



Austin Resource Recovery Zero Waste Goals & Programs

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Department Director

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City of Austin by the numbers

11th Largest City in US by Population

2015 Austin Population: 900,700

New Residents per Year (trending): 24,000

Single Family Residential Units: 190,000

Multi-Family Residential Units: 180,000

Land Area (Sq Miles) 322



Core Services

- **Curbside Collection Services**
 - Weekly trash
 - Every other week recycling
 - Weekly yard trimmings
 - Twice per year bulky item
 - Twice per year large brush
- **Household Hazardous Waste (HHW) Drop Off**
- **Street and Boulevard Sweeping**
- **Litter Pick up/Alley cleaning**
- **Dead Animal Collection**





Additional Services

- **Storm Debris Cleanup**
- **Mulching/Compost Operations/Dillo Dirt**
- **Downtown Trash Container Collection**
- **City Landfill Closure**
- **Cart Delivery and Repair**
- **Appliance and Electronics Drop-off**
- **Special Event Diversion Services**
- **Community Clean Up Assistance**
- **Illegal Dump Clean up Assistance**



New Direction

Past:

Sanitation Waste Collection

Recent:

Integrated Solid Waste Management

New Direction:

Materials Management

> Zero Waste Goal!



City Council Policy History Adopting Zero Waste

**2005 Urban Environmental Accords
Council Resolution 20050519-44**

**2009 Austin Zero Waste Strategic Plan
Council Resolution 20090115-050**

**2011 Austin Resource Recovery Master Plan
Council Resolution 20111215-047**



Definition of Zero Waste

**ZERO WASTE
IS A GOAL** TO GUIDE PEOPLE IN CHANGING THEIR
LIFESTYLES AND PRACTICES TO EMULATE
SUSTAINABLE NATURAL CYCLES, WHERE

**ALL DISCARDED MATERIALS ARE DESIGNED TO
BECOME RESOURCES FOR OTHERS TO USE.**

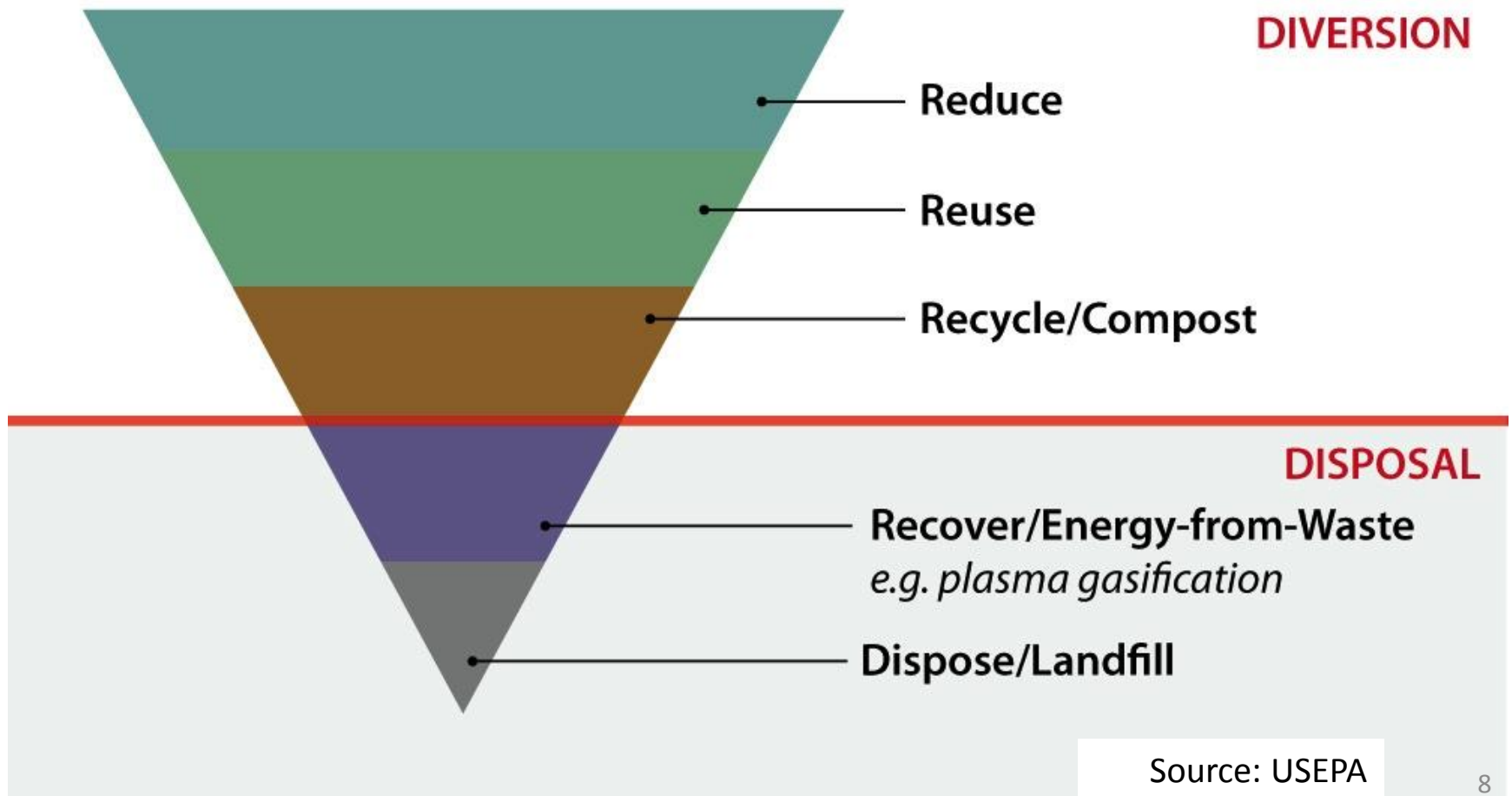
ZERO WASTE MEANS DESIGNING AND MANAGING PRODUCTS AND
PROCESSES TO SYSTEMATICALLY AVOID AND ELIMINATE THE VOLUME
AND TOXICITY OF WASTE AND MATERIALS,

**CONSERVE AND RECOVER ALL RESOURCES,
AND NOT BURN OR BURY THEM.**

Excerpts from Zero Waste International Alliance



Materials Management: Highest & Best Use





Austin Resource Recovery

**On the Path of
Resource Recovery**

**On the Journey
Toward Zero Waste**

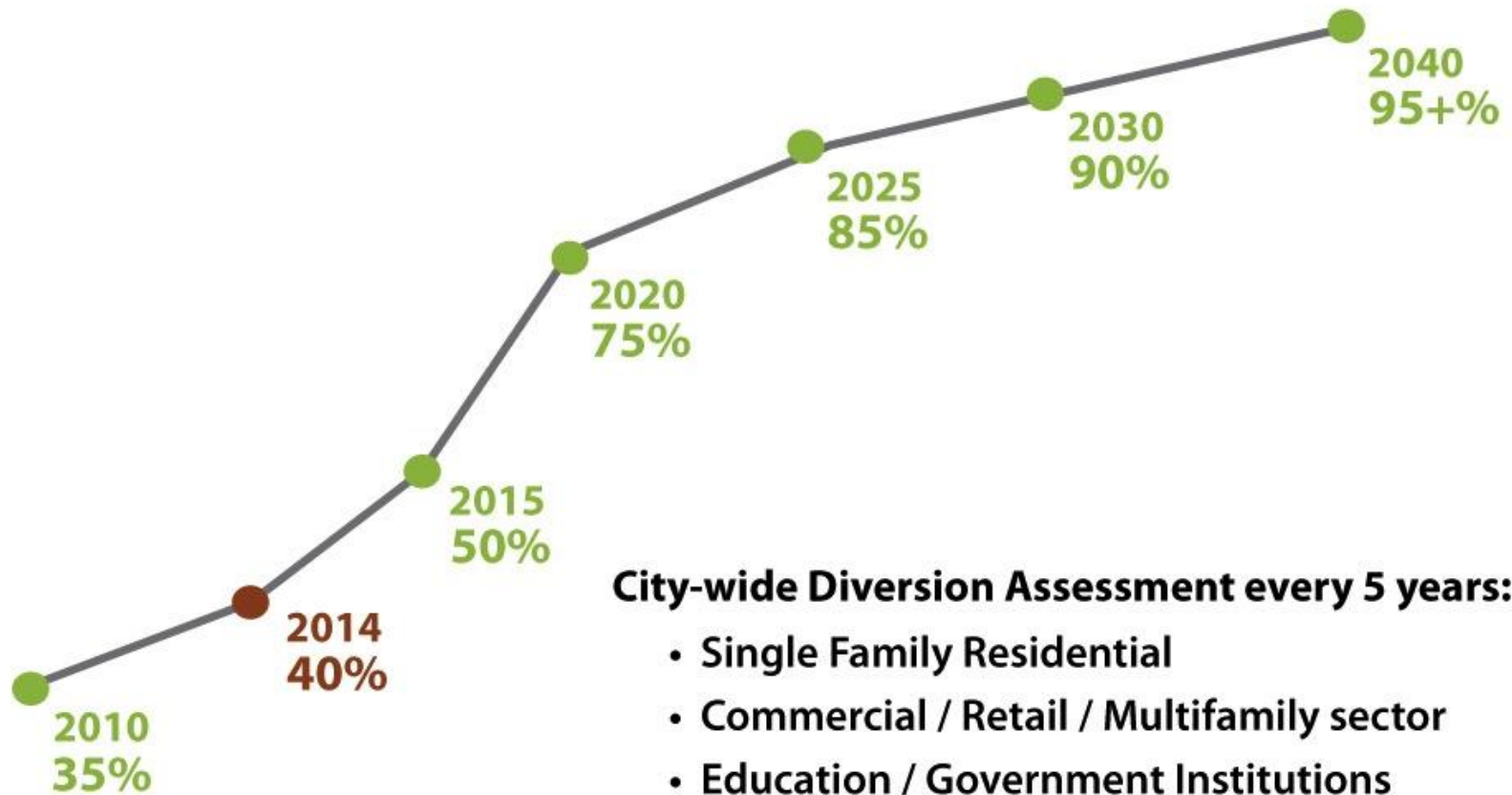
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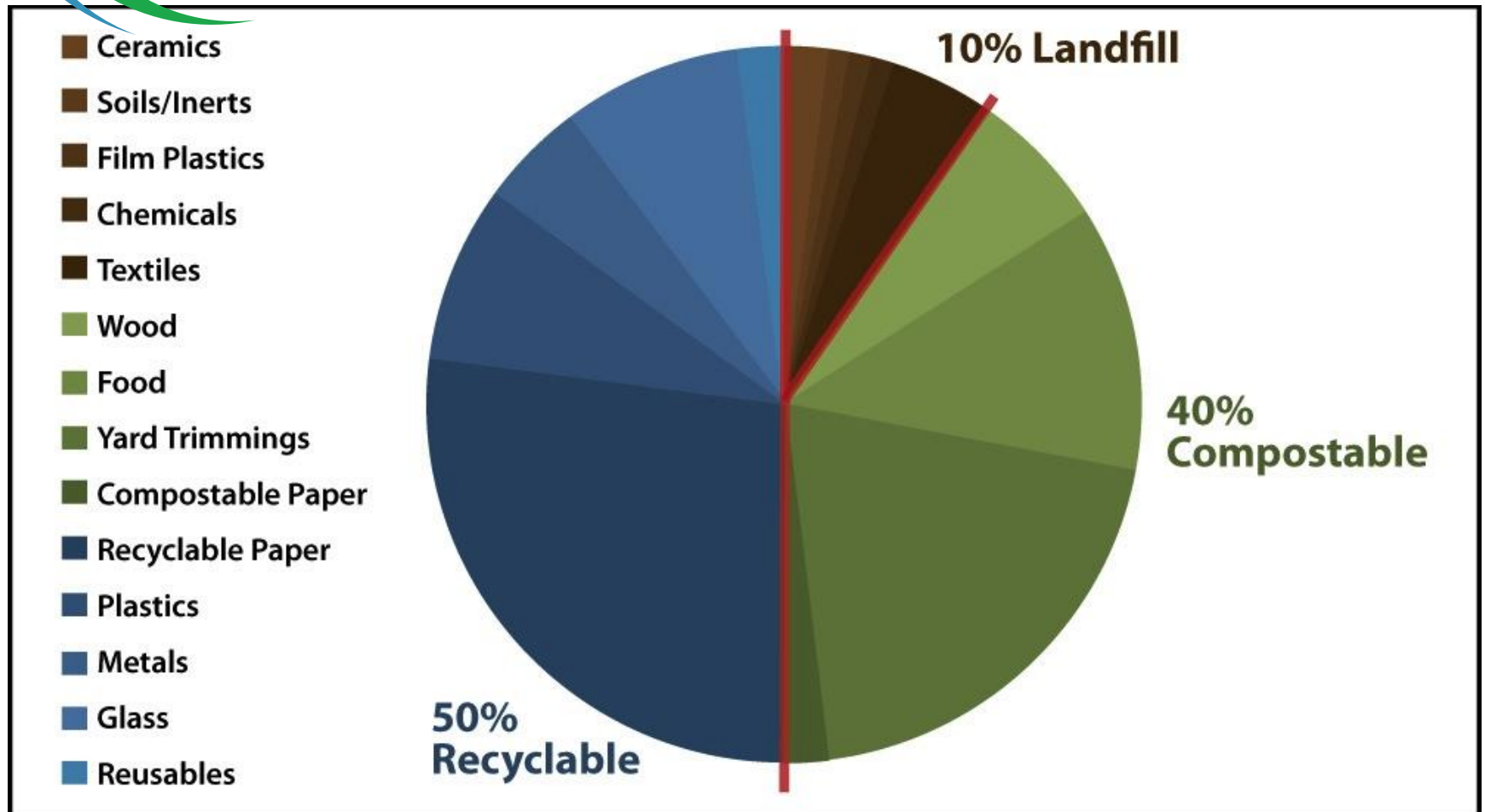


Master Plan:

Zero Waste Diversion Goals



Municipal Waste Stream



Based on information from CAPCOG, Regional Solid Waste Management Plan 2002- 2022, February 9, 2005, pg. 10, and Austin Zero Waste Strategic Plan, December 4, 2008, pgs. 5-6.



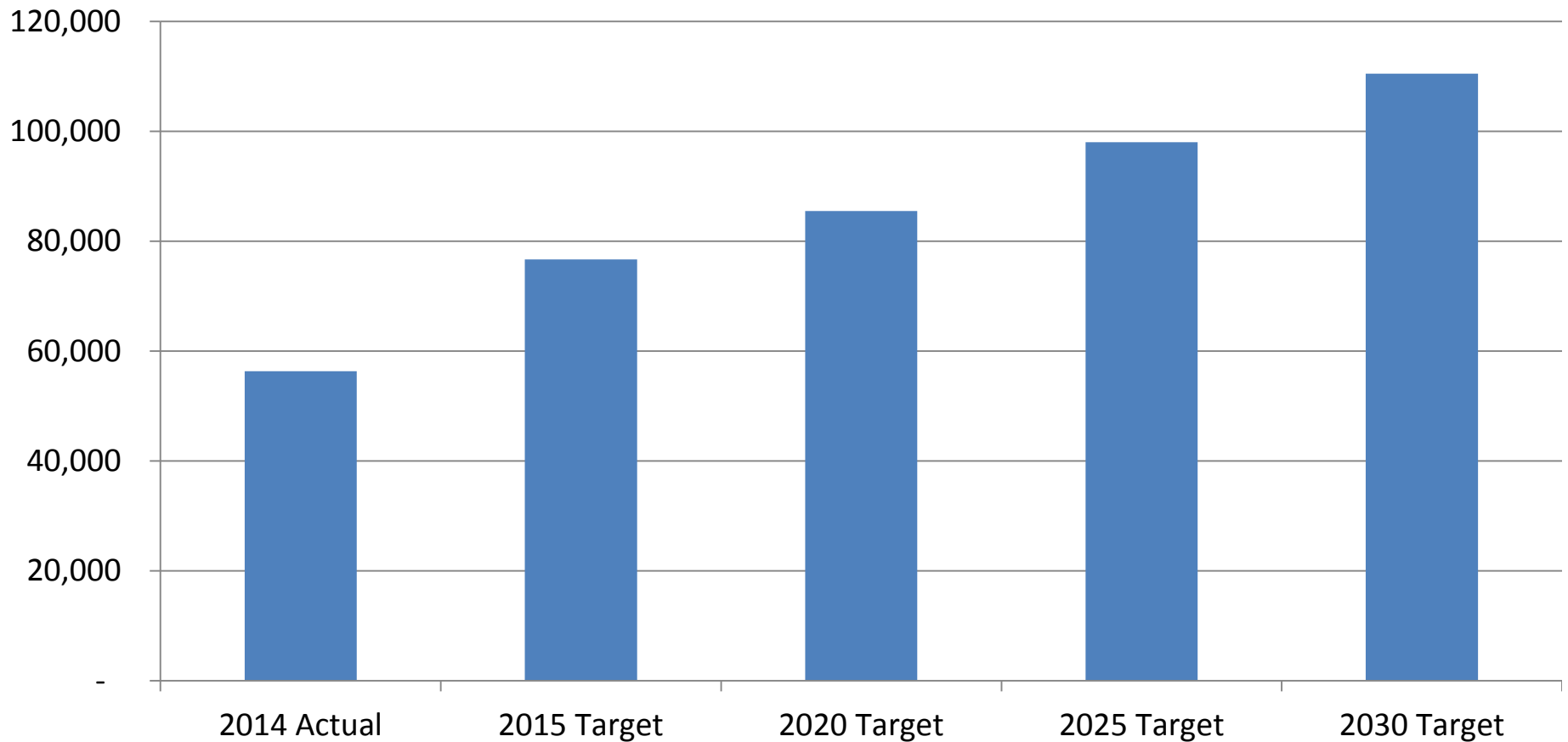
Austin Zero Waste

Residential Diversion Calculations

	<u>2014</u>	<u>2020</u>
Landfilled	137,258	60,000
Recycled	55,966	101,000
Composted	34,049	79,000
Total Tons	227,273	240,000 tons
Diversion %	39.6%	75.0%
Landfilled Per HH	27.9	11.0 lbs/week
Diversion Per HH	18.3	33.0 lbs/week



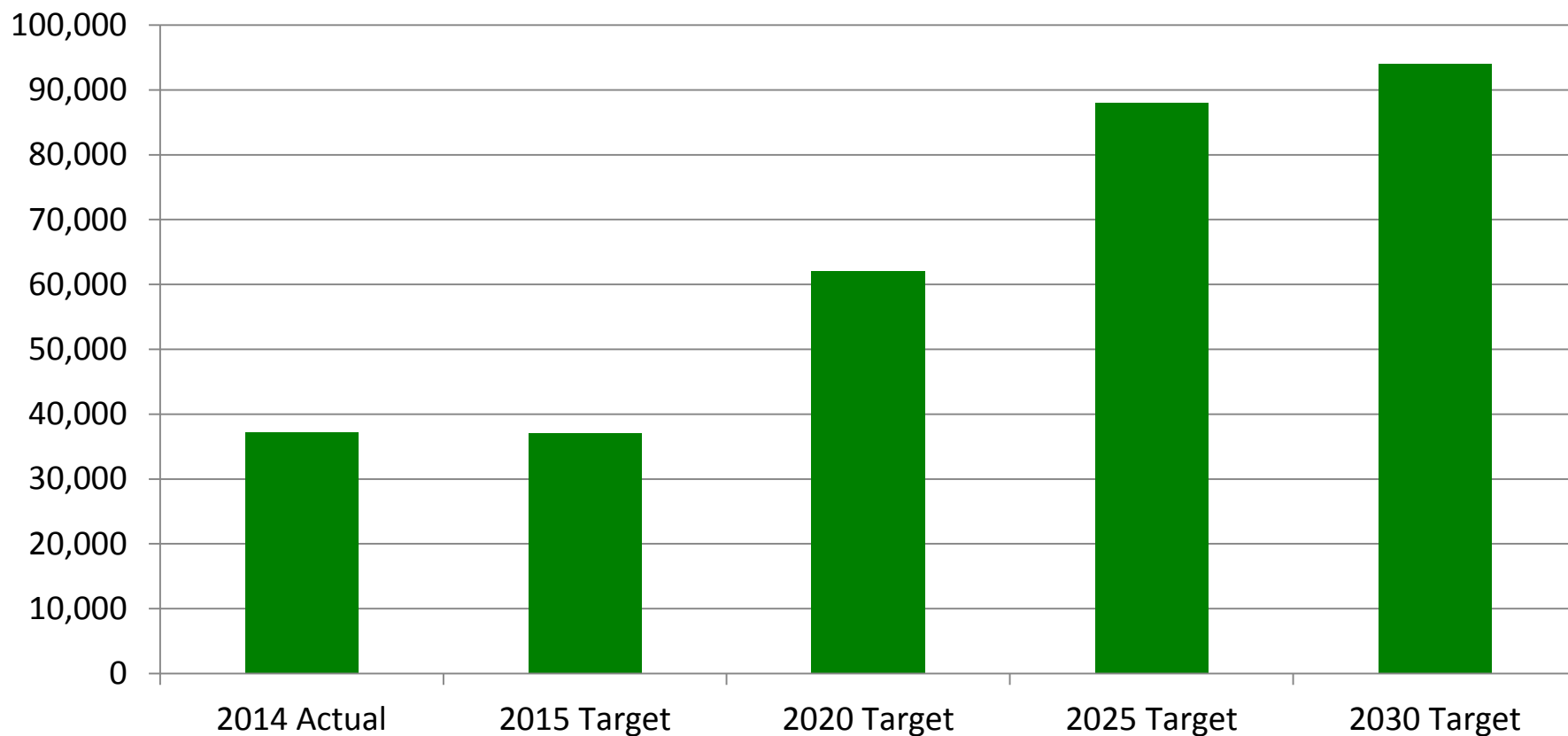
Residential Recycling Projected Diversion (in Tons)





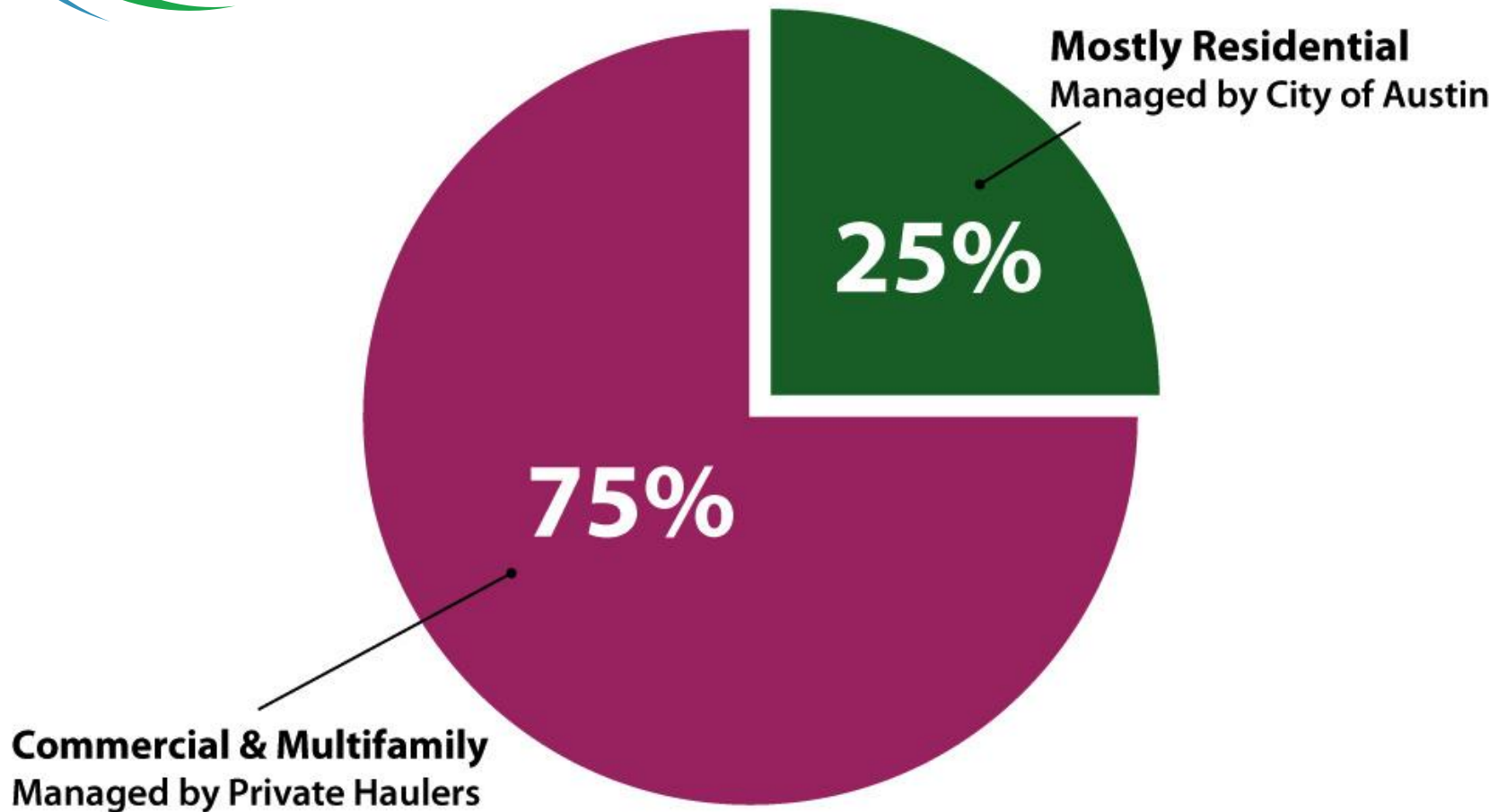
Residential Organics Projected Diversion (in tons)

Yard Trimmings & Food Waste





Overview of Waste Stream





Austin Zero Waste

Four Keystone Initiatives

- **Materials Management**
It's materials to recover, not solid waste!
- **Expanded Recycling Opportunities**
- **Organics Collection & Composting**
- **Recycling Economic Development**



ARR Master Plan

Zero Waste Synergy with Sustainability Efforts

- City Green Purchasing – Recycled Content
- Routing Efficiencies – 10% reduction miles
- 225 Vehicles – CNG, Bio-Diesel, Hybrids



Waste Reduction – First “R”

- Waste Reduction – Catalog Choice
- Business Waste Reduction Assistance
- Top of “Highest and Best Use” Hierarchy



Reuse – Second “R”

- Creative Arts / Teacher Resource Center
- Reuse Austin Drop-off sites for reusables



ARR Master Plan

Single-Stream Recycling Collection – Third “R”



- Long-Term Processing Contracts
- New pricing in October 2015
- Add materials to Single Stream Program
- Provide 96 gal and 64 gal blue containers
- Transition from biweekly to weekly (2018?)

Single-Stream Organics Collection



- Promote Residential Backyard Composting
- Collect yard trimmings in 96 & 64 gal carts
- Adding food scraps and compostable paper
- Pilot = 14,000 households
- City-wide by 2019 (?)



ARR Master Plan

Household Hazardous Waste



- Expanded Saturday and Daily Hours
- Battery Retail take-back program
- Enlarged door-to-door collection
- Pharmaceutical Take-back program
- Adding North HHW Service Site (2017)

Closed Landfill Management



- Post-Closure Care of City Landfill
- Expanded Gas Capture - LFGTE
- Solar Farm – 50 acres
- ReManufacturing Hub – 107 acres



ARR Master Plan

Recycling Economic Development

- 
- Austin Materials Exchange – Waste Pairings
 - Business Waste Reduction Assistance Program
 - Brownfield Redevelopment Program
 - Hired Recycling Economic Development Liaison
 - ReManufacturing Hub (at closed city landfill)


Community Partnerships

- 
- Non-Profit Partnerships – KAB, Ecology Action
 - Regional Cooperation & Inter-local Agreements
 - Public / Private Partnerships – Material Processing
 - Education Institution Partnerships
to support Research and Development



ARR Master Plan

Policies & Ordinances

- 
- **Universal Recycling and Composting Ord.**
 - Phase 1 multifamily complexes, offices
 - Phase 2 retail, restaurants and industrial
 - Phased in through 2018
 - **Special Event Ordinance – Recycling requirements**
 - **Construction and Demolition Ordinance**
 - **Single Use Bag Ordinance**

Incentives and Rewards

- **Business Assistance and Recognition**
- **Composting Workshops & Rebate Program**
- **City Sponsored Events Recycling Rebate Program**
- **Pay-as-you-Throw Rate Structure Incentives**



Recycling Economic Development

- Buy Local – Buy Zero Waste
- Circular Economy – localize markets
- Materials Marketplace (materials exchange)
- Austin Reuse/Recycling Economic Impact = \$720 million annually and 2,600+ jobs
- Austin Recycling Innovations Investment Forum



Recycling Economic Development

- Austin Remanufacturing Hub at Closed Landfill
US EDA \$1 Million Grant for land development
<https://www.youtube.com/watch?v=hclQh8geiyw>



Pay As you Throw Rate Structure

The Evolution of the
Waste Can



- Unit Pricing Per Gal of Trash Service
- Stratified rates rewards Conservation
- “Wasters” Pay More per Month
- “Zero Wasters” Pay Less
- PAYT encourages waste reduction
- More than 3,000 municipalities use Pay-as-you-Throw rate structures



2014-15 Rates

Pay-As-You-Throw Rate Structure

FY2014-15 Residential Rates	Cents Per Gallon Trash Cart Size	Monthly Trash Fee	Monthly Recycling and Organics Fee	Total Monthly Fee	Customer Selection
Trash Cart Size					
24 gallon	\$0.16 x 24	\$3.85	\$11.35	\$15.20	5%
32 gallon	\$0.16 x 32	\$5.10	\$11.35	\$16.45	20%
64 gallon	\$0.16 x 64	\$10.25	\$11.35	\$21.60	65%
96 gallon	\$0.25 x 96	\$24.00	\$11.35	\$40.15	10%

Clean Community Fee - \$4.30 per month per residential customer



Cost of Service

Monthly costs per Customer Curbside Collection Services

\$11.06 – Trash collection & Disposal

\$ 7.46 – Recycling collection/processing

\$ 3.13 – Yard waste collection/processing

\$ 2.21 – Semi-Annual Brush collection

\$ 1.28 – Semi-Annual Bulk collection

\$ 25.14 – Average Monthly Curbside Costs



Cost of Service

Monthly costs per Customer Clean Community Services

- \$ 1.54 – Litter Collection, Dead Animal, &
Clean Austin Neighborhood Cleanups**
- \$ 0.89 – Street & Boulevard Sweeping**
- \$ 0.62 – Household Hazardous Waste &
Resource Recovery Center**
- \$ 0.75 – Business & Resident Outreach**
- \$ 0.15 – Recycling Redevelopment &
Brownfields Remediation**
- \$ 0.41 – Landfill Closure Requirements**
- \$ 4.36 – Average Monthly Community Costs**



Your Part of Zero Waste

Recycle More!

Newspaper & Mixed Paper
Boxboard & Cardboard
Aluminum & Metals
Glass Bottles
Hard Plastics





Bob Gedert's

Top 10 Best Practices

- 1. Community & Employee Involvement**
- 2. Pay As you Throw Rate Structure**
- 3. Full Cost Accounting / Transparency**
- 4. Curbside Recycling – high capacity**
- 5. Curbside Organics – food waste included**
- 6. Universal Recycling Ordinance – “access”**
- 7. Color Coded containers/vehicles**
- 8. Full cycle auditing of material disposition**
- 9. Circular Economy - Localize Markets**
- 10. Commitment toward Zero**



Your Part of Zero Waste Take Action!

**Any “Waste” as an Output
of your Business [or your Home]
is an Operational Inefficiency**

Buckminster Fuller - 1976



Your Part of Zero Waste **Take Action!**

**Start by doing what's necessary;
then do what's possible;
and suddenly you are doing
the impossible.**

Francis of Assisi



Your Part of Zero Waste **Take Action!**

How much “Waste” are you “for”?

I’m for Zero Waste!



Bob Gedert



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http://austintexas.gov/sites/default/files/files/Trash_and_Recycling/MasterPlan_Final_12.30.pdf