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# Public Perceptions on Recycling in Multi-family Housing in Dallas

Texas Campaign for the Environment  
Qualitative and Quantitative Research Review  
May 2016

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# EXECUTIVE SUMMARY

## Background

In 2013, the City of Dallas passed a long term solid waste management plan that set a goal of diverting 85% of waste from landfills by 2040. This “Zero Waste” plan is projected to be implemented through various programs and policies that will drive collection of waste in recycling, composting, and reuse programs.<sup>1</sup>

One of the policies Dallas plans to consider is recycling in apartments, condominiums, and other multi-family complexes. This is very significant because multi-family residents make up approximately half of Dallas residents. While Dallas offers curbside recycling for all single-family homes (and has done so for 25 years), there is currently no city-wide policy in place to ensure that recycling is available at multi-family buildings. It is up to each building owner or manager to decide whether or not to offer any kind of recycling program for residents. According to City of Dallas surveys in 2014 and 2015, multi-family buildings are currently only diverting 6-7% of waste through their recycling programs.<sup>2</sup>

Dallas officials estimated in 2013 that only 17% of total solid waste is produced by single-family homes, compared to 25% from multi-family residences. This is a clear area of concern for the City’s ability to meet its waste diversion goals in the long-term “Zero Waste” plan.<sup>3</sup>

## Study Results from Quantitative and Qualitative Research

Texas Campaign for the Environment Fund (TCE Fund) commissioned two public opinion research projects to better understand public and private opinions on recycling in multi-family buildings. One project utilized phone polling of 400 multi-family residents in Dallas (quantitative data); the other used focus groups and personal interviews with multi-family residents and property managers (qualitative data).

Results of these studies suggest that an overwhelming number of Dallas multi-family residents think that recycling is important and beneficial to the environment. Quantitative data indicate that a large majority of multi-family residents who have recycling at their complex do participate in the program to some extent.

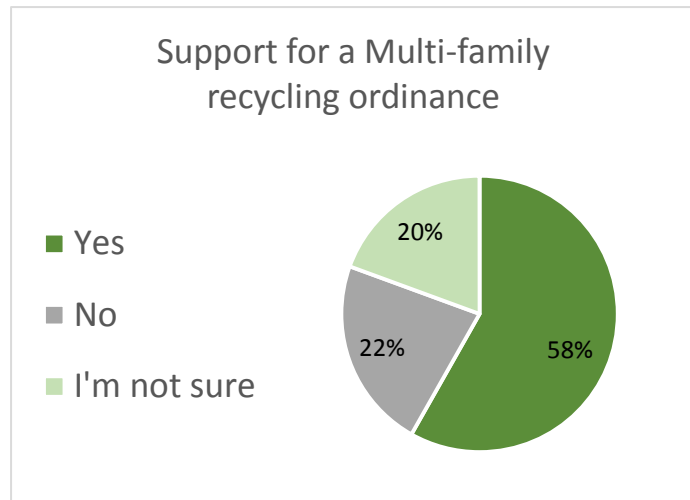
Qualitative research results indicate that education plays a pivotal role in increasing recycling participation and collection rates. Many participants in the study indicated that they were unclear which items are recyclable, they did not know specific environmental or economic benefits of recycling, and they suggested that better education would lead to increased participation.



## Discussion and Recommendations

Most surveyed residents, across almost all demographic groups, agreed that Dallas should require all multi-family buildings to offer a recycling program. Additionally, property managers who were personally interviewed unanimously agreed, for various reasons, that a mandatory ordinance would be required for them to adopt universal recycling programs in their buildings. One property manager summed up the general attitude when he said *"We are not required to, so why do it?"*<sup>4</sup>

One clear theme among property managers and tenants alike is interest in providing incentives to provide and participate in recycling. Some managers were very focused on cost, and said they would be more inclined to offer a program if reduced trash fees would make up for the added costs of providing recycling.

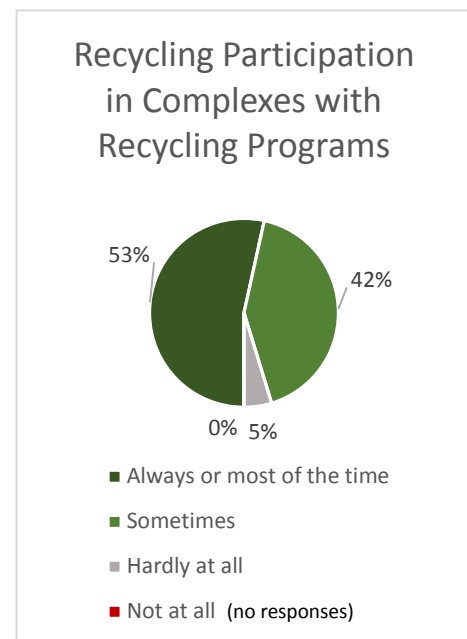


The City of Fort Worth included incentives in their recycling ordinance that Dallas could emulate, such as offering free recycling containers for apartment tenants of the first 50 complexes that signed up with a recycling contract, producing fliers and educational materials for residents available online, and allocating city staff resources to help advise property managers and owners.<sup>5</sup>

Our research shows that not only are residents interested in using recycling programs when they are offered, but the vast majority of those who have access are already participating. This finding is at odds with the repeated claim by apartment managers that there is little interest in recycling.

Property managers who participated in our study were, by and large, already aware that the city is considering implementing a recycling ordinance, and many say they are simply waiting until they are required by the city to start a program. In order for Dallas to meet its waste diversion goals in the coming years and decades, good recycling policies will need to be enacted to push multi-family complexes to participate. Our market research indicates that multi-family recycling programs should:

- Include a concerted, multi-lingual, on-going education program for residents;
- Provide support for property owners and managers to achieve compliance;
- Collect the same materials as Dallas' single-family program to unify public education messages;
- Be as consistent and similar as possible across all multi-family buildings to minimize confusion as residents relocate over time.



# METHODOLOGY

TCE Fund hired two independent research firms to conduct public perception studies on recycling in multi-family housing in the City of Dallas, Texas. The first study utilized qualitative market research methodologies while the second study utilized quantitative phone polling with 400 respondents.

## Qualitative Research

Facilitated focus groups were held to gather qualitative data for understanding the motivations, beliefs and barriers of residents living in apartments, condominiums, or other multi-family dwellings within the City of Dallas.

The interviews and focus groups were conducted at *Dallas By Definition* over three days, January 19<sup>th</sup>, 20<sup>th</sup> & 21<sup>st</sup> of 2016 with Dallas residents who live in multi-family buildings. This report outlines the findings of this effort and outlines specific recommendations based on the responses of the participants.

The research consisted of several group discussions and multiple one-on-one interviews. A total of 27 respondents participated in the focus groups. There were 11 one-on-one interviews among residents. A total of 10 property management decision makers were interviewed individually. Participants were recruited and screened by *Dallas By Definition* with qualifying questions for the survey (detailed below). All sessions were videotaped and each participant was paid a cash incentive for their time. The qualifying screeners and details about focus groups and interview participants can be found in **Appendix A** and **B**.

## Quantitative Research

Live phone polling was conducted to determine public perception of recycling in multi-family buildings in Dallas with a larger survey audience. ReRez, a market research polling firm, worked with TCE Fund to draft survey language and avoid biased questions. ReRez recruited 400 participants living in apartments, townhomes, and condominiums for the phone survey, who were screened over the phone by a live caller to determine if they qualified for the study. The live callers entered participant responses in an online survey form. Full survey questionnaire is included in **Appendix C**.

In order to assure accurate representation by geography, 2010 U.S. Census data was used for the survey by 43 Dallas ZIP codes. Other demographic attributes like race, gender, and age were tracked throughout the survey to ensure quality and city-wide representation.

# METHODOLOGY

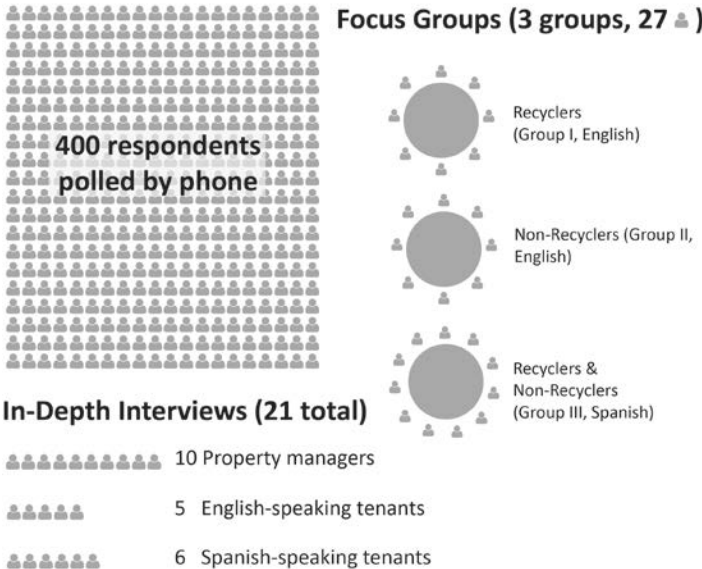


Figure 1 Shows research methodology for both qualitative focus groups and interviews as well as surveys polled by phone

# RESULTS AND DATA TRENDS

## 1. Most Dallas residents think recycling is important

In order to gauge general attitudes toward recycling, participants in the phone survey were asked to rank its importance. More than 80% of polled participants responded 3 or higher on a scale of 1-5. Results for this survey question are graphed in **Figure 2**.

Participants who were interviewed for the qualitative study also largely agreed on the importance of recycling. Many participants cited that recycling is good for the environment, and “it’s the right thing to do.”<sup>6</sup>

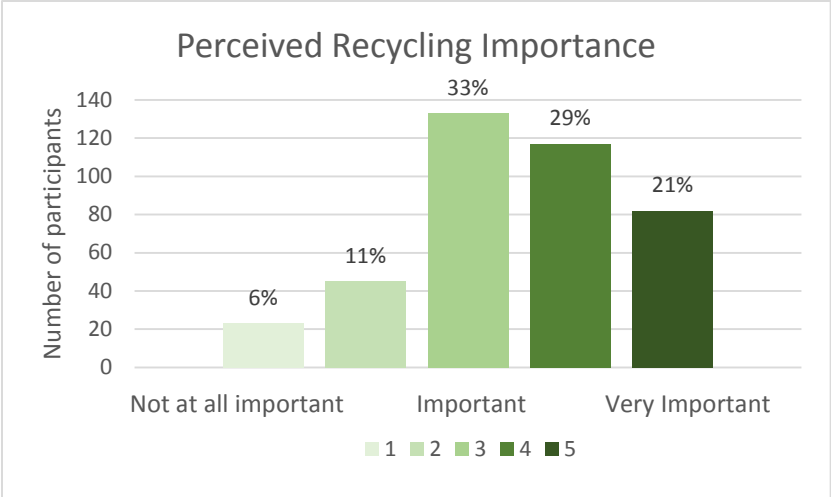


Figure 2 Phone polling participants largely rate recycling as important

## 2. Fewer Dallas residents understand the detailed reasons why recycling is important

When asked why recycling is important during focus group discussions, participant answers were less specific. Many participants were simply motivated by “doing good” for the environment, but had little detailed information the benefits. What became clear during the qualitative study was that participants understandably don’t always know what’s happening to the recyclables or waste when it is hauled from their bins.<sup>7</sup> This is common among many residents, as most people think that it goes “away” without much thought to the actual place where their discards actually go. During the discussions there was a heightened interest in knowing more about the disposition and impacts of their trash and recycling. In addition, there were few connections made between the local environment, water quality, and pollution that results from landfilling. Education on this topic may lead to a better sense of purpose, higher yields, and participation in diverting waste.

*“If they tell us what they do with the [recyclables]... maybe they built a park with it [sic], all the rubber pieces built a track or something... maybe the money went to a school or maybe they can show where this recycling is helping our community.” – Anne, Focus Group I<sup>8</sup>*

*“It would be good to put on TV how much was recycled in one year compared to the last. How many jobs were created?”*

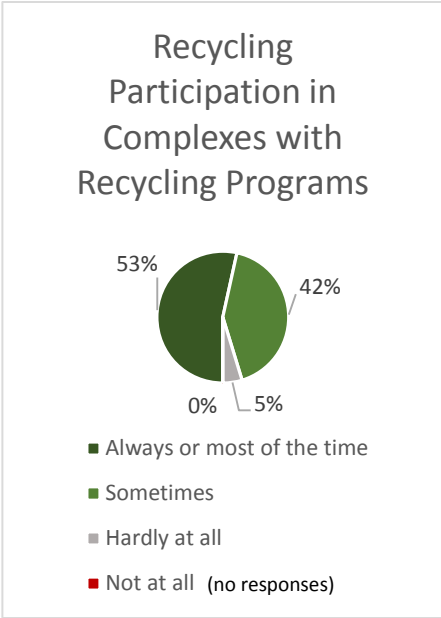


Figure 3 Virtually all phone polling participants who have recycling in their complex use the program to some extent

*Something to see what they are doing with the money we pay...” – translated to English, from Spanish speaking focus group<sup>9</sup>*

### 3. Multi-family residents who have recycling programs are participating in them

Almost without exception, participants of the phone survey who indicated their multi-family building offers a recycling service also claimed to use the program to some extent. More than 95% said they use the program “Always or most of the time” or “Sometimes.” Results from this polling question are shown in **Figure 3**.

Additionally, some property managers indicated their residents were very interested in recycling. Other mentioned prospective tenants would ask about a recycling program before signing a lease. One manager mentioned that tenants were even collecting recycling in bins on their apartment balconies, despite city rules that prohibit this.

*“We see people on the balconies that have recycle bins and we cannot allow that due to city ordinance,” – Roy, Manager, IDI*

*“Really big deal for them [residents], they like helping the environment,” – Shalundra, Manager, IDI<sup>10</sup>*

This finding is at odds with some apartment manager interviews conducted during the qualitative study. Some managers said few tenants were interested enough in on-site recycling programs to contact management about adopting a program. Therefore, some of them felt recycling participation would be minimal and unworthy of the cost.<sup>11</sup>

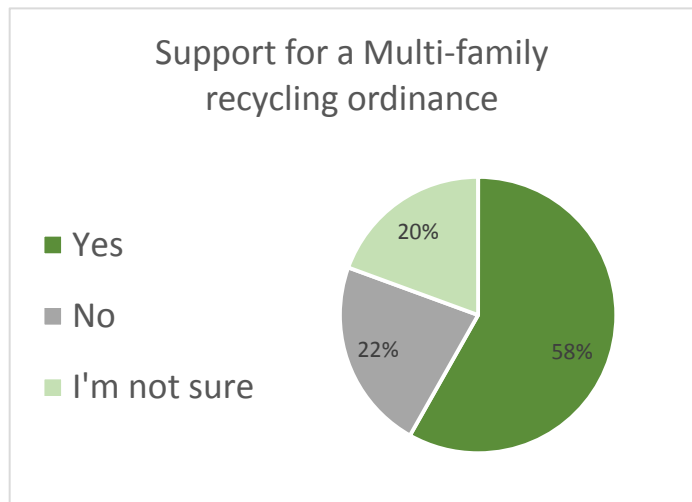
### 4. Most multi-family residents think Dallas should require complexes to offer recycling services

Participants of the phone survey were asked whether they thought Dallas should require multi-family buildings to offer recycling services for residents. Almost 60% of residents said “Yes,” to this key policy question. **Figure 4** illustrates responses.

Most respondents (54%) who already have recycling programs available at their own multi-family building said they would not support such an ordinance. This may suggest that some of these respondents do not see the need for a city-wide policy since

it would not change anything for them.

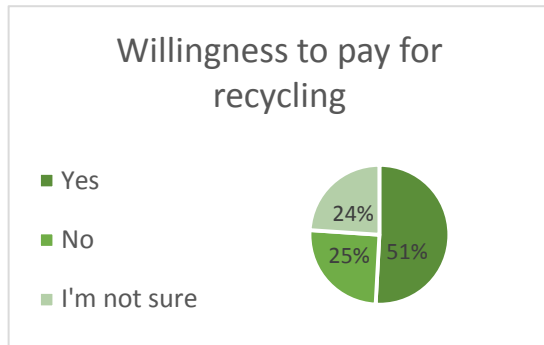
This majority support held firm across nearly all the demographic groups in the survey—all ethnicities and age groups had either a majority or plurality in favor of a recycling ordinance. Our research indicates that people from all walks of life in Dallas would support a city-wide recycling policy for multi-family buildings.



*Figure 4 Share of phone respondents who support, do not support, or have no opinion about a multi-family recycling ordinance for Dallas*

## 5. Most residents support a recycling ordinance even if it means added costs

Just over half of phone respondents who supported a multi-family recycling ordinance said they would be willing to pay more for the program. The remaining half was split evenly between “I’m not sure” and “No” (see **Figure 5**).



**Figure 5** Shows willingness of phone respondents to pay for a recycling program if required

To understand the potential cost of a multi-family recycling ordinance for Dallas residents, it is helpful to review programs that other cities in Texas have already implemented. Only a few cities in Texas—Fort Worth, San Antonio, Austin, San Marcos, and Cedar Hill—have comprehensive multi-family recycling ordinances already in place. Cedar Hill uses a contract with a single waste and recycling hauler, and its customers have seen a mere \$1.10/month rate increase to cover recycling.<sup>12</sup>

Dallas, however, uses an open-market system for waste and recycling contracts. This allows commercial buildings and complexes to sign their own contracts with any available hauling company. Quantifying costs under this system is very difficult to generalize. Austin and San Antonio use similar open-market systems, and while recycling contracts in these cities are not public information, there is no evidence showing any increase in rent.

One reason costs can be kept low for residents is that adding a recycling program comes with the potential to reduce the frequency (and thus cost) of regular trash pick-up. This advantage is also cited by City of Dallas officials who believe costs will not increase significantly for complexes that renegotiate their trash contracts when adding recycling services.

## 6. Incentives can encourage more recycling participation and “buy in”

One abundantly clear thread from qualitative research was that tenants and property managers alike are interested in incentives to provide and participate in recycling – whether it be additional information, community benefit or individual incentive. Many of the suggested incentives were financially related. Other incentives included logistical or space needs and education linking recycling with real environmental impacts. The latter suggestion is detailed in respondent quotes from one focus group below:

*“...we have no idea of what happens to [the recyclables]. I kind-of feel like a jerk if I didn’t [recycle], but I don’t know if it’s the right thing to do or not,” – Margaret, Focus Group I<sup>13</sup>*

*“I don’t know what they’re doing with it,” – Ricky, Focus Group I<sup>14</sup>*

*“I want to see results, something being done with it,” – Eric, Group I<sup>15</sup>*

At the end of one focus group, the moderator disclosed to the respondents that trash picked up by City of Dallas trucks is hauled to a landfill that sits directly next to the Trinity River. This information immediately drew visceral responses from the group. Respondents became more interested in the topic of recycling and diverting waste from landfills near waterways.<sup>16</sup>

The issues of space and logistics were mostly raised by property managers who were concerned about how and where to locate additional recycling dumpsters, and where tenants would sort recycling in their individual units. Some quotes show this below:

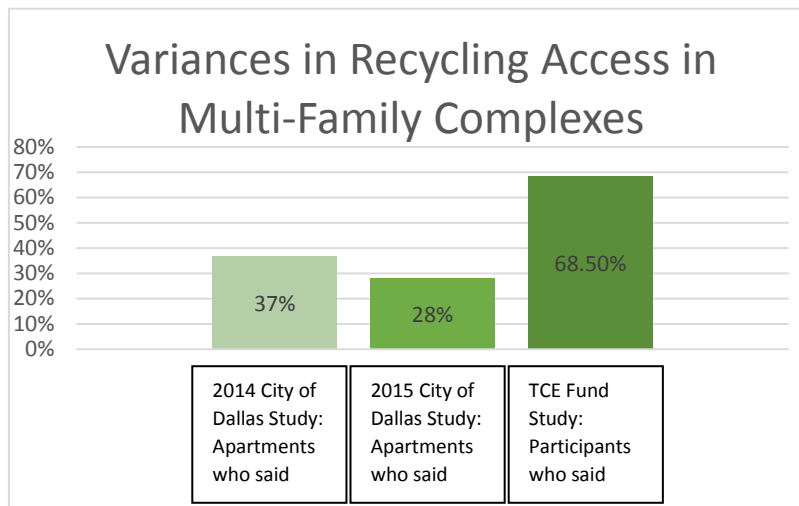
*“If you are living inside the City of Dallas there is not enough space inside your condo or your apartment to have different recycle [bins],” – Sharon, Group I<sup>17</sup>*

*“Where you gonna put it [recycle bin],” – Rosanna, Manager, Individual In-depth Interview<sup>18</sup>*

While the issue of space can be difficult to address in existing, older complexes, some solutions do exist. One solution used in Fort Worth is a “blue bag” program.<sup>19</sup> Under this program, blue bags are supplied by the city or waste hauler to tenants who use them solely for recycling. The bags are taken to designated areas such as a grassy lawn for pickup. Another solution is to trade existing trash dumpsters for recycling dumpsters, or to downsize to fit two dumpsters in the same space.

Finally, the problem of low participation and contamination of recycling (when trash is disposed in recycling containers) was also cited by property managers.<sup>20</sup> These issues can only be solved with frequent education to accommodate tenants who move often. Educational resources can be provided by cities or waste haulers, and many cities choose to include education in their multi-family recycling ordinances.

### It is still unclear how many multi-family residents have access to recycling in Dallas



**Figure 6** Inconsistencies in number of multifamily complexes or units that have access to recycling in three different studies

TCE Fund’s poll found that a majority of participants, 68.5%, claimed they had access to a recycling program in their multi-family building.

Interestingly, these results conflict with earlier City of Dallas surveys, and so the actual percentage of multi-family buildings with and without recycling programs is still unclear.

Two studies conducted by City of Dallas officials during 2014 and 2015 suggest far fewer recycling programs at multi-family

buildings. The 2014 study found that only 37% of surveyed apartments claim to have recycling services for tenants.<sup>21</sup> The second study in 2015 found that only 28% of surveyed apartments offer these services.<sup>22</sup>

The inconsistencies between the various studies shown in **Figure 6** could be explained in part by the methodology. The City of Dallas apartment surveys were emailed to property managers and owners who completed the survey voluntarily. The higher results from the TCE Fund survey could be explained by the relatively small sample size of 400 participants—residents who may have varying understandings and definitions of what on-site recycling programs look like.



Dallas officials have attempted to resolve this question by requiring multi-family building owners and managers to indicate whether they currently offer recycling programs as part of their annual registration with the city. However, many building owners and managers are simply ignoring this request, leaving the entry blank. Of those that have chosen to answer, preliminary results show 33% are offering recycling and 67% are not, which is more consistent with previous City of Dallas surveys.

## Recommendations

Dallas faces many opportunities and challenges with respect to increasing recycling rates throughout the city. While Dallas continues to provide excellent service to all of its single-family residents, there is a lack of access among multi-family residents. Despite the fact that multi-family complexes have long had the ability to implement recycling programs—using many of the same hauling companies that currently provide waste services—our research indicates that it is very unlikely for many multi-family buildings to do so in the absence of a city-wide policy. Our research shows that not only are residents very interested in using recycling programs, but the vast majority of those who already have access are indeed participating. This finding is at odds with the repeated claim by apartment managers that there is little interest in recycling.



Property managers who participated in our study were, by and large, already aware that the city is considering implementing a recycling ordinance, and many say they are simply waiting until they are required by the city to start a program. According to preliminary estimates from city officials, waste diversion figures from apartments in Dallas have stagnated around 6-7%. In order for Dallas to meet its waste diversion goals in the coming years and decades, good recycling policies will need to be enacted to push multi-family complexes to participate.

The ordinance that Dallas chooses should include a concerted, multi-lingual, on-going education program for multi-family residents. Dallas residents come from all walks of life and education programs should be implemented using messages and languages that people will understand. The majority of respondents in both of our studies viewed recycling as important and “good for the environment,” but only a few felt 100% confident in their own knowledge about recycling. In order to best resonate with residents, recycling education should also illustrate the environmental and public health impacts of landfilling alongside the economic benefits of recycling.

It is well known that multi-family housing has high turnover rates for residents in Dallas. It is critical to ensure that education is on-going to keep current residents informed and participating. In addition, the new collection programs should accept the same materials as Dallas’ single-family residential recycling program. Doing so will keep recycling contamination rates low by ensuring that residents know which materials are acceptable no matter where they move throughout the city.

Finally, the city should offer support for property owners and managers to achieve compliance with the ordinance. Fort Worth, for example, offers consultation for property managers, including online resources, printable fliers, and helping them effectively site recycling containers and trash to minimize contamination and maximize participation. Partnership and strong working relationships with multi-family building owners and managers will be essential for any city-wide policy to be effective.

# Appendix A

## Focus Group & Interview Respondent Specifications:

- City of Dallas residents living in multi-family dwellings: apartments, condominiums, or townhomes
- Between the age of 21 and 64
- Renters for 2 or more years
- Minimum income of \$20K
- Mix of male and female respondents
- Recruited 10 for each focus group
- 90 minute discussion group

### Group I, Recyclers

- Currently recycle at their home
- Residential property offers recycling services
- 8 English speaking respondents

### Group II, Non-Recyclers

- Currently do NOT recycle at their home
- Residential property does not offer recycling serviced
- 8 English speaking respondents

### Group III, Spanish Speaking Recyclers & Non-Recyclers

- Speak Spanish as first language
- 3 respondents have access to recycling
- 8 respondents do NOT have access to recycling

## 11 Residential in-depth interviews

- One-on-one in-depth interviews
- Based on similar discussion guide as focus group
- City of Dallas residents living in multi-family dwellings, condominiums or other non-single family dwellings
- Between the age of 21 and 64
- Renters for 2 or more years
- Minimum income of \$20K
- Mix of males & females respondents
- 5 Speak Spanish as first language
- 6 English-speaking
- 45 to 60 minute discussion

## 10 Property Manager in-depth interviews

- One-on-one in-depth interviews
- Manage or oversee a multi-family property or work with a property management company with the City of Dallas

- Decision maker on building maintenance and/or waste management such as trash disposal and/or recycling
- Between the age of 21 and 65
- Based on similar discussion guide as focus group
- 3 provide recycling services
- 5 do NOT provide recycling services
- 2 manage properties with recycling services and without
- All English speaking
- 45 to 60 minute discussion

## FOCUS GROUP 1, RECYCLERS

### 1/20/16 @ 5:00PM

LAST NAME	FIRST NAME	Q10. AGE	Q2. SEX	Q5. CITY OF DALLAS	Q6. DWELLING	Q7. LENGTH OF RESIDENCY	Q8. MULTI-FAMILY BUILDING OFFERS RECYCLING	Q8a. ACTIVELY RECYCLE	Q9. STATE MENTS	Q11. MARITAL STATUS	Q12. EMPLOY STATUS	Q13. EDUC LEVEL	Q14. INCOME	Q15. RACE
H.	GERALD	28	M	YES	APARTMENT	3-5 YEARS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$51K- \$80K	B
M.	RICKEY	58	M	YES	TOWNHOME	5+ YEARS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$51K- \$80K	B
C.	JUAN JAVIER	45	M	YES	CONDOMINIUM	3-5 YEARS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	PART TIME	SC	\$21K- \$50K	H
D.	ANNE	46	F	YES	CONDOMINIUM	1-3 YEARS	YES	YES	A-5, B-5, C-5, D-4	SINGLE	FULL TIME	CG	\$81K- \$100K	W
M.	ERIC	30	M	YES	APARTMENT	1-3 YEARS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$21K- \$50K	H
D.	MARGARET	38	F	YES	APARTMENT	6-12 MONTHS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	PART TIME	SC	\$51K- \$80K	W
G.	SHARON	62	F	YES	CONDOMINIUM	5+ YEARS	YES	YES	A-5, B-5, C-5, D-5	WIDOWED	FULL TIME	SC	\$21K- \$50K	W
H.	SONIA	61	F	YES	APARTMENT	3-5 YEARS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$21K- \$50K	H

## FOCUS GROUP II, NON-RECYCLERS

1/20/16 @ 5:00PM

LAST NAME	FIRST NAME	Q10. AGE	Q2. SEX	Q5. CITY OF DALLAS	Q6. DWELLING	Q7. LENGTH OF RESIDENCY	Q8. MULTIFAMILY BUILDING OFFERS RECYCLING	Q8a. ACTIVELY RECYCLE	Q9. STATEMENTS	Q11. MARITAL STATUS	Q12. EMPLOYMENT STATUS	Q13. EDUC LEVEL	Q14. INCOME	Q15. RACE
W.	JONATHAN	31	M	YES	CONDOMINIUM	1-3 YEARS	DON'T KNOW	NO	A-5, B-5, C-5, D-4	SINGLE	FULL TIME	CG	\$51K-\$80K	W
G.	JOE	37	M	YES	APARTMENT	1-3 YEARS	NO	N/A	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$51K-\$80K	W
A.	DONNA	52	F	YES	APARTMENT	3-5 YEARS	NO	N/A	A-5, B-5, C-5, D-5	MARRIED	FULL TIME	CG	\$51K-\$80K	B
E.	MARIA	25	F	YES	APARTMENT	5+ YEARS	NO	N/A	A-4, B-4, C-4, D-4	SINGLE	PART TIME	SC	\$21K-\$50K	H
B.	C.L.	46	F	YES	APARTMENT	1-3 YEARS	NO	N/A	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	SC	\$21K-\$50K	B
B.	Tracy	23	F	YES	APARTMENT	5+ YEARS	NO	N/A	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$21K-\$50K	W
B.	JOHN	40	M	YES	APARTMENT	6-12 MONTHS	NO	N/A	A-4, B-5, C-5, D-4	SINGLE	FULL TIME	HS	\$21K-\$50K	W
B.	JOHN	60	M	YES	APARTMENT	1-3 YEARS	NO	N/A	A-4, B-5, C-5, D-4	SINGLE	RETIRED	CG	\$21K-\$50K	W

## FOCUS GROUP III, SPANISH GROUP

**1/21/16 @ 5:00PM**

LAST NAME	FIRST NAME	Q12 AGE	Q2 SEX	Q4 CITY OF DALLAS	Q5 DWELLING	Q6 LENGTH OF RESIDENCY	Q7 MULTIFAMILY BUILDING OFFERS RECYCLING	Q7b. ACTIVELY RECYCLE	Q8. STATE-MENTIONS	Q9 HOW OFTEN SPEAK SPANISH IN HOME	Q10 SPANISH TV/MUSIC OR MOVIES	Q11 BORN IN LATIN AMERICA	Q11a. LATIN AMERICA DESCENT	Q13. MARITAL STATUS	Q14. EMP. STATUS	Q15. EDUC LEVEL	Q16. INCOME
M.	GUSTAVO	42	M	Yes	APARTMENT	1-3 YRS	NO	NO	4,5,5,5	ALL THE TIME	YES	YES	YES	MARRIED	FULL TIME	GED	\$21K-\$40K
M.	MARIA	43	F	Yes	APARTMENT	5+ YRS	NO	NO	5,5,5,5	ALL THE TIME	YES	YES	YES	DIVORCED	FULL TIME	GED	\$21K-\$40K
M.	ROSARIO	39	F	Yes	CONDO	5+ YRS	NO	NO	4,5,4,5	ALL THE TIME	YES	YES	YES	MARRIED	FULL TIME	GED	\$41K-\$60K
G.	NELLY	26	F	Yes	APARTMENT	1-3 YRS	NO	NO	5,5,5,5	SOMETIMES	SOMETIMES	YES	YES	SINGLE	FULL TIME	GED	\$21K-\$40K
O.	CARLOS	31	M	Yes	APARTMENT	1-3 YRS	NO	YES	4,4,4,4	SOMETIMES	SOMETIMES	YES	YES	SINGLE	FULL TIME	SC	\$21K-\$40K
D.	ERICA	42	F	Yes	CONDO	3-5 YRS	YES	YES	5,5,5,5	SOMETIMES	SOMETIMES	NO	YES	MARRIED	FULL TIME	CG	\$95K-\$120K
G.	ALEJANDRO	47	M	Yes	APARTMENT	1-3 YRS	NO	NO	4,4,4,4	ALL THE TIME	YES	YES	YES	SEPARATED	FULL TIME	SC	\$21K-\$40K
A.	SYLVIA	38	F	Yes	APARTMENT	1-3 YRS	NO	YES	5,5,5,5	SOMETIMES	SOMETIMES	YES	YES	DIVORCED	FULL TIME	SC	\$21K-\$40K
G.	ANTONIO	38	M	Yes	APARTMENT	5+ YRS	YES	YES	5,5,5,5	ALL THE TIME	YES	YES	YES	SINGLE	FULL TIME	SC	\$21K-\$40K
L.	IVAN	42	M	Yes	APARTMENT	5+ YRS	YES	YES	5,5,5,5	SOMETIMES	SOMETIMES	YES	YES	MARRIED	FULL TIME	SC	\$41K-\$60K

## SPANISH-SPEAKING 1/21/16 ONE ON ONES

DATE & TIME	NAME	Q12. AGE	Q2. SEX	Q4. CITY OF DALLAS	Q5. DWELLING	Q6. LENGTH OF RESIDENCY	Q7b. ACTIVELY RECYCLE	Q8. STATE-MENTS	Q9. HOW OFTEN SPEAK SPANISH IN HOME	Q10. SPANISH TV, MUSIC OR MOVIES	Q11. BORN IN LATIN AMERICA	Q11a. LATIN AMERICAN DESCENT	Q13. MARITAL STATUS	Q14. EMPL STATUS	Q15. EDUC LEVEL	Q16. INCOME
8:00A M	AIDA T.	53	F	Yes	APARTMENT	1-3 YRS	YES	5.5.5.5	ALL THE TIME	YES	YES	YES	MARRIED	HOME-MAKER	SC	\$21K-\$40K
9:30AM	SANTIA GO M.	58	M	Yes	APARTMENT	5+ YRS	YES	5.5.5.5	ALL THE TIME	YES	YES	YES	MARRIED	FULL TIME	SC	\$21K-\$40K
11:00A M	ADRIAN ELLA S.	33	F	Yes	APARTMENT	1-3 YRS	YES	4.4.5.5	ALL THE TIME	YES	YES	YES	MARRIED	PART TIME	SC	\$21K-\$40K
1:00PM	EDGAR R.	25	M	Yes	APARTMENT	5+ YRS	YES	5.5.5.5	SOMETIMES	SOMETIMES	YES	YES	SINGLE	FULL TIME	CG	\$41K-\$60K
2:00PM	ARAGE LY B.	55	F	Yes	APARTMENT	5+ YRS	YES	5.5.5.5	ALL THE TIME	YES	YES	YES	MARRIED	FULL TIME	SC	\$21K-\$40K

## RECYCLING - ENGLISH

### 1/19 - 1/20/16 ONE ON ONES

DATE & TIME	NAME	Q10. AGE	Q2. SEX	Q5. CITY OF DALLAS	Q6. DWELLING	Q7. LENGTH OF RESIDENCY	Q8. MULTI-FAMILY BLDG OFFER RECYCLING	Q8a. ACTIVELY RECYCLE	Q9. STATE-MENTIONS	Q11. MARITAL STATUS	Q12. EMPL STATUS	Q13. EDUC LEVEL	Q14. INCOME	Q15. RACE
JAN 19 12:00PM	TINA MARIE B.	49	F	YES	APARTMENT	3-5 YEARS	YES	YES	A-4, B-5, C-5, D-4	SINGLE	FULL TIME	SC	\$51K-\$80K	W
JAN 19 1:00PM	LARRY B.	41	M	YES	APARTMENT	1-3 YEARS	YES	YES	A-4, B-4, C-5, D-5	SINGLE	FULL TIME	SC	\$21K-\$50K	B
JAN 19 3:30PM	JEFF C.	61	M	YES	APARTMENT	5+ YEARS	YES	YES	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	SC	\$51K-\$80K	W
JAN 19 4:30PM	BRONWYN C.	35	F	YES	APARTMENT	6-12 MONTHS	NO	N/A	A-4, B-5, C-5, D-5	SINGLE	FULL TIME	CG	\$51K-\$80K	W
JAN 20 2:00PM	ALLIE B.	24	F	YES	TOWNHOME	6-12 MONTHS	NO	N/A	A-4, B-4, C-5, D-4	SINGLE	FULL TIME	CG	\$21K-\$50K	W
JAN 21 1:00PM	MICHAEL S.	51	M	YES	APARTMENT	5+ YEARS	NO	N/A	A-5, B-5, C-5, D-5	SINGLE	FULL TIME	SC	\$21K-\$50K	W



## RECYCLING - MANAGERS

### 1/19 - 1/21/16 ONE ON ONES

DATE & TIME	NAME	Q13. AGE	Q2. SEX	Q5. JOB TITLE	Q9. TYPE OF PROPERTY	Q10. HOW MANY PROPERTIES DO YOU MANAGE	Q11. LENGTH OF EMPLOYMENT WITH THIS COMPANY	Q12. DOES PROPERTY OFFER A RECYCLING SERVICE	Q14. RACE
JAN 19 9:00AM	CHRISTINE E.	26	F	PROPERTY MANAGER	APARTMENT	1	1-3 YEARS	YES	A
JAN 19 11:00AM	ROSANNA B.	52	F	PROPERTY MANAGER	CONDOMINIUM	1	5+ YEARS	YES	B
JAN 19 3:00PM	CAMERON S.	40	M	PROPERTY MANAGER	APARTMENT	50	5+ YEARS	NO	H
JAN 19 5:30PM	MARC D.	41	M	DISTRICT MANAGER, PROPERTY MANAGER	APARTMENT	4	1-3 YEARS	2 YES & 2 NO	W
JAN 19 6:30PM	SHERI H.	58	F	PROPERTY MANAGER	APARTMENT	1	5+ YEARS	NO	W
JAN 19 7:15PM	SHALLUNDRA E.	46	F	JUNIOR PROPERTY SUPERVISOR	APARTMENT, LOFT, TOWNHOME	2	5+ YEARS	1 YES & 1 NO	B
JAN 20 9:00AM	JUANITA Z.	45	F	PROPERTY MANAGER	APARTMENT	1	1-3 YEARS	NO	H
JAN 20 11:30AM	CARRIE T.	35	F	PROPERTY MANAGER	APARTMENT	1	1-3 YEARS	YES	W
JAN 20 12:30PM	ROY D.	47	M	DIRECTOR OF PROPERTY MANAGEMENT	APARTMENT	4	5+ YEARS	NO	W
JAN 21 9:00AM	STEVEN P.	38	M	VP OF MANAGEMENT	APARTMENT	3	5+ YEARS	NO	W

# Appendix C

## Phone Polling Survey Language

1. In what city do you live? **(only continue if Dallas)**
2. Do you live in the city limits of Dallas? **(only continue if Yes)**
3. What is your age? **(only continue if 18+)**
4. In which type of housing do you currently live?
  - a. Apartment **(continue)**
  - b. Condominium **(continue)**
  - c. Townhome **(continue)**
  - d. Duplex **(terminate)**
  - e. Single Family Home **(terminate)**
  - f. Other **(terminate)**
5. How long have you lived at your current address?
  - a. Less than six months **(terminate)**
  - b. Six months to a year **(continue)**
  - c. 1-4 years **(continue)**
  - d. 5+ years **(continue)**
6. In which ZIP code is your home located? **(only continue if ZIP code quota is not met)**
7. Does the apartment/condo you live in provide a recycling service?
  - a. **(If Yes to #7)** Which best describes the recycling service provided by your complex?
    - i. Doorstep / Valet
    - ii. Large recycling dumpsters on site
    - iii. Blue roll carts on site
    - iv. Other (specify)
  - b. **(If Yes to #7)** How much would you say you participate in recycling at your complex?
    - i. Always or most of the time
    - ii. Sometimes
    - iii. Hardly at all
    - iv. Not at all
  - c. **(If Yes to #7)** How much would you say you participate in recycling at work, school, or public events?
    - i. Always or most of the time
    - ii. Sometimes
    - iii. Hardly at all
    - iv. Not at all
  - d. **(If No to #7)** If your multifamily building did provide a recycling service, would you use it?
    - i. Yes
    - ii. No
    - iii. I'm not sure
  - e. **(If No to #7)** How much would you say you participate in recycling at work, school, or public events?
    - i. Always or most of the time

- ii. Sometimes
  - iii. Hardly at all
  - iv. Not at all
8. How important to do you think recycling is? **(1-5 scale)**
9. Do you think the City of Dallas should require all multi-family buildings to offer recycling services for their residents?
- a. Yes
  - b. No
  - c. I'm not sure
10. If multi-family building owners and managers claim that offering this service would cost more money, and they would have to pass this cost along to tenants, would you still support city rules requiring multi-family buildings to offer recycling services?
- a. Yes
  - b. No
  - c. I'm not sure
11. Would you be willing to contact your multi-family building owner or manager and ask them to offer residential recycling services?
- a. Yes
  - b. No
  - c. I'm not sure
12. Would you be willing to contact your Dallas City Council member and ask them to support city rules requiring multi-family buildings to offer recycling?
- a. Yes
  - b. No
  - c. I'm not sure
13. What is your ethnicity? **(Please select all that apply.)**
- a. American Indian or Alaskan Native
  - b. Asian or Pacific Islander
  - c. Black or African American
  - d. Hispanic or Latino
  - e. White or Caucasian
  - f. Prefer not to answer
  - g. Other **(specify)**
14. What is your gender?
- a. Male
  - b. Female
  - c. Prefer not to answer
  - d. Other **(specify)**
15. What is your approximate average annual household income?
- a. \$0-24,999
  - b. \$25k – 49,999
  - c. \$50k – 74,999
  - d. \$75k – 99,999
  - e. \$100k – 124,999

- f. \$125k – 149,999
- g. \$150k – 174,999
- h. \$175k – 199,999
- i. \$200k +

**Participant Quotas by ZIP Code**

Zip Code	Est. Pop. 2013	Target completions	Actual Completions
75201	10213	4	4
75202	2133	1	1
75203	15514	6	6
75204	26586	11	11
75205	23384	10	10
75206	37198	15	17
75207	9561	4	4
75208	31299	13	13
75209	15312	6	6
75210	6125	3	3
75212	25756	11	11
75214	33460	14	14
75215	14118	6	6
75216	49342	20	20
75218	22743	9	9
75219	21700	9	9
75220	43762	18	18
75223	12583	5	
75224	34640	14	15
75225	20770	8	8
75226	3265	1	1
75227	56594	23	23
75228	70669	29	29
75229	33371	14	14
75230	27027	11	11
75231	34227	14	15
75232	27317	11	11
75233	14431	6	6
75234	29180	12	12
75235	18864	8	8
75236	15264	6	6
75237	17203	7	7
75238	30594	13	13
75240	27050	11	13
75241	29586	12	12
75243	56910	23	24
75246	2604	1	1
75247	546	0	0
75251	2945	1	1
75252	24898	10	10
75270	20	0	0
75390	0	0	0
<b>TOTAL:</b>	<b>978764</b>	<b>400</b>	<b>400</b>

# Endnotes

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- <sup>1</sup> City of Dallas Long Term Solid Waste Management Plan. 2013.
- <sup>2</sup> Corporate Waste Research Report – Wave 2. Pg 31.
- <sup>3</sup> City of Dallas Long Term Solid Waste Management Plan 2013.
- <sup>4</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 32.
- <sup>5</sup> City of Fort Worth website. Multi-family Recycling Plan. <http://fortworthtexas.gov/aptreycling/>
- <sup>6</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 24.
- <sup>7</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 25.
- <sup>8</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 25.
- <sup>9</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 25.
- <sup>10</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 34.
- <sup>11</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 32.
- <sup>12</sup> Cedar Hill code of ordinances. Health and Sanitation: Section 9-57(c)
- <sup>13</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 24.
- <sup>14</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 24.
- <sup>15</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 24.
- <sup>16</sup> L'il Cheyenne. Qualitative research. Focus Group I. January 20, 2016.
- <sup>17</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 29.
- <sup>18</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 33.
- <sup>19</sup> Multi-Family Recycling Study. City of Fort Worth, Texas. September 2005. 6-15.
- <sup>20</sup> City of Dallas Recycling Summary Report - Qualitative Research. L'il Cheyenne. Pg 28.
- <sup>21</sup> Corporate Waste Research Report – Wave 1. Pg 35.
- <sup>22</sup> Corporate Waste Research Report – Wave 2. Pg 30.