

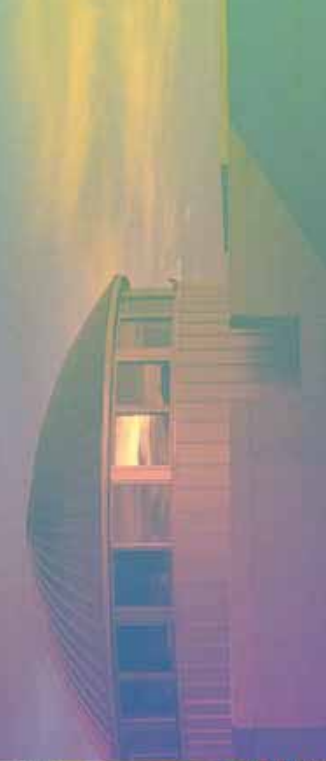


The Numbers Game: Waste Diversion as a Local Climate Solution



Lakewood
Sustainability

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CITY OF LAKEWOOD

SUSTAINABILITY PLAN 2015



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TABLE ZW2-1: STRATEGY BENEFITS

STRATEGY	ENVIRONMENTAL BENEFITS			ECONOMIC BENEFITS			SOCIAL BENEFITS	
	GHG REDUCTION POTENTIAL	ECOSYSTEM HEALTH	SELF-RELIANCE	HOUSEHOLD BENEFITS	COMMUNITY COHESION	PUBLIC HEALTH		
ZW2-A: Residential Curbside Recycling and Waste Diversion	🍃🍃🍃🍃	■ ■ ■	■	■	⊘	■ ■		
ZW2-B: Residential Organic Waste	🍃	■ ■ ■	■	■	⊘	■ ■		
ZW2-C: Multifamily Recycling and Composting	🍃🍃	■ ■ ■	■	■	⊘	■ ■		

🍃 <5,000 MtCO₂e Greenhouse Gas Emissions 🍃 ~10,000 MtCO₂e Greenhouse Gas Emissions

■ ■ ■ ■ High ■ ■ Medium ■ Low ⊘ Does Not Apply

TABLE ZW2-2: STRATEGY FEASIBILITY

STRATEGY	CITY OF LAKEWOOD				COMMUNITY	
	UPFRONT COSTS	ONGOING COSTS	PAYBACK / REVENUE POTENTIAL	FINANCIAL BENEFIT FOR RESIDENTS	FINANCIAL BENEFIT FOR BUSINESSES	
ZW2-A: Residential Curbside Recycling and Waste Diversion	\$	✓	✓	✓	-	
ZW2-B: Residential Organic Waste	\$	✓	-	✓	-	
ZW2-C: Multifamily Recycling and Composting	\$	✓	-	✓	-	

\$ < 50,000 \$\$ = 50,000–100,000 \$\$\$ = 100,000–1,000,000 \$\$\$\$ > 1,000,000

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ZERO WASTE: GREENHOUSE GAS EMISSIONS REDUCTION POTENTIAL

BASELINE	
EMISSIONS BY SECTOR – MT CO ₂ E	
BUILDINGS	1,175,087
MATERIALS	783,392
TRANSPORTATION	690,761
TOTAL GHG	2,649,240
	100%

2025 BUSINESS AS USUAL (BAU)	
EMISSIONS BY SECTOR – MT CO ₂ E	
BUILDINGS	1,053,368
MATERIALS	903,600
TRANSPORTATION	539,165
TOTAL GHG	2,496,133
	100%

2025 AFTER ZERO WASTE STRATEGIES ARE IMPLEMENTED	
EMISSIONS BY SECTOR – MT CO ₂ E	
BUILDINGS	1,053,368
MATERIALS	804,346
TRANSPORTATION	539,165
TOTAL GHG	2,396,879
	100%

CHANGE	
BUILDINGS	-121,719
MATERIALS	+120,209
TRANSPORTATION	-151,596
TOTAL GHG	-153,107

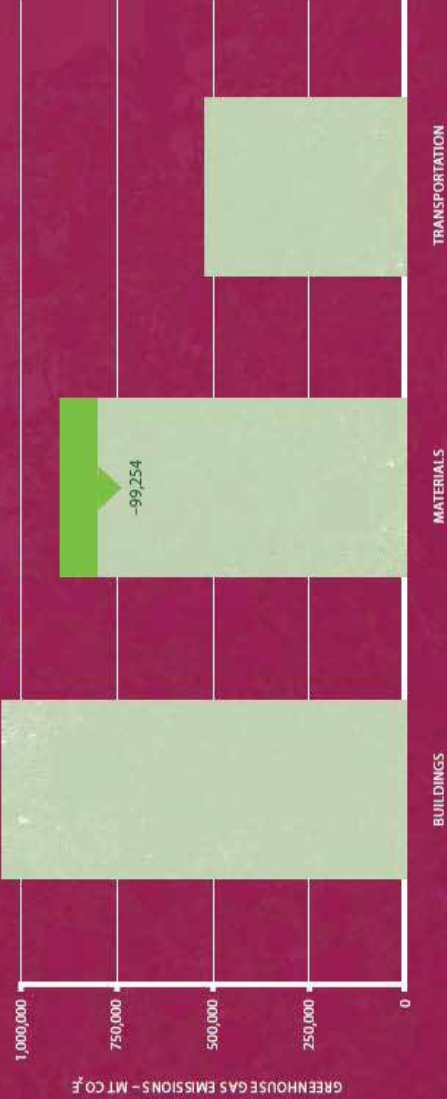
CHANGE	
BUILDINGS	44%
MATERIALS	34%
TRANSPORTATION	22%
TOTAL GHG	100%

CHANGE	
BUILDINGS	0
MATERIALS	-99,254
TRANSPORTATION	0
TOTAL GHG	-99,254

2007 BASELINE EMISSION BREAKDOWN



IMPACT OF ZERO WASTE STRATEGIES ON 2025 BUSINESS AS USUAL (BAU)



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SUSTAINABILITY PLAN
CHAPTER 01

CLIMATE CHANGE AND ADAPTATION

TARGET

GHG reduction
20% by 2025
50% by 2050

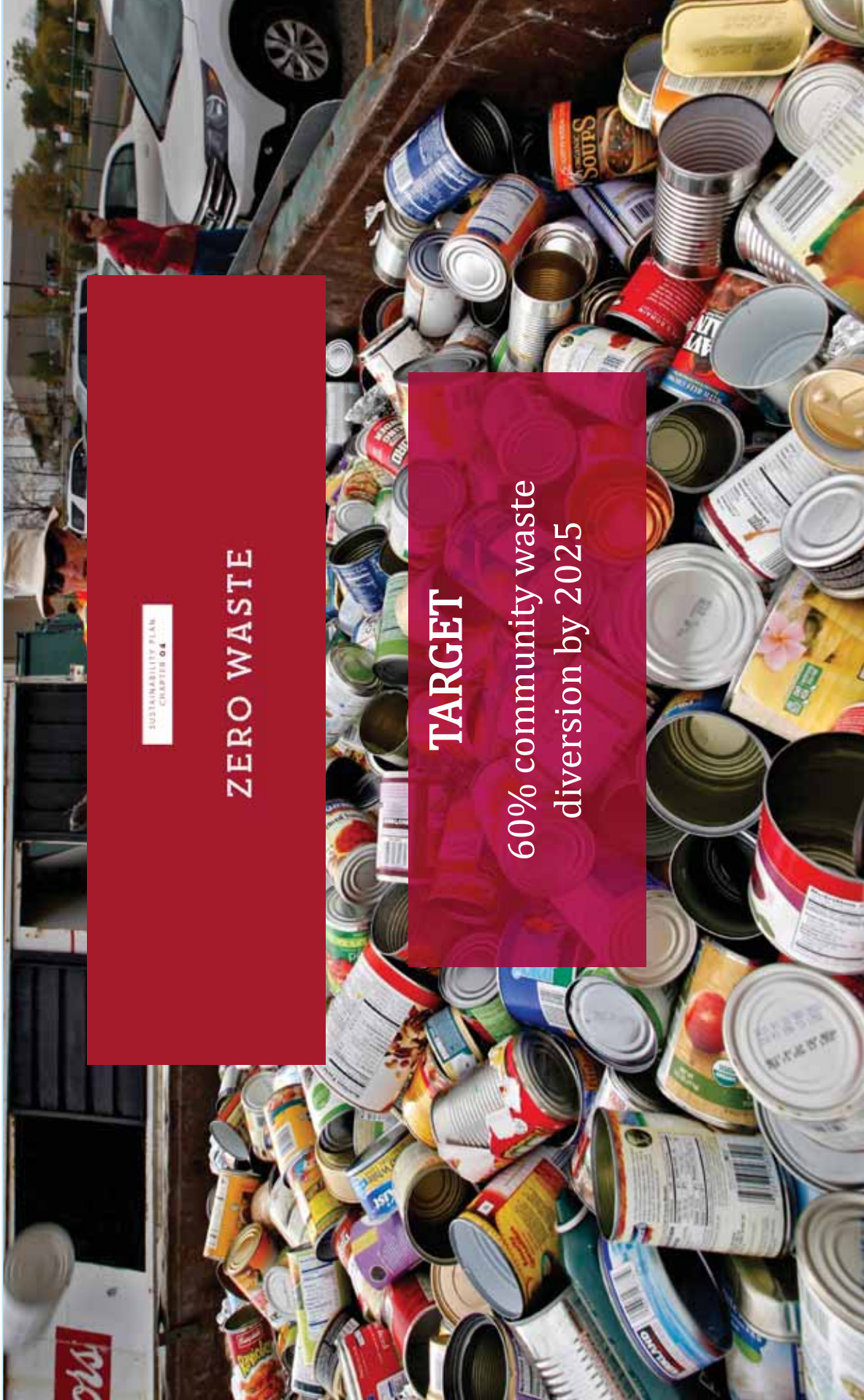
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SUSTAINABILITY PLAN
CHAPTER 04

ZERO WASTE

TARGET

60% community waste
diversion by 2025



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Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

An Accounting and Reporting Standard for Cities



C40
CITIES

ICLEI
Local Governments
for Sustainability



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2007 Hybrid
Life-Cycle
Methodology

vs

2015 GPC
Methodology

How do we reconcile the two?

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Standardized

OR

Meaningful to
the Community

Do we have to choose?

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2015 Inventory Comparison Against 2007 Baseline

EMISSIONS	Units	2007 (Old Methodology)	2007	% Change from Old Methodology	2015	% Change Against Baseline
Residential Electric	MTCO _{2e}	346,770	367,314	6%	307,481	-16.3%
Residential Nat Gas	MTCO _{2e}	206,430	203,406	-1%	192,820	-5.2%
C&I Electric	MTCO _{2e}	489,300	518,273	6%	464,449	-10.4%
C&I Nat Gas	MTCO _{2e}	131,460	129,537	-1%	124,726	-3.7%
Fugitive emissions from natural gas systems	MTCO _{2e}		10,386		9,906	-4.6%
Total Buildings	MTCO_{2e}	1,173,960	1,228,916	5%	1,099,382	-10.5%
Vehicle Travel	MTCO _{2e}	553,903	556,347	0%	528,556	-5.0%
Railways	MTCO _{2e}				2,237	
Air Travel	MTCO _{2e}	135,940	131,735	-3%	119,354	-9.4%
Total Transportation	MTCO_{2e}	689,843	688,082	0%	650,147	-5.5%
Landfill	MTCO _{2e}	269,880	18,174	-93%	18,931	4.2%
WWTP Process	MTCO _{2e}	2,920	2,922	0%	3,116	6.6%
Total Waste	MTCO_{2e}	272,800	21,096	-92%	22,047	4.5%
Consumption-based	MTCO_{2e}	509,610	509,652	0%	619,782	21.6%
Total Consumption-based	MTCO_{2e}	509,610	509,652	0%	619,782	21.6%
Total with Consumption-based	MTCO_{2e}	2,646,213	2,447,746	-8%	2,391,358	-2.3%
Total without Consumption-based	MTCO_{2e}	2,136,603	1,938,094	-9%	1,771,577	-8.6%
Total BASIC	MTCO_{2e}		1,806,359		1,652,223	-8.5%

Connect

Thank You!

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