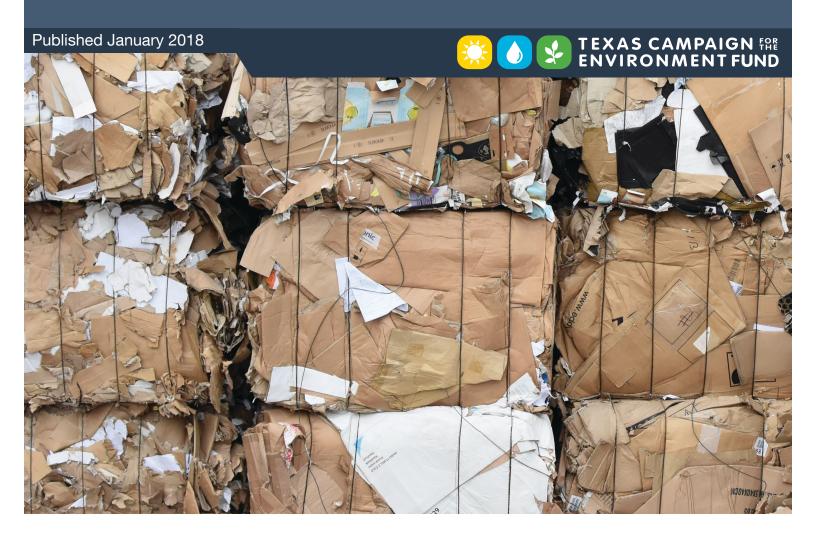
Franchise Agreements & Recycling in the Dallas-Fort Worth Metroplex

Cities in the Dallas-Fort Worth Metroplex have implemented public-private agreements, partnerships, and policies to make basic recycling services more accessible. This report examines and evaluates the methods by which cities can work to expand recycling services where people live, work, and play.



Executive Summary

In order to avoid the cost of creating and expanding landfills in the coming decades and to provide universal access to recycling services where people live and work, many city governments are working to address commercial and multi-family discard streams. These sources often generate as much as two to three times the discards as single-family residential streams. The vast majority of an estimated 1.4 million multi-family residents in North Texas lack convenient access to recycling in their homes.

Some cities have chosen to mandate that recycling programs exist in all commercial establishments without assigning specific companies to collect the materials. Other cities have chosen to sign exclusive agreements with one or more companies, which are made responsible for handling recycling for all multi-family and commercial buildings.

This report investigates the status of cities with franchise agreements for solid waste and recycling in the DFW area, while examining the specific criteria that make contracts more effective for maximizing waste diversion in commercial and multi-family establishments. The report concludes with recommendations for cities that may be seeking to expand recycling access via changes in their code of ordinances or franchise agreements with solid waste and recycling haulers.

Commercial Recycling is a Big Opportunity Area in DFW

The DFW Metroplex has considerable opportunities to increase diversion of discards. The estimated recycling rate in the region is approximately 22.7%, compared with a 34% national average. The majority of discards generated in DFW comes from commercial and multi-family establishments. According to regional data in 2010, the residential sector of DFW generated 3,100,673 tons of material. During this same period, the commercial and multi-family sectors generated 5,921,722 tons, nearly twice as much. Cities with higher concentrations of businesses and multi-family housing have even

higher ratios of commercial discards. In Dallas and Fort Worth, commercial discards represent 83% and 70% of discards generated overall, respectively.⁴⁵

Most DFW cities have made arrangements for recycling in single-family residential neighborhoods but lack requirements or strong incentives for commercial and multi-family establishments. The greatest opportunities for waste diversion exist in the commercial and multi-family sectors.

Exclusive Public-Private Recycling Agreements Need Key Provisions

Exclusive franchise agreements (EFAs) between cities and private solid waste and recycling haulers give exclusive rights to managing and hauling waste from commercial establishments in a given city or sometimes a specific city district.

A typical exclusive franchise contract contains several fundamental parts: A grant of exclusive franchise for the company to haul recyclables and/or trash from certain commercial establishments; specific responsibilities and requirements for the company (including equipment, frequency and type of service, and processing options for materials that are collected); a limited term for the agreement

and optional term extensions; a list of common definitions between the two parties; fee structure and billing methods; insurance and legal agreements.

A survey of franchise contracts in DFW cities found a great deal of variability in these agreements. This variability can result in considerably different quality and efficacy of recycling and solid waste services from city to city. In this section, we highlight certain contractual components that make recycling agreements more effective in promoting proper recycling and increased participation by commercial tenants and multi-family residents.

Key Provisions in Successful Public-Private Recycling Agreements				
Universal Recycling Services	Adequate Capacity & Location for Recycling Containers	Track Diversion Rates & Tons Collected	Contamination Thresholds & Processing Requirements for Materials	Public Education & Outreach
Require that <i>all</i> properties of a certain type (e.g. Multi-family properties) have recycling services.	Set appropriate requirements for the proper volume and placement of recycling dumpsters for each property. For example, trash containers similar in size and capacity to recycling containers.	Require hauler to report tonnages from trash and recycling containers. Include specific requirements to separate these numbers for residential, multi-family and commercial.	Require haulers to recycle materials through a processor with a contamination rate that is based on current or anticipated quality. Setting this threshold too low may allow haulers to discard recyclables even if a processor might still accept them.	Require an adequate fee for haulers to provide public education on how to recycle correctly and promote the program.
Examples include: Allen, Lewisville, Cedar Hill, Euless, Little Elm	Examples include: Lewisville, Cedar Hill, Bedford	Examples include: Lewisville, Desoto, Keller	Examples include: Plano, Carrollton, Euless, Cedar Hill	Examples include: Plano, Allen, Lewisville, Carrollton, Cedar Hill

Zoned Franchise Agreements in Cities Outside Texas

Zoned franchise agreements are another type of exclusive public-private agreement. In a zoned franchise system, contractors are assigned to specific areas of the city, or exclusive zones, in which they collect recyclables and other discards. Commercial and residential collection zones have been used in larger cities to bolster recycling participation and industry jobs, while tempering air pollution and traffic concerns. These agreements also allow for multiple contractors to be awarded collection zones, which enables smaller

contracting companies a more competitive edge compared with the all-or-nothing citywide exclusive franchise agreements.

Several cities in California, including Santa Barbara, San Jose, Oakland, Chico, as well as Portland, OR and Seattle, WA have implemented commercial and residential collection zones. Los Angeles just started their zoned system in July 2017. New York City, Boston, and Long Beach, CA are considering doing the same.

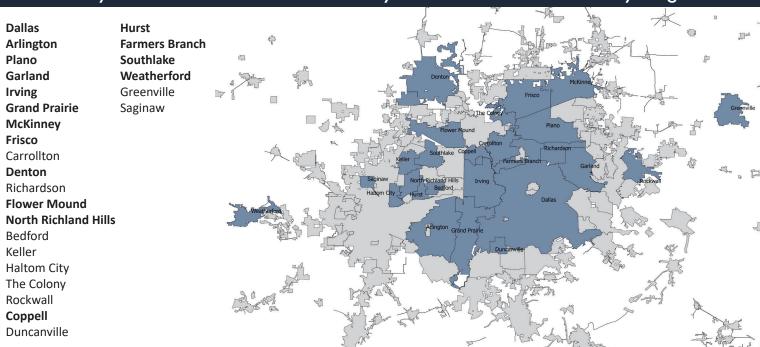
Best Case Scenario: Expand Recycling to One Million DFW Residents

There are currently only five DFW cities that have exclusive franchise agreements with recycling haulers that call for servicing all multi-family properties. There are no exclusive contracts that require recycling services for all non-residential commercial properties. Cities have an opportunity to renegotiate their franchise contracts at the end of their active term to include multi-family recycling for all properties.

By looking at contract termination dates, we ran a best case scenario for expanding recycling access to all multi-family properties in the DFW area. In this scenario we only included cities with a general population greater than 25,000 at the time of the 2010 census.

According to data provided by the North Central Texas Council of Governments and municipal recycling agreements gathered by TCE Fund, there are 26 cities that do not currently guarantee recycling for multi-family properties that either have contracts that expire within two years or are not bound by commercial recycling contracts for multi-family recycling services. If these 26 cities decided to make multi-family recycling universal within the next two years, approximately 1,052,868 additional residents would be guaranteed recycling services in DFW. The overwhelming majority of these residents live in 16 cities (listed in bold text below) that can implement universal multi-family recycling immediately, which would cover approximately 933,379 residents.

Key DFW Cities That Could Quickly Provide for Universal Recycling



If these 26 cities decided to make multi-family recycling universal within the next two years, approximately 1,052,868 additional residents would be guaranteed recycling services in DFW

Survey of Multi-Family Residents in Cities with Franchised Recycling

Texas Campaign for the Environment Fund conducted a door-to-door survey in the cities of Allen, Lewisville, and Cedar Hill to determine the effectiveness of exclusive franchise agreements that call for universal recycling services in all multi-family properties. About 100 multi-family residents were surveyed in each of the three cities in October and November 2017 for this purpose.

Despite provisions in the franchise agreements of these cities that require outreach and education, TCE Fund found that less than half of surveyed residents were aware of the recycling program in their community. This was true even for a large number of residents who had lived in the community for more than two years.

The study also found that several residents in Cedar Hill were not supplied with 18-gallon recycling containers for placement in their apartment unit. A provision for providing these containers to each resident was included in the franchise agreement, but according to a Waste Management employee who was contacted about this, the

City of Cedar Hill is supposed to contact the franchisee if additional containers are needed. Additional research is needed to determine how this provision could be improved. Data from other studies have shown individual recycling containers add convenience for users and increase participation.

Surveyed residents who were aware of the recycling program in their apartment were asked a multiple-choice question about how the program could be improved. The most common response (more than 40% in all cities) was "placing more recycling containers next to trash containers," the second most common response was "educating residents on how to properly recycle; keep trash out."

Franchise agreements in these cities have helped provide universal access to recycling throughout multi-family properties. However, there is significant room to improve the enforcement of key provisions in these agreements.

Recommendations

Most DFW cities do not have comprehensive access to recycling for multi-family residents. In order to guarantee recycling access for all multi-family residents, cities have a couple of options:

- Open access to multiple haulers to collect recyclables by passing a city ordinance that requires multi-family properties to sign recycling contracts with them (Universal Recycling Ordinance);
- 2. Negotiate an exclusive franchise agreement (EFA) with an existing or new recycling hauler to require universal collection from all multi-family properties.

This report examines the advantages and disadvantages to each option (see chart on page 7) and explores options for non-exclusive franchise agreements. The large degree of variability in language and provisions of exclusive franchise agreements and universal recycling ordinances makes a simple comparison of these options difficult. Key provisions are needed in both systems to maximize waste diversion and recycling participation; enforcement and accountability should be considered to ensure services are adequate.

One critical drawback of exclusive franchise agreements is their tendency to be awarded only a handful of large hauling companies, while excluding smaller companies from doing business. Cities that prefer an open-market approach while still maintaining some control over collection activities may opt for a Grant of Privileges system. This model is essentially a non-exclusive franchise agreement, which requires haulers to obtain a "permit," meet certain requirements, and possibly pay a fee in order to collect from commercial and residential establishments. Similar to exclusive franchise agreements, this system allows cities to require haulers to report tonnages, reduce emissions, and provide uniform services.

In order to preserve landfill space and promote recycling where people work, cities should consider covering all commercial buildings served by recycling haulers using the same policies that apply to multi-family buildings. Many companies provide recycling for their employees on a voluntary basis such as Toyota, Dell, and Frito Lay; however, to maximize diversion, this matter could be addressed through public policy.



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Commercial Recycling is a Big Opportunity Area in DFW

Since the 1990s, municipalities in the DFW region have adopted basic recycling programs for residential discards—including paper materials, metals, plastics, and glass—in order to mitigate the economic and environmental impacts of wasting these valuable materials. Early recycling efforts in DFW concentrated on single-family neighborhoods, where most people lived. Today, almost every DFW city provides universal curbside recycling for these residents either through private or public hauling programs. While these programs have proven effective in keeping more than 20% of regional discards from being wasted in landfills, they fall short of addressing the vast majority of wasted materials in the region—most of which is generated from multi-family and commercial properties and could be recycled or composted if properly sorted before disposal.

Most DFW cities lack requirements or strong incentives for successful recycling programs in commercial and multi-family establishments. As a result, relatively few of these properties have initiated or maintained recycling services for their tenants and residents. Notable exceptions include commercial and multi-family properties in cities like Fort Worth, Plano, Allen, Lewisville, Frisco, Denton, and other smaller cities that have addressed recycling for these properties through one or more city ordinances or franchise agreements.

The City of Fort Worth has a universal recycling ordinance (URO), a policy which requires all multi-family properties with eight or more units to submit a recycling plan to the city for approval. The "open market" ordinance allows multi-family property managers to contract with any recycling hauler of their choice. Plano has a construction and demolition ordinance that financially incentivizes businesses to recycling construction materials, while Frisco requires certain C&D materials to be kept from landfills altogether. These programs have resulted in some of the largest zero waste construction projects in DFW to date—including the Frisco Star Facility and Toyota HQ in Plano. Toyota HQ in Plano.



According to the City of Dallas, the vast majority of municipal solid waste is generated from commercial and multi-family sectors.

Exclusive franchise agreements differ from recycling programs that are adopted by way of city ordinance, but can accomplish similar comprehensive recycling services in multi-family, and less commonly, commercial properties. In an exclusive franchise agreement (EFA), cities contract with one or more trash and recycling companies to collect discarded materials. There is a great diversity of responsibilities and parameters outlined in each EFA.

This report aims to help city officials and recycling advocates understand the most important components of exclusive franchise agreements (EFAs) and universal recycling ordinances (UROs) that lend to more successful recycling programs. The table below provides a simple comparison of these two approaches; key components of each approach are discussed and referenced throughout this report.

While this report does not focus on single-family residential franchise agreements, these have proven successful for "single-stream" and "soft recyclable" materials—like clothing, shoes, toys, and furniture—in some DFW cities. See TCE Fund's *State of the Region Recycling Report 2017 Winter Update* for more discussion on this.

Advantages and Disadvantages for Strategies to Provide City-Wide Recycling			
	Universal Recycling Ordinance	Exclusive Franchise Agreement	
ADVANTAGES	 Open market for recycling collection allows for competition between small and large businesses Individual contracts between properties and haulers allows for site specific services (e.g. small trucks, variable sized containers, valet services, etc.) Demand for different services in a competitive environment may help spur innovation over time 	 Cities have more control over collection operations—can set requirements like data tracking, vehicle fleet, education, special event recycling, etc. Potential for reduced traffic and air pollution as collections routes are consolidated Potential for lower recycling cost as cities have more negotiating power with large agreements 	
DISADVANTAGES	 Can result in non-uniform collection of material types from property to property if not addressed by Ordinance Increased traffic and emissions on hauling routes as multiple companies overlap in collection Service costs are variable and might be higher for some businesses as they have less negotiating power compared with cities Cities have much less control in tracking tonnage data as recycling contracts are written between private entities (can be resolved through a Grant of Privileges system). 	 Businesses lose their choice in selecting a preferred hauler, or hauler-specific service (e.g. valet recycling) Haulers that do not win city contracts are shut out entirely, which can be harmful to small recycling businesses Bad contracts can result in cities locking in all commercial establishments for the term of the contract; these are typically long-term contracts, so much deliberation is needed to ensure success. 	

Exclusive Public-Private Recycling Agreements Need Key Provisions

Exclusive franchise agreements between cities and private solid waste and recycling haulers grant exclusive rights to managing and hauling discards from commercial establishments in a given city or sometimes a specific city district. When these agreements are awarded to a contractor, only that contractor is permitted to manage and haul materials. Some cities will create non-exclusive franchise agreements that allow multiple haulers to collect materials; these non-exclusive agreements are often referred to as Grants of Privilege. In some cases, as in Fort Worth, commercial trash haulers must apply for a Grant of Privilege while recycling haulers do not have these requirements.

A typical exclusive franchise agreement or contract contains several fundamental parts:

- A grant of exclusive franchise for the company to haul recyclables and/or trash from certain commercial establishments;
- Specific responsibilities and requirements for the company, including equipment, collection frequency, type of service, whether service is optional or mandatory, and processing options for materials that are collected;
- A limited term for the agreement and optional term extensions or renewals;
- A list of common definitions between the two parties;
- · Fee structure and billing methods;
- Insurance and legal agreements.

For this report, 39 franchise agreements from cities with a larger population than 25,000 during last census in the Dallas-Fort Worth area were examined. Texas Campaign for the Environment Fund obtained these EFAs via individual public information requests. These contracts are available on TCE Fund's website for transparency and public research purposes.

In this section, we examine the differences in DFW exclusive franchise agreements and highlight key contractual components that make them more effective.

Universal Recycling Services

The first key component to ensure recycling access to all tenants and residents in commercial and multi-family properties is a requirement for franchisees to provide comprehensive recycling services. Only five cities in DFW have requirements for mandatory recycling services in multi-family properties, and currently there are no city contracts that require recycling services for all businesses. Cities with universal recycling services in multi-family properties are listed in the table on the following page.

The majority of franchise agreements examined in this report give exclusive, but optional, hauling rights for franchisees to collect recyclables from commercial and multi-family properties. Cities can choose to make recycling services available to all residents and businesses when they renegotiate or renew contracts. For example, the City of Lewisville signed an EFA with Waste Management that originally left recycling services optional for all multi-family prop-

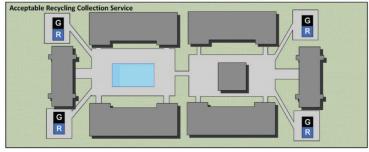
erties; two years later, the active agreement was amended so all properties would have both trash and recycling services.

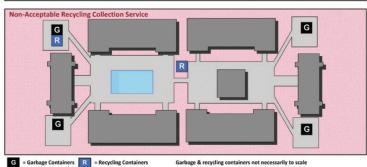
Adequate Capacity & Location for Recycling Containers

Exclusive Franchise Agreements can and should include very specific responsibilities and requirements for hauling companies with regard to the capacity and location for recycling and trash containers. Typically, there are different service requirements for single-family residential, multi-family residential, commercial, and institutional or public properties. It is critical for EFAs to include adequately-sized containers and frequency of collection for each type of property.

Some examples, including the cities of Allen and Euless, require a minimum number of containers and collection frequency for each apartment property, regardless of the number of housing units the property contains. This requirement may result in insufficient service—overflowing containers for example—for larger properties with more participating residents. It is better to set requirements that factor the property size or number of units, in cities or service areas that have a greater diversity in property size. Cities with smaller apartment complexes, like Bedford, include an option for wheeled recycling roll-carts. This can ease strain on properties that may not have enough space for large trucks and dumpsters on site. Finally, cities can require haulers to provide small recycling bins to each apartment unit, which can help encourage separation of recyclables and increase overall participation in the program. This was done in Cedar Hill, however, the extent to which these containers are provided to all residents is in question (see page 11).

At this time, there are no known requirements in DFW cities for the placement location of recycling containers relative to solid waste containers on commercial properties in DFW. However, numerous behavioral studies have found that placement of recycling bins adjacent to solid waste bins can greatly increase participation and





The City of San Antonio provides a diagram for proper recycling bin placement in multi-family complexes. ¹⁸ DFW cities lack these placement requirements.

Exclusive Public-Private Recycling Agreements Need Key Provisions

reduce contamination. ^{11 12 13} Recycling bin placement requirements were included in San Antonio's universal recycling ordinance, which states that bins must be "placed in an appropriate location, to make the disposal of recycling material as convenient as garbage material and which offers equal access opportunity to a recycling container as a garbage container for tenants of the properties." ¹⁴

Track Diversion Rates & Tons Collected

Almost all DFW cities have delegated solid waste and recycling collection for commercial and multi-family properties to private haulers. Since private haulers select their own collection routes, which sometimes combine multiple types of residential, commercial and public properties, tracking specific tonnages from each individual service area can be extremely difficult. Most commercial and multi-family recycling numbers are therefore based on estimates, which can sometimes be derived from sorting facility data or self-reported data from haulers.

One major advantage to EFAs is the opportunity cities have in tracking commercial and multi-family recycling data. In most cases, DFW cities have not included these provisions for haulers, and therefore, recycling data is still lacking. The most detailed tracking requirements for a commercial and multi-family recycling hauler was included in a 2014 EFA between the City of Lewisville and Waste Management. The agreement requires the franchisee to submit monthly reports that estimate tons of recyclables collected from multi-family and commercial properties separately. For multi-family properties, the Lewisville franchise agreement requires highly-specific data: "including multi-family complex customer names, addresses, number of containers provided, and total estimated volume or weight of recyclables collected at each location." In theory, cities with granular tracking data from each multi-family complex can measure average recycling rates per household and target recycling education even more accurately than most single-family residential programs. While the City of Lewisville has the most robust multi-family recycling data in the region, tracking apartment-specific data is not enforced and monthly diversion totals may not be as accurate as intended (see chart on page 9).

Contamination Thresholds & Processing Materials

Recycling contamination is a growing issue in single-stream recycling programs, especially with increased volatility in commodity prices and new standards for exporting recyclables to China. Multi-family recycling programs are sometimes reported to contain higher levels of contamination compared with other single-stream recycling sources. Therefore, Exclusive Franchise Agreements should address contamination thresholds, processing, and reporting requirements for franchisees to maximize recyclable material is sent to end-market processors.

The City of Euless EFA, for example, specifies procedures for the franchisee when recycling contamination exceeds a maximum of 10% of total weight. On the first instance of high-contamination, the franchisee is supposed to contact the property manager about the issue; on the second instance, if within 30 days, the contractor can notify the manager and city officials with a detailed report of issues; and on the third instance, if within six months, the contractor can charge a fee and send for the material to be collected as garbage. This procedure holds accountable the property manager, apartment residents, and the franchisee to ensuring that materials are properly recycled and processed. However, cities should be cognizant that recycling contamination can often exceed thresholds as low as 10-15%. All parties should work to reduce contamination through contractual accountability and proper recycling education programs.

The City of Plano EFA, which applies only to single-family residential properties, has a maximum contamination threshold of 15%. If the contractor suspects a load of recyclables exceeds this threshold, a city employee must be called to inspect the materials. If parties are unable to resolve a disputed instance of contamination, the city employee may choose to have the materials sorted and weighed before determining which party is responsible for paying for disposal.

Some EFAs do not contain specific language in order to ensure that collected recyclables are processed at recycling facilities. The City of Carrollton EFA, for example, allows for the franchisee to determine the "marketability" of recycled materials and permits disposal "when no reasonable commercial market exists." The franchisee

Key Provisions in Successful Public-Private Recycling Agreements				
Universal Recycling Services	Adequate Capacity & Location for Recycling Containers	Track Diversion Rates & Tons Collected	Contamination Thresholds & Processing Requirements for Materials	Public Education & Outreach
Require that <i>all</i> properties of a certain type (e.g. Multi-family properties) have recycling services.	Set appropriate requirements for the proper volume and placement of recycling dumpsters for each property. For example, trash containers similar in size and capacity to recycling containers.	Require hauler to report tonnages from trash and recycling containers. Include specific requirements to separate these numbers for residential, multi-family and commercial.	Require haulers to recycle materials through a processor with a contamination rate that is based on current or anticipated quality. Setting this threshold too low may allow haulers to discard recyclables even if a processor might still accept them.	Require an adequate fee for haulers to provide public education on how to recycle correctly and promote the program.
Examples include: Allen, Lewisville, Cedar Hill, Euless, Little Elm	Examples include: Lewisville, Cedar Hill, Bedford	Examples include: Lewisville, Desoto, Keller	Examples include: Plano, Carrollton, Euless, Cedar Hill	Examples include: Plano, Allen, Lewisville, Carrollton, Cedar Hill

Exclusive Public-Private Recycling Agreements Need Key Provisions

must notify the city before materials are disposed, but otherwise the company reserves the right to add or remove materials based on market conditions and other factors. The City of Cedar Hill EFA contains similar language about marketability but requires mutual agreement from both parties before adding or removing recyclable materials from an approved list.

The importance of provisions for holding haulers accountable to properly recycle materials was made clear in February 2016, when an internal audit found that Waste Management had improperly landfilled 19% of recyclable material that was collected from 14 North Texas cities and suburbs over the course of one year. Waste Management reimbursed most cities the cost difference between recycling and landfilling those materials within a few months, but little disciplinary action was taken beyond this.

Public trust in recycling programs is essential to continued participation and success. As much as possible, cities should define a list of accepted recyclable materials, how and when certain materials can be added or deleted, how franchisees manage and process recyclable materials, and how cities can hold franchisees accountable.

Public Education & Outreach

Responsibility for providing education on recycling programs is often shared by cities and franchisees in their EFAs. The most basic education requirements for franchisees include providing proper signage on recycling containers, a list of acceptable recyclable materials, and funding for the occasional distribution of promotional materials to encourage participation. More comprehensive education requirements can include:

Funding, directing, or coordinating education at schools, civic

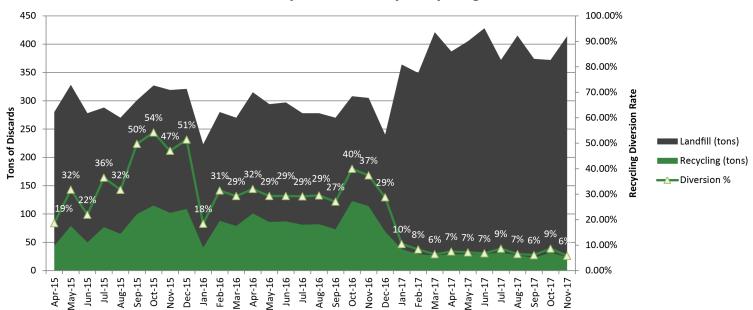
organizations, city-sponsored events, and apartments

- Providing publicly-available resources for reducing waste and proper recycling, including online and local publications.
- Sponsoring and providing services to city-sponsored sustainability or zero waste events
- Regular meetings with city officials to develop or refine the implementation of services, promotional programs, and public relations
- Funding for additional city staff to oversee education campaigns and recycling promotion

Cities like Allen, Plano, Lewisville, and Carrollton have requirements for some or all of the more comprehensive programs listed above. DFW cities with more comprehensive education programs require franchisees to pay between \$35,000 and \$86,000, while cities with less adequate education programs will charge significantly less. Allen, Plano, and Frisco have all won numerous awards and recognition for sustainability and zero waste events that were facilitated through comprehensive education resources provided in part by franchised haulers.

The Allen USA Celebration is recognized as the largest annual zero waste event in North Texas. The city's franchised recycling hauler, Community Waste Disposal, sponsors the event by providing compostable serveware for food vendors as well as trash, recycling and composting collection depots. Preventing contamination while maximizing diversion at public events can be very difficult, so the City of Allen, CWD, and other partners work together to enlist volunteers and educate up to 200,000 annual visitors about proper diversion. The event has averaged a 90% landfill diversion rate since 2008.¹⁷

Lewisville Monthly Multi-Family Recycling Diversion Data



This chart illustrates the recycling diversion data from multi-family properties in Lewisville from April 2014 - November 2017. Lewisville has the most detailed recycling data on multi-family properties in the region, because it requires tonnage tracking in its EFA. A significant drop in diversion can be observed over the last year. This may be the result of the franchisee using a different tracking methodology. More information is needed to understand this trend.

Exclusive Franchise Agreements Can Inhibit Small Recycling Haulers

One of the strongest arguments against exclusive franchise agreements is that small recycling businesses are unable to compete for large city contracts. In the DFW region, this argument holds up to available evidence.

Texas Campaign for the Environment Fund requested franchise agreement contracts from the largest 42 cities in DFW (based on 2010 census data). Three cities, Mesquite, Mansfield, and Wylie, did not provide contracts in time for this study. Twenty-eight cities had exclusive franchise agreements for trash collection in non-residential commercial properties, while 11 cities did not have exclusive franchise agreements for commercial hauling.

All but one of the 28 cities that gave exclusive rights to haul trash from non-residential commercial properties awarded contracts to the four largest hauling companies in the region; 31 out of 32 of the surveyed cities with exclusive hauling for single-family residential properties awarded contracts to the same four companies.

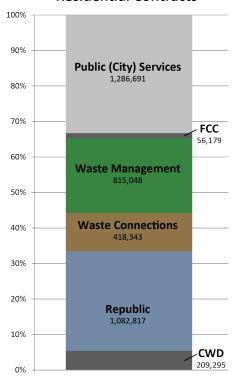
The table and chart below illustrate the consolidation of hauling rights via exclusive franchising in these cities. City officials should carefully consider the impact on small hauling companies when determining whether or how to award franchise agreements.

Cities could mitigate the negative affects of this market consolidation by considering different franchise hauling systems. A zoned franchise hauling system (discussed in detail on pages 12-13) allows multiple franchisees to be awarded a individual collection zones or districts. A Grant of Privileges franchise system is a non-exclusive hauling model that grants hauling rights to multiple franchisees, through a permitting-like process. Grant of Privileges systems are used by a handful of cities in the region for landfill hauling. The City of Forth is considering expanding their Grant of Privileges system to include commercial recycling haulers in the near future.

		P	
City	Est. Population (2017)	Residential Landfill Hauling	Commercial Landfill Hauling
Lewisville	94,568	Waste Management	Waste Management
Cedar Hill	46,599	Waste Management	Waste Management
Carrollton	129,510	Waste Management	Open Market
Fort Worth	790,194	Waste Management	Grant of Privileges
McKinney	165,524	Waste Connections	Waste Connections
Frisco	160,341	Waste Connections	Waste Connections
Haltom City	41,420	Waste Connections	Waste Connections
Waxahachie	32,426	Waste Connections	Waste Connections
Greenville	25,346	Waste Connections	Waste Connections
Saginaw	21,236	Waste Connections	Waste Connections
Burleson	42,279	Waste Connections	Open Market
Cleburne	27,177	City service	Waste Connections
Euless	54,560	Republic	Republic
Arlington	373,354	Republic	Republic
Plano	272,126	Republic	Republic
Grand Prairie	181,591	Republic	Republic
Flower Mound	70,396	Republic	Republic
North Richland Hills	66,074	Republic	Republic
DeSoto	50,756	Republic	Republic
Bedford	48,129	Republic	Republic
Grapevine	47,953	Republic	Republic
The Colony	40,940	Republic	Republic
Rockwall	40,693	Republic	Republic
Coppell	40,083	Republic	Republic
Duncanville	39,036	Republic	Republic
Hurst	37,812	Republic	Republic
Southlake	28,130	Republic	Grant of Privileges
Rowlett	57,187	FCC	FCC
Allen	95,018	CWD	CWD
Keller	43,794	CWD	CWD
Lancaster	37,150	CWD	CWD
Little Elm	35,414	CWD	CWD
Farmers Branch	31,164	CWD	Grant of Privileges
Dallas	1,230,736	City service	Open Market
Richardson	106,472	City service	Open Market
Garland	232,774	City service	Grant of Privileges
Irving	229,251	City service	Grant of Privileges
Weatherford	26,165	City service	Grant of Privileges
Denton	112,772	City service	City service

This table shows the single-family residential and non-residential commercial landfill (trash) hauling agreements in 39 cities that were examined in this report. Thirty-two cities use only 5 private haulers for single-family residential properties. Five cities in the region use a Grant of Privileges system for hauling commercial landfill materials.

Population Covered by Exclusive Residential Contracts



This chart illustrates the share of single-family residential populations covered by public and private haulers. Roughly 65% of single-family residents in DFW are serviced by four major haulers.

Survey of Multi-Family Residents in Cities with Franchised Recycling

In order to determine the effectiveness of exclusive franchise agreements in DFW cities, Texas Campaign for the Environment Fund (TCE Fund) conducted door-to-door surveys in apartment complexes in Lewisville, Allen, and Cedar Hill. All three cities have comprehensive recycling for all multi-family properties. TCE Fund staff members were trained and instructed to ask specific survey questions of apartment residents and record results in digital survey forms. Approximately 100 survey results were recorded from apartment communities in each of the three cities. A full list of survey questions and multiple-choice answers can be found in **Appendix A**.

The chart below illustrates when these three cities began comprehensive recycling services in all apartments.¹⁹ The Cities of Little Elm and Euless have similar requirements for franchisees to collect recyclables from multi-family properties, but these cities were not included in the survey.

Allen	Lewisville	Cedar Hill
	Franchisee	
CWD	WASTE MANAGEMENT	WASTE MANAGEMENT
	Program Began	
2004	2015	2013

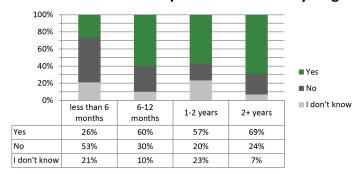
Each survey respondent was first asked how long they lived in their apartment complex. About half of surveyed respondents said they lived in the community for less than one year. Respondents then answered a question about their knowledge of a recycling program in the apartment community. As illustrated in the charts (right), the longer a resident lived in the community the more likely they were to know about the recycling program. However, despite all three cities' franchise agreements containing language that franchisees must help provide education on recycling programs, many residents indicated that they had not received notification that there was a recycling program in the apartment community. Less than half of all respondents were aware of the recycling program in their community, even those who had lived in Cedar Hill apartments for more than two years.

When apartment residents were asked about recycling convenience, about half responded that the service was convenient to them. Lewisville respondents ranked recycling convenience the highest, while rankings in Cedar Hill were only marginally higher than Allen (see chart on page 12). TCE Fund originally hypothesized that Cedar Hill would rank highest for convenience and participation, since the city's franchise agreement requires Waste Management to provide individual recycling containers for each apartment unit. However, a handful of respondents commented that they either no longer had the provided recycling container or that they

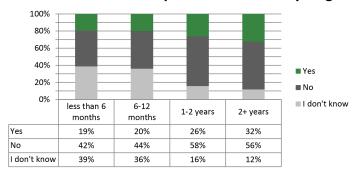
Allen: Does Your Apartment Offer Recycling?



Lewisville: Does Your Apartment Offer Recycling?



Cedar Hill: Does Your Apartment Offer Recycling?

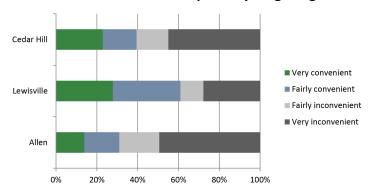


never received one. A Waste Management representative told TCE Fund that the city has a responsibility to notify when additional containers are needed. It may be the case that many apartment residents in Cedar Hill who should be guaranteed 18-gallon recycling containers are not receiving them due to a lack of enforcement of this component of the franchise agreement.

Of respondents who knew about the recycling program in their apartment community, 78% said they recycled at least sometimes. One-fourth of those who said they recycled claimed they "always recycle as much as possible," while another third of them claimed they "recycle most of the time." This data largely agrees with another study conducted for TCE Fund in 2016 that found an overwhelming majority (95%) of Dallas apartment dwellers with on-site access to recycling claimed to participate in the program.

Survey of Multi-Family Residents in Cities with Franchised Recycling

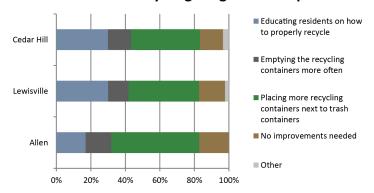
How Convenient is Your Apt. Recycling Program?



Finally, surveyed respondents who knew about the recycling program in their community were asked to select from a multiple choice list one or more reasons for how the apartment recycling program could be improved. In each city, less than 20% of respondents answered with "No improvements needed." A large amount of those who believed no improvements were needed also said they received notification about the program, the program was convenient to them, and they recycled at least most of the time.

In Allen, 51% of respondents claimed the recycling service could be improved by "Placing more recycling containers next to trash containers." This response was selected by about 40% of respondents in both Lewisville and Cedar Hill. All three cities have EFAs that do not mention specific placement requirements for recycling containers. In order to improve recycling awareness and reduce contamination, these cities could amend their contracts to provide

How Can Your Recycling Program Be Improved?



for additional recycling containers near solid waste containers.

The second most common response from all three surveyed cities was "Educating residents on how to recycle properly; keep trash out." This is another key provision recommended for all EFAs in this report. Each of these cities include some provisions for franchisees to provide education resources to residents. However, a vast majority of respondents in these cities did not recall receiving notification about their apartment's recycling program. Cities with EFAs that provide comprehensive recycling to multi-family residents should consider working more closely with franchisees to ensure education programs are effective and consistent. The City of Carrollton, for example, included frequent meetings with the franchisee throughout the EFA term to make improvements and adjustments to outreach and education.

Zoned Franchise Agreements in Cities Outside Texas

Zoned franchise agreements—another type of EFA in which contractors are assigned to specific areas of the city, or exclusive zones—are gaining popularity, particularly in large municipalities in the U.S. Exclusive commercial and residential collection zones have been shown to bolster recycling participation, while reducing air pollution, traffic and wear and tear on roads.

The key environmental benefit of these agreements arises from consolidating hauling routes, in which only one franchised hauler is collecting from each zone. This greatly reduces inefficiencies in fuel consumption, air and noise pollution, and labor associated with multiple haulers that have overlapping routes. Furthermore, since zoned agreements allow for multiple haulers to be awarded collection zones, smaller companies are given a more competitive edge compared with the all-or-nothing citywide exclusive franchise agreements.

Several major cities along the West Coast of the U.S. have implemented zoned franchise agreements for solid waste and recycling services, such as Seattle, WA; San Jose CA; and Portland, OR.²⁰

After years of organizing by the labor-community coalition, *Don't Waste LA*, the Los Angeles City Council finalized the adoption of the

Zero Waste LA Franchise System and their zoned system started to go into effect in July 2017. Zero Waste LA is expected to divert 90% of discards from landfills by 2025—one million tons on an annual basis. In addition, Zero Waste LA will generate an estimated \$200 million in new infrastructure investment, and they will create a prioritization of food recovery for needy families. All Los Angeles residents and businesses will have access to recycling, expanded compost collection, and improved job quality for industry workers. The haulers have requirements to submit tonnage reports by discard stream and their destination facilities. Those facilities must be certified by the city sanitation department and must also submit monthly reports.²¹

Following in the path established by recycling advocates in Los Angeles, a new *Don't Waste Long Beach* coalition is pushing for zoned franchises in that Southern California city. One reason is that the road damage of one waste truck trip is equal to 9,300 trips by an SUV.²² In May 2017, by a unanimous vote, the Long Beach City Council approved a proposal to research ways to optimize how commercial discards are collected. The study is to prioritize truck route efficiency, impacts on the environment, worker health and safety, street and alley impacts and job development.²³

Zoned Franchise Agreements in Cities Outside Texas

In May 2017, the City of Boston presented of a Request for Proposals for a 9-month study of Zero Waste options which will include consideration of district franchises. At the time, Austin Blackmon, Boston's chief of energy, environment and open space said with regards to district franchises, "We want to look at everything that could potentially be effective." In November 2017, the city awarded the contract and announced the Chairs of Zero Waste Advisory Committee, which included Blackmon. This initiative is a part of Mayor Martin Walsh's climate action agenda. ²⁵

Route Inefficiencies of a Non-Exclusive Hauling System

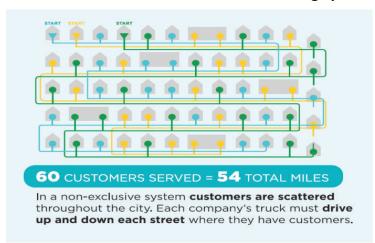


Diagram from 2013 LAANE study that illustrates the inefficiencies of collection routes that result from open market hauling policies. These inefficiencies can be mitigated with exclusive franchise agreements, including franchise district zones.

In New York City, the *Transform Don't Trash NYC* coalition has been pushing for zoned franchises to create good green jobs and improve the health of communities, especially that have been burdened by waste facilities and truck emissions. The Sanitation Department is looking to shift to zoned franchises in order to address climate change gases, truck traffic worker safety, and decreasing hauling costs for small businesses.²⁶ In November 2017, Sanitation Commissioner Kathryn Garcia defended the push for commercial waste zones because there are more than 100 haulers in the city that:

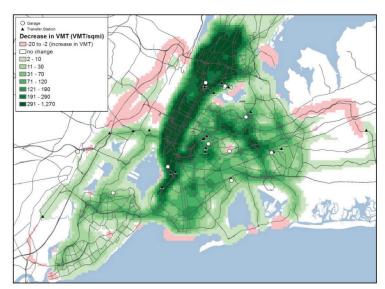
"[C]riss-cross the city nightly [which] creates excess noise, traffic and air pollution. It also risks lives: Three New Yorkers have been killed by private-carter trucks since April. While recycling has been required for decades, many carters have flouted these laws. And some trucks are more than 30 years old, lacking modern pollution controls. That's why we're working to create a truly fair and efficient system that benefits all businesses, large and small."²⁷

The route inefficiencies of the current hauling system described here are also illustrated in the diagram above, which was included in 2013 report by the Los Angeles Alliance for a New Economy.²⁸

A 2016 study funded the New York Department of Sanitation (DSNY) found that a zoned franchise collection system would result in servicing 8.7 times more businesses in the same distance traveled as the current system, a reduction in hauling vehicle miles traveled (VMT) by 49 to 68 percent, and emissions reductions between

32 and 64 percent for various pollutants. Many of the pollutants tested, including carbon monoxide, particulate matter, nitrogen oxides, and VOCs, are associated with common respiratory illnesses. A subsequent report by *Transform Don't Trash NYC* noted that route inefficiencies in the current hauling system contribute to trucking "roughly three-quarters of the City's putrescible and construction/demolition solid waste through a handful of low-income communities and communities of color."²⁹

Critics of zoned franchise agreements share similar concerns with those critical of other exclusive franchise agreements. They argue that eliminating the open-market collection of discards hurts smaller hauling companies who are less likely to be awarded a large commercial hauling zone. Additionally, businesses that seek hauling services lose the ability to choose their preferred hauler, which may lead to an inferior service at a higher price.³⁰



Map from 2016 DSNY study that illustrates a large reduction in annual vehicular miles traveled (VMT) as a result of a theoretical franchise zoning model. The study highlights environmental benefits that would result from reduced truck traffic.

NYC Study: Estimated Pollutant Reduction Benefits from a Zoned Franchise Agreement Model

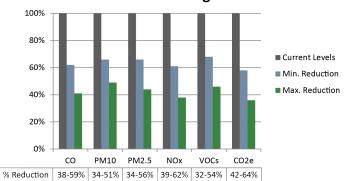


Chart derived from 2016 DSNY study that illustrates the estimated pollutant reduction from a zoned franchise agreement. Compared with current pollution data, franchise zoning would greatly reduce GHGs emissions and other harmful pollutants.

Best Case Scenario: Expand Recycling to One Million DFW Residents

In order to illustrate the potential for multi-family recycling expansion in DFW, TCE Fund compiled data from municipal franchise agreements, recycling ordinances, and census population data. Additional data provided by the North Central Texas Council of Governments (NCTCOG) was used to determine multi-family population estimates in each DFW city. It should be noted that these numbers are based on a population growth model that uses 2010 census data, and these numbers may not accurately reflect the recent boom in multi-family housing construction in the region. Cities with a total population less than 25,000 during the 2010 census were excluded from this scenario. We estimate the number of multi-family residents that will benefit from this best case scenario is conservative, but reflects the most recent available data.

At present only five DFW cities have exclusive franchise agreements that call for universal recycling in all multi-family properties. Only one city, Fort Worth, has a universal recycling ordinance that achieves similar recycling service coverage for all multi-family properties. Of the remaining cities, 26 municipalities were found that do not guarantee recycling for multi-family properties and either have contracts that expire within two years or are not bound by existing contracts or agreements. If these 26 cities decided to make multi-family recycling universal within the next two years, approximately 1,052,868 additional residents would be guaranteed recycling services in DFW. The overwhelming majority of these residents live in 16 cities that can implement universal multi-family recycling immediately, which would cover approximately 933,379 residents.

Key DFW Cities That Could Quickly Provide for Universal Recycling

CITY NAME	Total Population (2017 est.)	Multi-family Pop. (2017 est.)	% Multi-family Pop.
Dallas	1,230,736	470,020	38.19%
Arlington	373,354	105,764	28.33%
Plano	272,126	60,743	22.32%
Garland	232,774	40,708	17.49%
Irving	229,251	108,094	47.15%
Grand Prairie	181,591	33,792	18.61%
McKinney	165,524	26,962	16.29%
Frisco	160,341	21,230	13.24%
Carrollton	129,510	39,683	30.64%
Denton	112,772	23,357	20.71%
Richardson	106,472	28,300	26.58%
Flower Mound	70,396	3,794	5.39%
North Richland Hills	66,074	12,469	18.87%
Bedford	48,129	14,429	29.98%
Keller	43,794	4,370	9.98%
Haltom City	41,420	8,341	20.14%
The Colony	40,940	9,705	23.71%
Rockwall	40,693	3,193	7.85%
Coppell	40,083	5,494	13.71%
Duncanville	39,036	5,151	13.20%
Hurst	37,812	8,820	23.33%
Farmers Branch	31,164	8,175	26.23%
Southlake	28,130	187	0.66%
Weatherford	26,165	3,770	14.41%
Greenville	25,346	5,212	20.56%
Saginaw	21,236	1,105	5.20%
	3,794,869	1,052,868	19.72%

If these 26 cities decided to make multi-family recycling universal within the next two years, approximately 1,052,868 additional residents would be guaranteed recycling services in DFW

Recommendations

Regional and national research indicates that for many years cities have worked to address the collection of solid waste and recyclables through exclusive franchise agreements (EFAs). These agreements were first widely adopted in cities that had no other means to provide discard collection services to residents and businesses, but they are becoming more popular in cities that are seeking a greater range of services in multi-family properties, including universal recycling. Five cities in DFW-Allen, Lewisville, Cedar Hill, Euless, and Little Elm—have exclusive franchise agreements that call for universal recycling access in multi-family properties. This report has compared the two most popular options—universal recycling ordinances and exclusive franchise agreements—for municipalities to ensure that all residents have access to convenient recycling services.

We determined that the efficacy of either method of providing universal recycling access to multi-family properties is predicated on specific language and requirements outlined in each respective ordinance or franchise agreement. There is a great deal of variability in the franchise agreements and ordinances examined by this report. While we determined that key provisions were needed in EFAs to enhance awareness and increase participation in recycling programs, sometimes these provisions have gone unenforced. Data from TCE Fund's apartment recycling survey indicated that many residents in Allen, Lewisville, and Cedar Hill are not properly educated about the recycling programs in their apartments. Since cities are poised to enforce these agreements for all affected prop-

erties, it is critical that city staff, property managers, and franchisees establish frequent communication and systems of accountability to optimize the use of waste diversion services. This is also true for cities with open market universal recycling ordinances. More research could be done to determine why certain provisions of DFW franchise agreements, like education and outreach, are not being enforced.

City officials who are seeking to provide universal recycling services to multi-family and commercial properties should weigh the advantages and disadvantages of different commercial hauling systems examined in this report. Different geographies, property demographics, commercial hauling options, political views, and many other factors unique to each municipality should be considered. Cities have the opportunity to borrow elements from both EFAs and UROs to resolve concerns with either system. For example, a city may choose to implement an open-market universal recycling ordinance and require prospective haulers to register and follow certain rules as a franchised hauler. This "Grant of Privileges" franchising process may include requirements for tracking tons, providing education, and contributing to the city's efforts to reduce waste, while also ensuring that smaller hauling companies remain competitive.

All exclusive franchise agreements examined by this study, as well as links to universal recycling ordinances, were obtained by open records requests and can be found on Texas Campaign for the Environment Fund's website as an external resource to this report. These are provided for transparency and policy research purposes.

Acknowledgements

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