

# Memorandum



CITY OF DALLAS

DATE November 11, 2016

TO Honorable Members of the Quality of Life and Environment Committee: Sandy Greyson (Chair), Tiffinni A. Young (Vice-Chair), Rickey D. Callahan, Mark Clayton, Philip T. Kingston, B. Adam McGough

SUBJECT **Zero Waste Plan: Key Short-Range Initiatives**

On Monday, November 14, 2016, the Quality of Life and Environment Committee will receive a briefing on the Zero Waste Plan program and key short-range initiatives.

Please contact me if you have any questions or concerns or need additional information.

A handwritten signature in black ink, appearing to read 'Joey Zapata'.

Joey Zapata  
Assistant City Manager

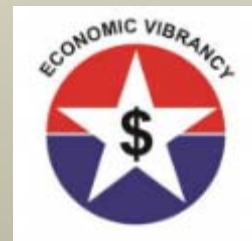
c: Honorable Mayor and Members of the City Council  
A.C. Gonzalez City Manager  
Larry Casto, City Attorney  
Craig D. Kinton, City Auditor  
Rosa A. Rios, City Secretary  
Daniel F. Solis, Administrative Judge  
Ryan S. Evans, First Assistant City Manager

Eric D. Campbell, Assistant City Manager  
Jill A. Jordan, P.E., Assistant City Manager  
Mark McDaniel, Assistant City Manager  
M. Elizabeth Reich, Chief Financial Officer  
Sana Syed, Public Information Officer  
Elsa Cantu, Assistant to the City Manager – Mayor & Council

# Zero Waste Plan: Key Short-Range Initiatives

Quality of Life & Environment Committee

November 14, 2016



# Briefing Outline

- Provide a brief summary of the Zero Waste Plan and goals
- Review and compare Dallas residential diversion rates
- Discuss current key short-range initiatives
  - Marketing and Outreach
  - Hard to Recycle Materials
  - City Facilities Zero Waste
  - Commercial and Multi-family
- Discuss ongoing research and future considerations
  - Universal Recycling Ordinance (Multifamily and Commercial)
  - Organics
  - Household Hazardous Waste Collection

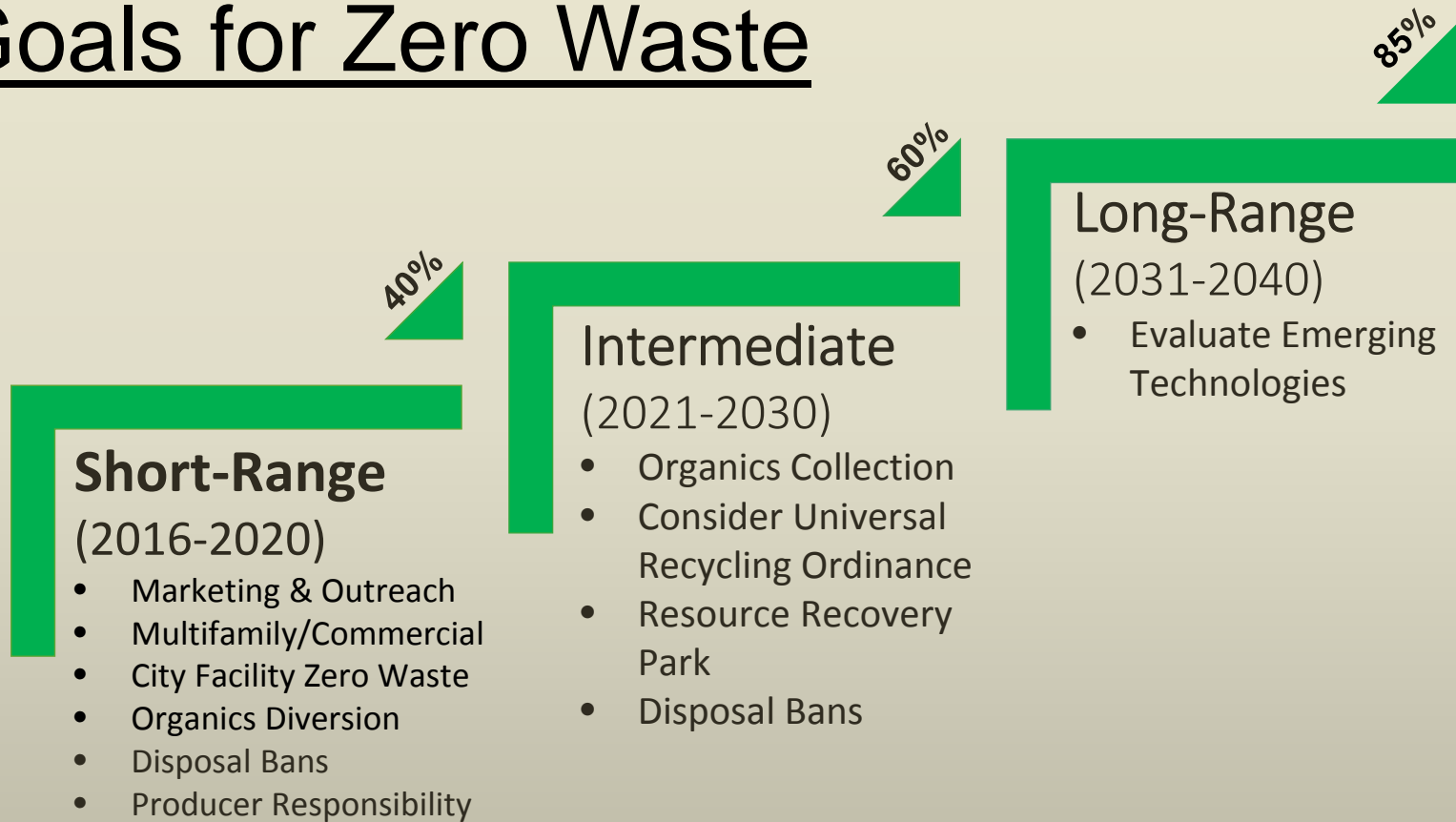
# What is the Zero Waste Plan?

Adopted by Council in February 2013, the plan is the beginning of a long-range systematic effort, with incremental goals to:

- Strive for sustainability
- Reduce waste volume and maximize diversion through reuse and recycling efforts
- Demonstrate that economic growth, environmental stewardship and fiscal responsibility are NOT mutually exclusive

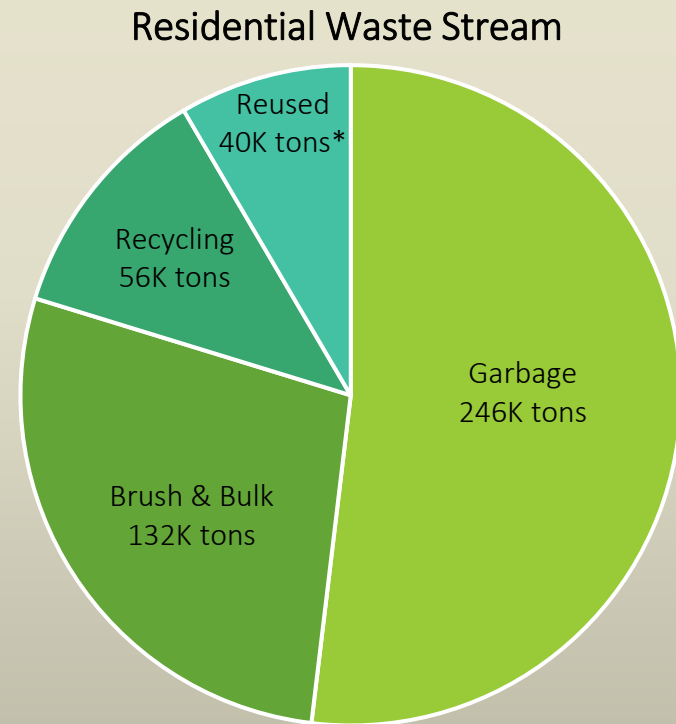


# Goals for Zero Waste



# Residential: Where are we now?

- Currently, the City diverts or reuses approximately 20% of the residential waste generated
- This includes: Garbage, Bulk & Brush and Recycling



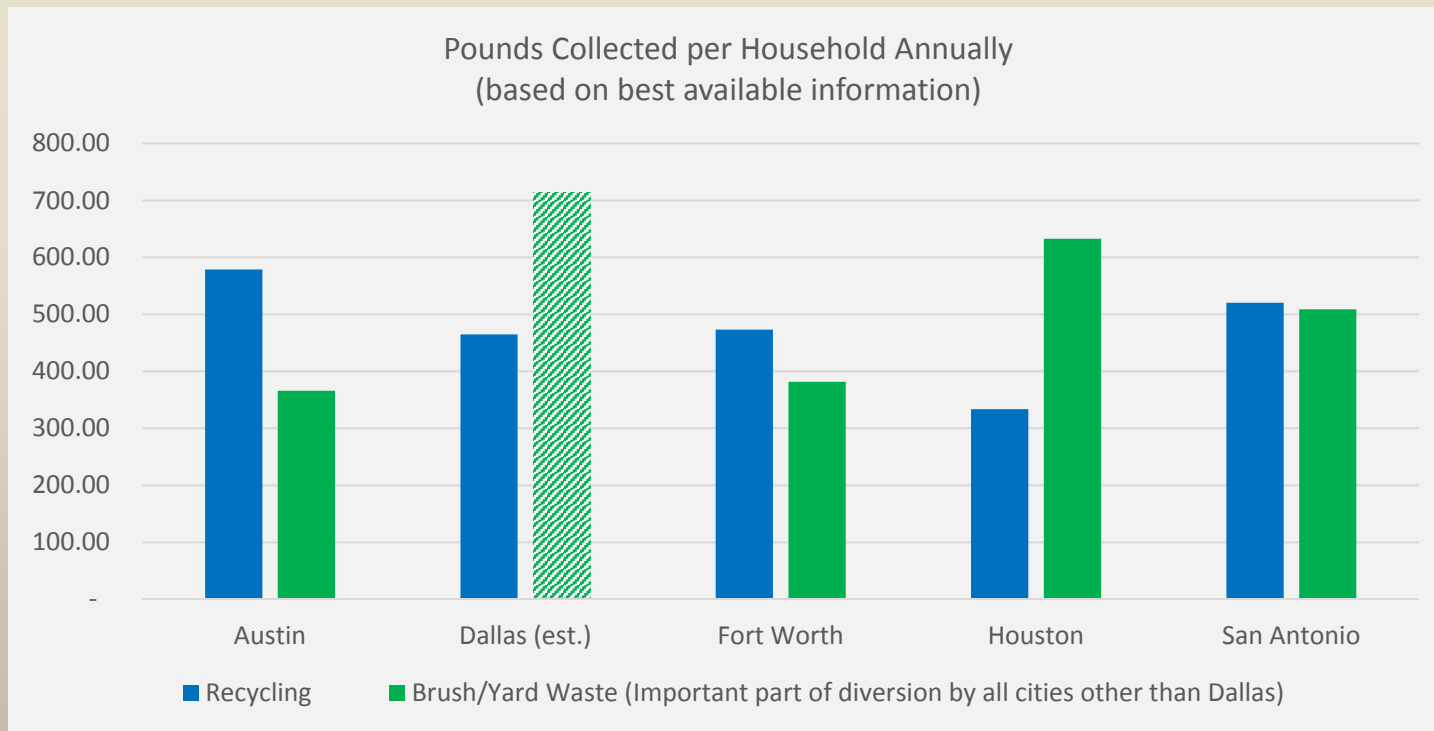
\*Estimated tons of mixed brush reused at the landfill

## Other Cities: Diversion Rate Comparison

City	Diversion Rate*
Dallas	20%
Houston	21%
Ft. Worth	21%
San Antonio	31%
National Average**	35%
Austin	42%

\*Based on best available information. \*\* Based on the 2012 EPA MSW Study

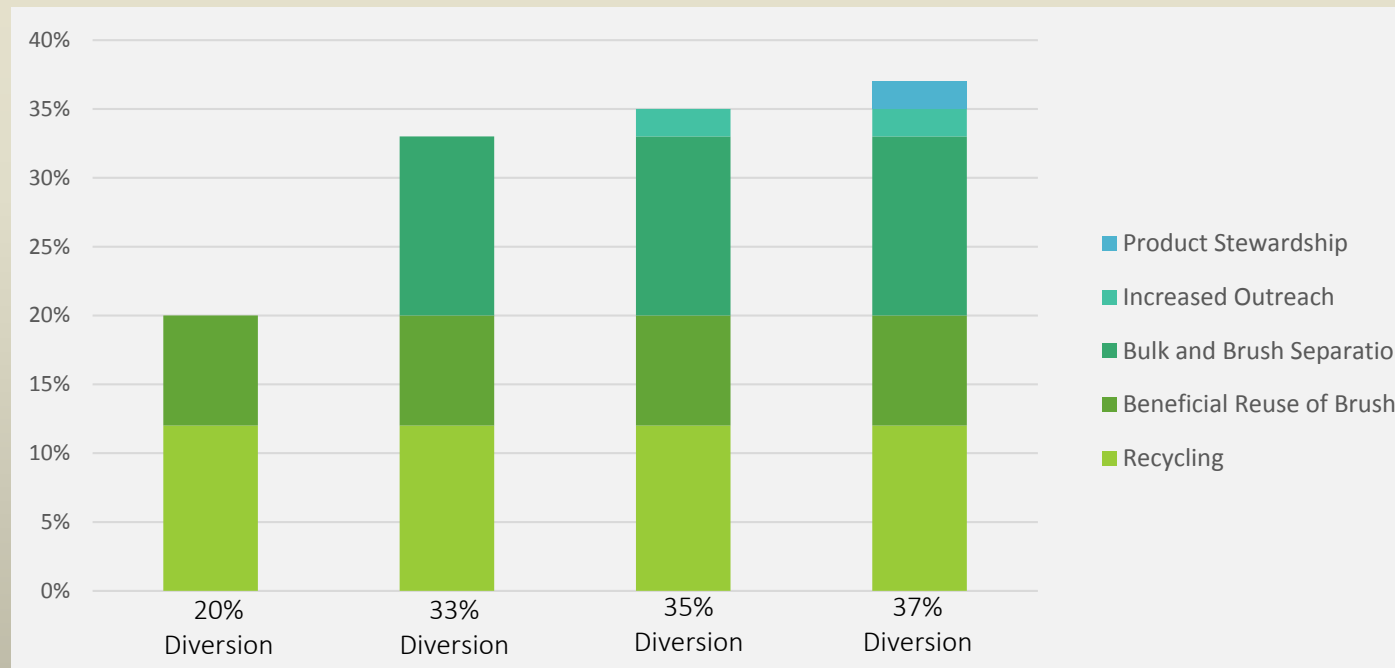
# Other Cities: Significant Diversion Streams





# Reaching our goals - Residential

Based on current efforts, the chart below shows the potential progress towards our diversion goals with optional changes to services.



# Key Short-Range Initiatives



# Marketing and Outreach



# Marketing and Outreach

- Sanitation Services has a comprehensive outreach strategy to increase awareness and recycling participation.

- Digital
- Print and Radio
- Outdoor Advertising
- DWU Bill Inserts
- Events and Seminars



# Marketing and Outreach

## Digital

Nextdoor - 100,000+ members

Facebook - 7,000+ followers

Twitter - 400+ followers

## Sanitation Services App

- 8,000+ reminders
- 4,000 mobile downloads
- 37,000+ items researched

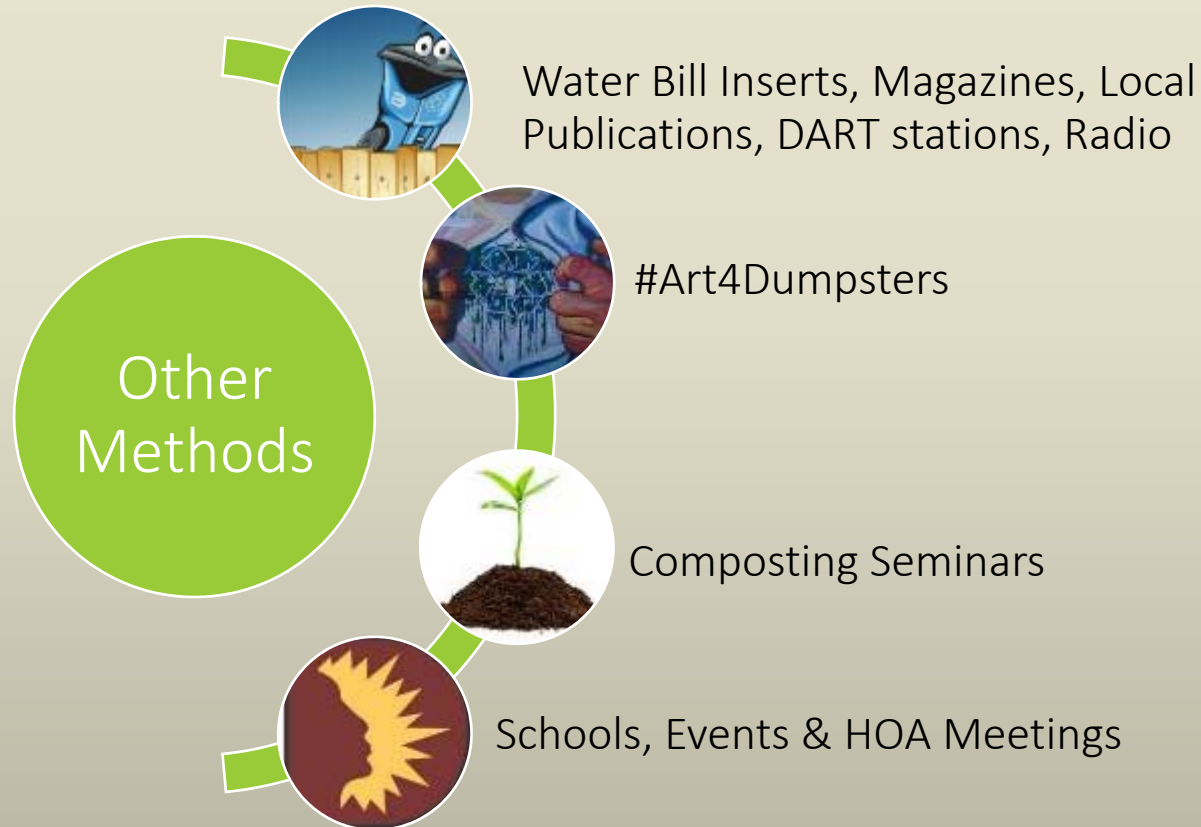


What Goes in Recycle Bin? [Need help?](#)

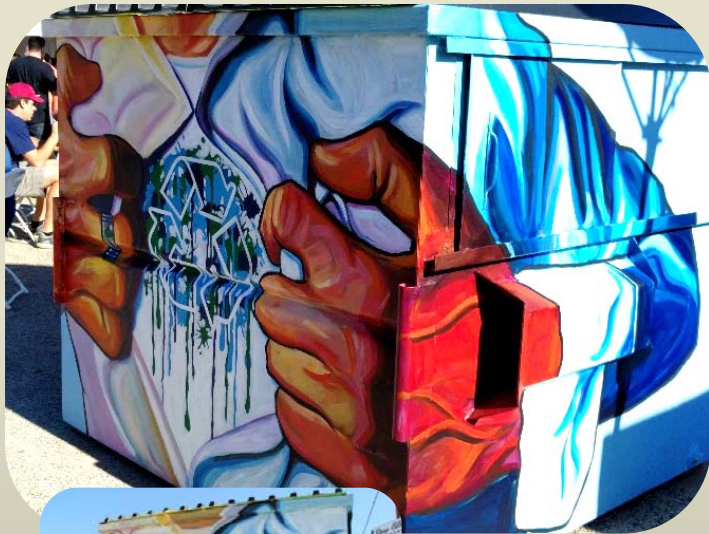
Type the name of an item and we'll tell you how to recycle or dispose of it.

Recycling Search Tool

# Marketing and Outreach



# Marketing and Outreach



Art4Dumpsters at Deep Ellum Arts Festival



Fall & Spring Composting Seminars

# Hard to Recycle Materials



Image: Kane County, IL

## Household Hazardous Waste (HHW)

- A number of household hazardous wastes are accepted at the Dallas County HHW Collection Center.  
Dallas residents participation:
  - FY15 – 978,000 lbs
  - FY16 –1,098,000 lbs
- We're currently evaluating potential sites for a collection center in southeast Dallas.



# Hard to Recycle Materials



## BOPA

- Sanitation Services provides monthly disposal and recycling opportunities for Batteries, Oil, Paint and Antifreeze. The BOPA mobile rotates throughout Dallas.
  - FY15 – 1,126 vehicles dropped off BOPA
  - FY16 – 1,489 vehicles participated
- We're also looking at opportunities to add document shredding to monthly BOPA events.

# City Facility Zero Waste



# City Facility Zero Waste



- Every City facility has access to recycling, but recycling is not a priority for most.
- To renew the importance of recycling, a new “Binless Office” program will be implemented over the next year at several City facilities. The goals are to:
  - Increase recycling diversion and decrease recycling contamination
  - Show that the City of Dallas is committed to Zero Waste by becoming a leader in facility waste diversion efforts

# City Facility Zero Waste

- To increase recycling at City facilities, Sanitation Services has piloted the Binless Office at multiple offices.
  - Sanitation Administrative Offices
    - Estimated increase to 70% diversion from 50%
  - Eco Park
  - Oak Cliff Municipal Center
  - EBS Administrative Offices (Dec. 2016)
- The Binless Office is scheduled to be implemented at City Hall in January.
  - City Hall Diversion Rate – 33%



# City Facility Zero Waste



- What is a Binless Office?
  - All desktide bins are removed and replaced with strategically located Zero Waste stations
  - Desk trays are provided to collect waste & recyclables at the desk
- Why switch to a Binless Office?
  - It requires people to think about what they're throwing away
  - It increases the diversion rate
  - It cuts down on collection time for custodial staff
  - It encourages walking
- Who else has implemented the Binless Office?
  - Zappos.com, Hewlett-Packard, J.P. Morgan



# Multifamily and Commercial



# Multifamily and Commercial

- Dallas adopted its Zero Waste Plan in 2013, at that time it was decided that Dallas would pursue voluntary efforts to increase recycling participation for multifamily and commercial properties
  - The Zero Waste Plan currently states that voluntary efforts will be evaluated in 2019 to assess progress
  - In 2019, if Council believes those efforts have not been effective, then a Universal Recycling Ordinance (recycling participation mandate) could be considered

# Multifamily and Commercial

- As outlined in the Plan, Sanitation staff has partnered with the commercial sector to host quarterly stakeholder meetings and identify strategies for maximum recycling
- Major stakeholders include:
  - Apartment Association of Greater Dallas (AAGD)
  - Hotel Association of North Texas (HANTx)
  - Building Office Managers Association (BOMA) Dallas
  - Texas Campaign for the Environment



# Multifamily and Commercial: Stakeholders

## Stakeholder Meetings

- Since June 2013, Sanitation Services hosted 19 stakeholder meetings. Action items have included:
  - Surveys – development & distribution
  - Reviewing results of the survey
  - Establishing recycling goals
  - Association's current initiatives
  - Creation of commercial website & online outreach materials
  - Outreach and technical assistance
  - Development of recycling-only roll cart service
  - Development of Green Business Certification
  - Tradeshows & other outreach opportunities



Recycling training at AAGD Headquarters

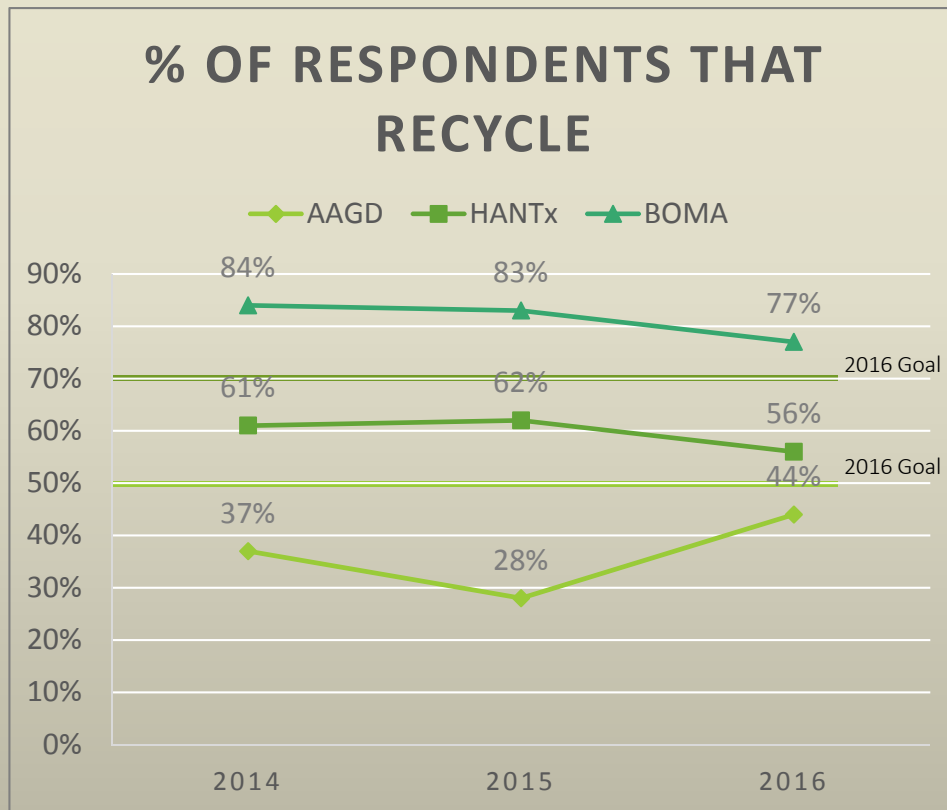
# Multifamily and Commercial




## Commercial Survey

- Sanitation staff worked with stakeholders to develop questions and distribute annual surveys to their members
- The survey helped establish baselines, provide a better understanding of obstacles and measure recycling participation over time



# Commercial Survey: Recycling Rate



	People that responded	Total number of potential respondents	Response Rate
2016			
	179	813	22%
	39	207	19%
	85	206	41%

# Commercial Survey: Trends & Obstacles

- Trends in the survey data show that:
  - The response rate is inconsistent and lower than preferred
  - Overall, the data does not support an increase in recycling participation
- Obstacles identified by survey participants include:
  - Not enough space for recycling
  - Management has not requested that the property recycle
  - Equipment, education and staff training is too expensive
- To establish better participation data, Sanitation Services is currently working with Code Compliance to add a mandatory recycling question in all multi-tenant registration forms.

# Multifamily and Commercial

## Recycling Roll Carts – New Service



- To address the lack of space, stakeholders recommended that the City provide recycling roll cart collection.
- Since the program began in early 2016, Sanitation Services has discussed recycling with over 170 businesses
  - Over 60 new recycling customers
  - Over 100 properties referred to a different collection method
- Best practices, collection methods and recycling education is discussed at each site visit

# Multifamily and Commercial

## Green Business Leaders

- Launches on America Recycles Day, November 15th
- Developed as an incentive to increase recycling participation
- Businesses are recognized on social media for recycling, reducing waste and innovative programs.
- Businesses must reach specific point levels to be certified. There are three levels: bronze, silver, gold.



# Research and Future Considerations



# Research and Future Considerations

- Sanitation Services has identified several topics that are being researched for future considerations
  - Universal Recycling Ordinance (Multifamily and Commercial)
  - Organics (Food Waste) Diversion
  - Household Hazardous Waste Collection – Additional Facility



# Universal Recycling Ordinance

- Although Dallas is currently using voluntary efforts to increase recycling in multifamily or commercial properties, staff is conducting research on mandatory programs in other cities
  - The City's Zero Waste Plan includes an option for Council to consider a URO in 2019 if recycling participation does not increase significantly.
- A Universal Recycling Ordinance (URO) is typically used by cities to require commercial or multifamily properties to provide recycling for their tenants, guests or residents.
- Texas cities with a URO include the City of Allen, Austin, Fort Worth, Lewisville and San Antonio.

# Universal Recycling Ordinance

- Most Texas cities that have a URO only address Multifamily properties (Austin is an exception)
- Most URO's are typically phased in over time (1-3 years) and include the ability for exceptions if specific conditions exist (e.g. significant space constraints, etc.)
  - Large Properties – First to be phased in
  - Medium Properties
  - Small Properties – Last to be phased in
- Other commercial buildings and hotels would be evaluated for future initiatives
- If Dallas were to consider a URO, a similar phased in approach would be recommended

# Organics Diversion: Research

- It is estimated that organics is approximately 30% of the residential waste stream. Organics collection prevalent in cities along the east and west coast
- Locally, Austin and San Antonio have begun piloting organics collection
  - Each city is utilizing a third roll cart for collections
  - Early indications reveal that most organics roll carts are being used for yard waste with little food waste diversion
- Research shows that additional costs for a 3rd organics roll cart can range between \$3 and \$5 per month
- Composting facilities must be available or developed when considering organics collection



# Organics Diversion: Research

Some factors to consider when evaluating organics collection:

- 45% of Dallas households are collected in the alley
  - The majority of the alleys in Dallas are in poor condition and only 8ft wide
- Currently, there are limited options for composting with food waste
  - Facilities that do process organics have strict requirements and contamination (e.g. plastic bags) can be an issue
- Understanding the true diversion value of a residential organics program targeting food waste needs to be further evaluated
- Pursuing an alternative bulk and brush collection program that collects brush/yard waste separately from bulk is likely a better diversion value to pursue initially

# Household Hazardous Waste

- Currently, the City has a contract with Dallas County to provide Household Hazardous Waste (HHW) collection
  - The only permanent site is north of IH 635 near Garland
- As mentioned earlier in the briefing, Sanitation Services has implemented a mobile BOPA collection program, but not all HHW is accepted in this collection
- Preliminary research is being conducted to identify options for providing a satellite or additional HHW collection site in southern Dallas
  - Possible locations are being scouted
  - TCEQ permitting would be required and facilities would have to be staffed by qualified and trained personnel
  - If operated independently of Dallas County, disposal contracts would have to be developed

# Summary

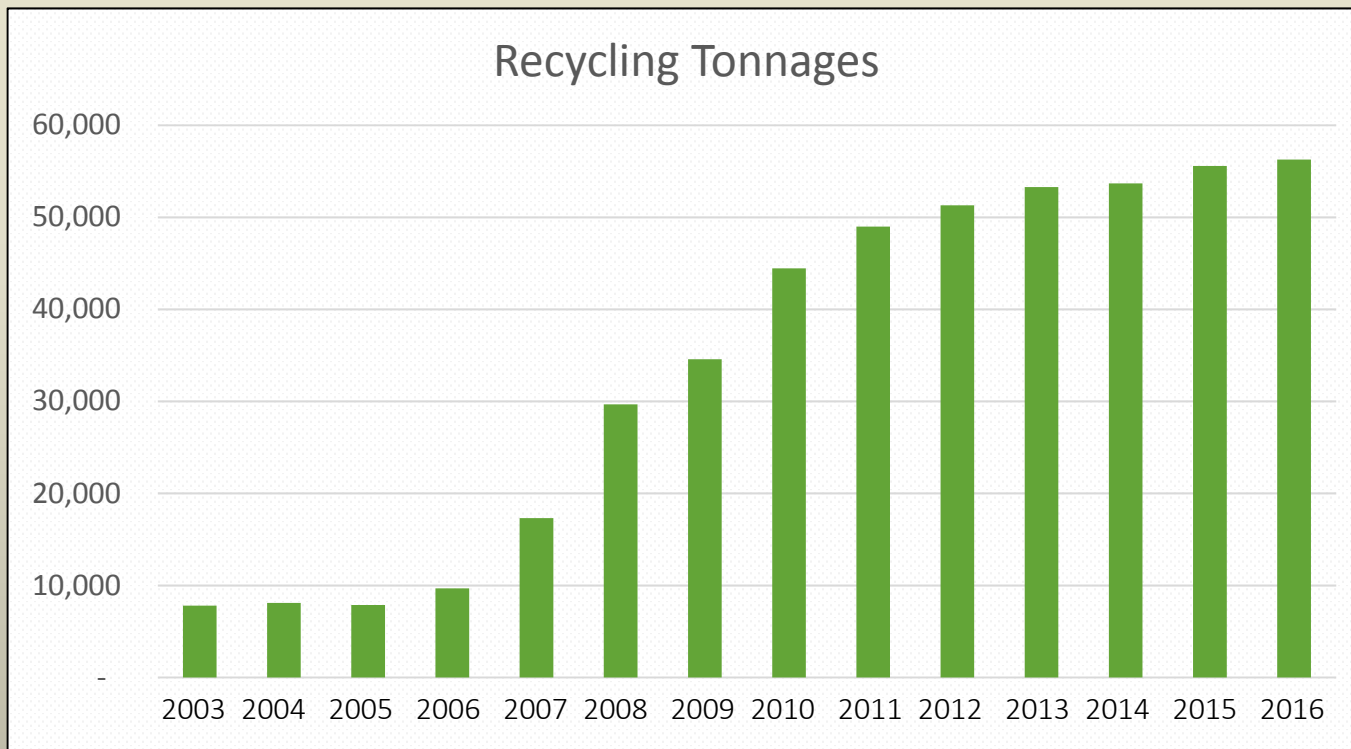
- Sanitation Services, along with other City departments are working on multiple efforts to maximize diversion and reach 40% diversion by 2020
- Continued outreach & education is needed to increase recycling participation and proper recycling habits
- Sanitation Services will continue to work with the multifamily and commercial sector on diversion opportunities and better ways to capture diversion data
- Researching and analyzing best practices will continue to identify effective and efficient solutions to waste diversion
- Looking for additional partnerships with large food waste generators for innovative organics diversion opportunities
- Staff will continue to bring Council information on progress and initiatives to ensure the opportunity for policy guidance and direction

# Questions

# Appendix



# Residential Recycling: History



# Other Cities: Recycling Comparison

- Curbside Recycling: Pounds per Household\*
  - Houston - 333 lbs per HH/Yr
  - Dallas – 465 lbs per HH/Yr
  - Fort Worth – 474 lbs per HH/Yr
  - San Antonio – 520 lbs per HH/Yr
  - Austin – 598 lbs per HH/Yr

\*based on best available information

# Marketing and Outreach



Social Media Quiz




Recycle Ben™

# Marketing and Outreach

**WIN A PRIZE** Complete the crossword puzzle and win an awesome flash drive!

## RECYCLING CROSSWORD PUZZLE



**ACROSS:**

- Polystyrene, also known as \_\_\_\_\_, is not recyclable in the city of Dallas.
- \_\_\_\_\_ paper cannot go into Recycle Ben. Place the very small pieces in a bag through recycling facility sorting centers and get mixed with other small amounts of debris that end up in trash.
- These items are recyclable in the city of Dallas: Paper, \_\_\_\_\_, Glass, Cardboard/Cartons, and Metal.
- \_\_\_\_\_ should not go into Recycle Ben because they get caught in the machinery at the recycling facility which creates problems, but you can take them to most grocery stores to be recycled.
- Visit our webpage at [www.dallas.gov](http://www.dallas.gov), to learn more about recycling.
- The reflective coating makes this type of glass non-recyclable.
- What is the name of the app that has collection reminders and a search tool for what is and isn't recyclable in the City of Dallas?
- If your unrecycled furniture is in good condition, \_\_\_\_\_ it instead of putting it at the curb.
- HWB stands for household \_\_\_\_\_ items.

**DOWN:**

- BDW stands for \_\_\_\_\_, Oil, Paint, Appliances.
- \_\_\_\_\_ cans, like hair spray, can be recycled if they are empty.
- What is the name of the City's landfill?
- What is the name of Dallas Gene Wertz's recycling mascot?
- \_\_\_\_\_ can be taken to the transfer station on the landfill to be "re-cycled".
- Metal and glass \_\_\_\_\_ are not recyclable, but they can be taken to some dry cleaners for reuse.
- A \_\_\_\_\_ is made from corrugated cardboard and the bottom half is usually contaminated with grease, grass and other toppings but the top half is recyclable if it is clean.

**HOW TO WIN:**

- Correctly fill in the crossword puzzle.
- Take a photo of completed puzzle.
- Send photo to [Info@recycles@dallascityhall.com](mailto:Info@recycles@dallascityhall.com).

[facebook.com/DallasZeroWaste](https://www.facebook.com/DallasZeroWaste)  
[@DallasZeroWaste](https://twitter.com/DallasZeroWaste)  
[www.instagram.com/dallaszerowaste](https://www.instagram.com/dallaszerowaste)  
[www.linkedin.com/company/dallaszerowaste](https://www.linkedin.com/company/dallaszerowaste)

158/16

September 2016 Insert – over 200 submissions

## STORAGE RECYCLE BEN INVENTORY



### FREE BEN!!!!

FREE BEN FROM STORAGE AND RECEIVE A FREE BIN

Right now, there are several Recycle Bens waiting to be taken home. They're ready to help you start recycling, they just need a chance!



To order your Recycle Ben, please call 3-1-1 or email [DallasRecycles@DallasCityHall.com](mailto:DallasRecycles@DallasCityHall.com).

### ACCEPTED RECYCLABLE MATERIALS

Plastic	Paper	Cardboard/Cartons	Metal	Glass

Follow us on Facebook, Twitter and Instagram to learn more!

[DallasZeroWaste](https://www.facebook.com/DallasZeroWaste)
[DallasZeroWaste](https://twitter.com/DallasZeroWaste)
[DallasZeroWaste](https://www.instagram.com/dallaszerowaste)

May 2016 Insert – over 150 new roll cart requests

# Hard to Recycle Materials



## Electronics

- In FY16, Dallas residents dropped off over 525,000 lbs. of electronics at transfer stations, Recycling Round-Ups and the landfill.
- Our contracted electronics recycler is e-Stewards certified.
  - The e-Stewards standard follows international trade laws, social accountability & environmental standards and data privacy requirements
  - Electronics cannot be sent overseas for processing
- Currently, in the process of becoming the 1st city in Texas to become e-Stewards certified.
  - It shows Dallas is committed to making best efforts to use certified recyclers who safely, ethically and responsibly recycle electronic waste.
  - Other cities include the City of Seattle and San Jose

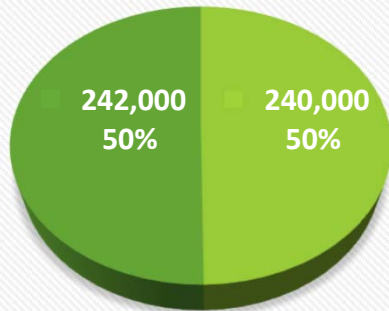
# Hard to Recycle Materials

## FY17 – BOPA Schedule

<b>Date</b>	<b>Location</b>	<b>Address</b>
October 8th 2016	Prairie Creek Library	9606 Lake June Rd, 75217
November 12th 2016	Bachman Lake Library	9480 Webb Chapel Rd, 75220
December 10th 2016	Brentfield Elementary	6767 Brentfield Dr, 75248
January 14th 2017	Kennedy-Curry Middle School	6605 Sebring Dr, 75241
February 11th 2017	Hampton-Illinois Library	2951 S Hampton Rd, 75224
March 11th 2017	Life in Deep Ellum	2803 Taylor St, 75226
May 13th 2017	Home Depot	2610 Fort Worth Ave, 75211
June 10th 2017	Parking Lot on 5639 Forest Lane	5639 Forest Ln, 75230
July 8th 2017	Cathedral of Hope	5910 Cedar Springs Rd (on Nash St), 75235
August 12th 2017	Prairie Creek Library	9606 Lake June Rd, 75217

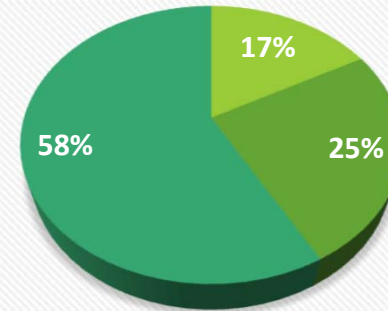
# Multifamily and Commercial

## Dallas Housing Units



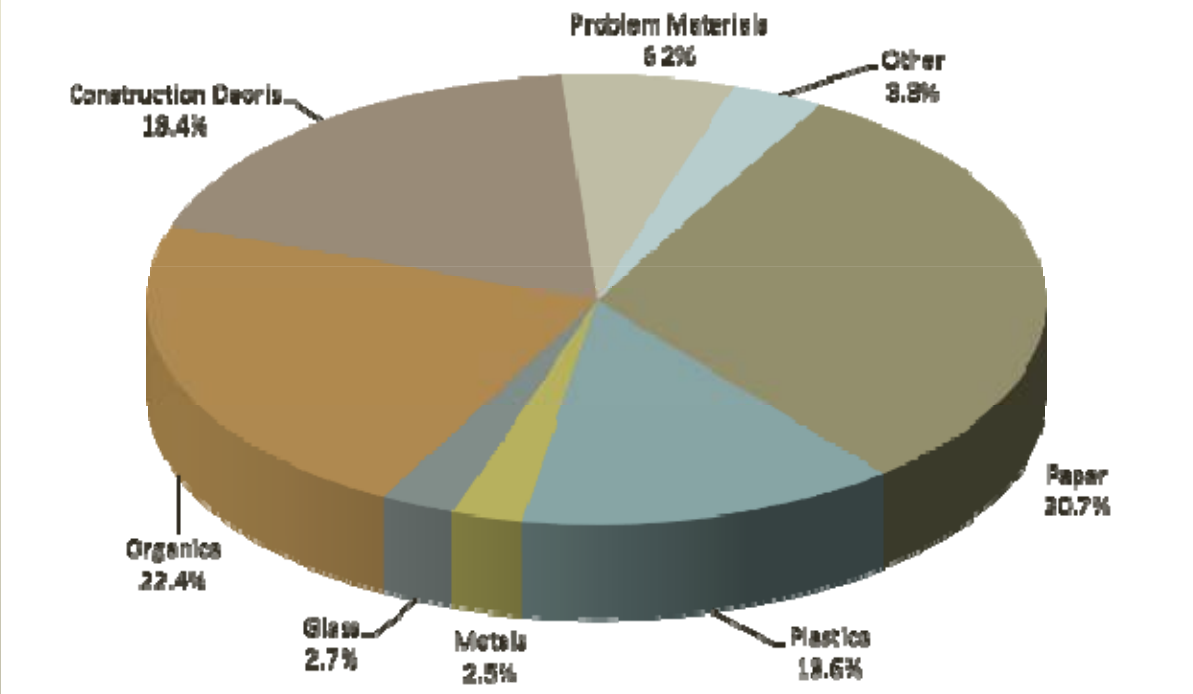
■ Single Family Residential  
■ Multifamily Residential

## Estimate Disposal by Type



■ Single Family      ■ Multifamily  
■ Other Commercial

# Mixed Commercial Waste Composition



Note: Based on a 2014 Waste Characterization study of mixed commercial waste



# Commercial Survey: 2016 Response Rates



	Respondents	Potential Respondents	Response Rate
2016			
AAGD	179	813	22%
HANTx	39	207	19%
BOMA	85	206	41%

# Multifamily and Commercial

- Voluntary Short-Range Goals

	AAGD	HANTx
2016 Participation	43%	56%
2016 Goal	50% by Jan. 1 <sup>st</sup> 2016	70% by Jan. 1 <sup>st</sup> 2016

BOMA Dallas chose not to set a participation goal since it currently has a high average participation rate (77%).

# Commercial Survey: Obstacles



Reasons for <u>Not Recycling</u>	2014	2016
Not enough space	39%	<b>33%</b>
Owners/Managers have not requested it	<b>41%</b>	29%
Residents have not requested it	33%	27%
Equipment/Education/ Staff training is too expensive	24%	25%
Other	N/A	14%

Reasons for <u>Not Recycling</u>	2014	2016
Not enough space	<b>50%</b>	35%
Owners/Managers have not requested it	50%	24%
Guests have not requested it	17%	0%
Equipment/Education/ Staff training is too expensive	17%	<b>47%</b>
Other	N/A	14%

Reasons for <u>Not Recycling</u>	2014	2016
Not enough space	<b>50%</b>	21%
Owners/Managers have not requested it	-	17%
Tenants have not requested it	-	8%
Equipment/Education/ Staff training is too expensive	17%	29%
Other	N/A	<b>46%</b>

# Multifamily and Commercial

## Universal Recycling Ordinance

City	Properties Impacted	Requirements
Allen	Multifamily	A recycling plan at the time of plan review. One 8-yd dumpster for every 150 units.
Austin	All Commercial	An annual recycling plan. Minimum recycling capacity. Recycling education also required.
Fort Worth	Multifamily	Recycling Plan. Applies to multifamily properties with more than 8 units.
Lewisville	Multifamily	Applies to properties with more than 4 units.
San Antonio	Multifamily	Recycling plan. Applies to properties with 3 or more units.

# Multifamily and Commercial

- Universal Recycling Ordinance – Austin
- The ordinance applies to all properties and it was phased in over time, based on size.
- Properties are required to:
  - Recycle a minimum of plastics #1 & #2, paper, cardboard, glass, and aluminum
  - Provide recycling capacity greater than 6.4 gallons per unit per week
  - Locate recycling containers within 25 feet of trash containers
  - Provide education of tenants and employees
  - Post compliant signage
  - Submit a diversion plan annually



# Multifamily and Commercial

- Universal Recycling Ordinance – Fort Worth
- Applies to multifamily properties with 8 or more units.
- It was implemented over a two-year period and began on January 1st 2014
- A recycling plan must be submitted. There is not a minimum recycling capacity that the property must meet.
- City's multifamily inspectors verify that a property is abiding by the plan during annual inspections.



# Multifamily and Commercial

- Universal Recycling Ordinance – San Antonio
- Applies to multifamily properties with 3 or more units.
- Began in December 2010 and phased in over 14 months.
- The properties are required to submit a plan and the implementation inspection must match the plan.
- A recycling capacity of 6 gallons per unit is recommended. Properties fail inspection for overflow material.



# Multifamily and Commercial

## Recycling Drop-Off Sites

- Currently, over 140 recycling drop-off sites are available to apartment residents.
- In FY16, residents dropped off 4,000,000 lbs of recyclables
- An increase in illegal dumping has led to the removal of 5 sites in the past 6 months.
- Industry best practices recommend fewer drop-off sites and that they be staffed.
- Future contract costs could increase significantly.





# Organics Diversion: Research

- Composting facilities must be available or developed when considering organics collection
  - Most composting facilities will accept green and wood waste, but not food waste
  - Marketplace competition would have to be developed or the City would have to develop its own program



# Organics Diversion: Research

- In addition to residential organics collection, staff is reviewing options for food waste diversion at large commercial facilities (hotels, convention centers, airports, etc.)
- Typical diversion programs might include hauling and composting of food and organic waste, but alternative diversion opportunities may exist to eliminate or significantly reduce the need for hauling and off site processing
  - Biologic technology or processing equipment could allow for on-site anaerobic digestion or pulping of food waste (separating liquid from organic pulp) to provide an environmentally and financially viable option for diversion