials to ensure their highest and best use.

Program Options - Diversion Estimates

	Estimated Diversion Increase (tons)				Total Diversion Rate Increase (%)	Residual Processing Diversion (tons)	Total Diversion Increase with Residual Processing (tons)	Diversion Rate Increase with Residual Processing (%)
	Short Term (2013-2015)	Medium Term (2021-2025)	Long Term (2026-2030)	Total Diversion Increase (2013-2030)				
Diversion (tons)	28,569	16,271	17,387	62,227		9,537	71,765	
Diversion (%)	7.9%	4.4%	4.7%		17%			19.6%

Environmental Benefits

Indicator



- Greenhouse gas emissions reduction through waste reduction & recycling
- Conversion of fleet to clean fuels

Target



- 50% contribution to GHG reduction by 2022
- 100% of all City fleet vehicles to clean fuels by 2030

Economic Benefits

Indicator

Target



Creation of new jobs

20% increase in local jobs from waste prevention and recycling

Local Market Development

3 new local partnerships by 2015

5 new partnerships by 2022

City Leadership

Indicator

Target



Zero waste at City offices and facilities

Recycling and composting at all City facilities by 2015



80% diversion rate at City facilities by 2015



95% diversion rate at City facilities by 2030



Producer Responsibility

Indicator



- Producer responsibility for problem products (advocacy at state level or implementation of City ordinances)

Target



- State legislation or City ordinance to address pharmaceuticals, sharps, batteries, fluorescent bulbs by 2022
- State legislation to address packing of products and additional disposal fees for packaging materials.



Zero Waste Culture Change

Indicator



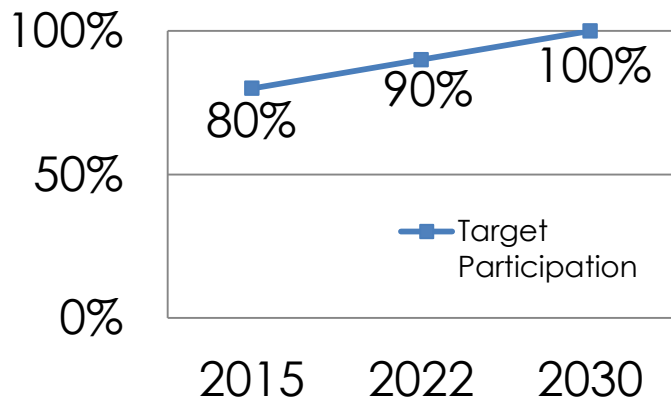
- Customer participation and reduced contamination
- Zero waste awareness at home, at work, at school, at play

Target



- 80% participation in City programs by 2015
- 90% participation in City programs by 2022
- 100% participation in City programs by 2030
- Contamination reduced to 2% by 2015
- Contamination reduced to 1% by 2022
- 80% of residents and businesses aware of Zero Waste by 2015
- 90% of residents and businesses aware of Zero Waste by 2022

Target Population Participation



How Much Will This Cost?

	Single Family		Multi-family		Commercial	
Program	Phase	Rate Change	Phase	Rate Change	Phase	Rate Change
Food Collection - carts	short	3.8%	medium	1.7%		
Behavior Change	short	1.5%	short	3.9%	short	(0.8)%
Bulky Move In-Out			short - med	2.6%		
Weekly Organics/Recycling & Bi-Weekly Refuse Service	short - med	(0.5)%	short - med	(7.3)%		
Food Collection - bins			medium	2.5%	medium	6.1%
Wet/ Dry Collection	med - long	(9.3)%	med - long	(1.2)%	med - long	(2.3)%
Mandatory Recycling					long	3.3%
Residual Processing	long	0.4%	long	0.4%	long	0.5%
Total Rate Impact 2012-2030 Carts		(4.5)%		(0.3)%		
Total Rate Impact 2012-2030 Bins				(0.5)%		6.8%

How Do We Pay For It?

SF Fees

- **Integrated Waste Management Fee**
- Based on all commodities (waste, recycling & organics)
- Incentivize customers to increase recycling and reduce disposal
- Potential reduction in collection costs

Commercial Refuse Rate

- A uniform “per cubic yard” rate for the whole range of bin or container sizes and collection frequency offered to customers.
- The cubic yard rate would ensure that sufficient revenues are generated to cover the City’s costs.

Recycling Rate

- A recycling rate would be established, measured by the full service costs for recycling materials.
- Based upon the quantity of recycling, this rate could be less than the refuse rate.

The View is Definitely Changing...

