



Case Study Research

Solid Waste Master Plan

Task 7

Pinellas County, Florida
May 2019

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1 Explore additional means to extend the useful life of the existing owned property

1.1 Case Study Subject Community: Berkeley, California

General Description

The City of Berkeley (the City) is located in Northern California. It has a population of 122,324 (2017, US Census) with approximately 45,515 households.

The City provides the residential and commercial sectors with collection of dual stream recycling, refuse, and organics. Single family homes and multi-unit buildings up to four units are provided with one bulky waste pickup annually.

The City owns and operates a transfer station that accepts:

- Compostables
- Mixed construction & demolition debris
- Appliances, mattresses, tires
- E-waste (at the nearby Alameda County Computer Resource Center)
- Motor oil and oil filters

The City actively promotes the Berkeley Recycling Community Conservation Centers (CCC) and Urban Ore as a way to reuse or recycle materials on its website. Urban Ore Inc. contracts with the City for exclusive salvage rights of reusable materials from the City's transfer station tip floor. Urban Ore has space at the transfer station to store material and a vehicle which transports the salvaged material to Urban Ore's retail location, Eco Park, in South Berkeley. The remainder of this document focuses on Urban Ore and its role with the City.

Background

The City's Solid Waste Management Plan (1976) called for salvaging for reuse at the City-owned landfill. About 400 vehicles self-hauled materials to the landfill daily, and materials were salvaged by a non-profit organization (Bay Cities Resource Recovery Depot) which eventually went bankrupt. Upon this organization's bankruptcy, Urban Ore was established in 1980 near the City's landfill to fulfill a similar role. In 1983, the landfill was closed and operations moved to the transfer station.

Since then, Urban Ore has played a role in the City meeting its waste reduction targets. The City developed Eco Park with Urban Ore as a key tenant. The Eco Park was intended to serve as a model for other eco-industrial parks to reduce landfill costs and meet state mandates on waste reduction. The City originally provided a sales location that was rent-free until a certain sales threshold was met. Once the store was able to afford commercial rent, the Urban Ore facility was moved to a warehouse location where it stayed until 2002 upon moving to its current location.



Methodology

Urban Ore staff collect materials from the tipping floor at the City's transfer station deemed reusable. The City provides space for storage of material and a vehicle to transport salvaged material to Urban Ore's warehouse.

Urban Ore also collects materials and accepts donations from the public and businesses. The store is organized into two areas: a 30,000 sq. ft. warehouse housing the General Store (gallery, arts & media, hardware and cabinets) and the 2.5 acres housing the Building Materials Exchange (stored outdoors).

Performance

Urban Ore estimates approximately 7,000 tons of materials are reused every year of which about 12 percent comes from the City's tipping floor. Urban Ore salvages an average of 70 tons of reusable materials each month from the City's transfer station.

Impacts on Tonnage and Diversion/Recycling

The amount of material managed through Urban Ore's efforts does not make a significant contribution towards the City's recycling rate, but does help with its goal of zero waste. Less than one percent of the City's waste is diverted by Urban Ore.

Operation and Cost Impacts

Initially, the City paid Urban Ore a fee for all materials recovered, which was still less than the cost of hauling materials to the landfill and tipping fees. In 2012, the City negotiated a new agreement which eliminated revenue. The City receives a tipping fee for materials self-hauled to the transfer station and avoids the cost of disposing of materials salvaged by Urban Ore.

The City is currently looking into options for its current transfer station which is outdated and over capacity with consideration for recycling, trash, compost, and other salvageable materials.

Various sources cite earnings in the millions for Urban Ore through sales of materials. Urban Ore is a for-profit organization that provides income sharing and profit sharing opportunities to its employees and pays a living wage to its 30-plus employees.

Customer Convenience Issues and Benefits

Having a reuse center housed in a convenient location allows customers to shop for multiple types of materials which would otherwise be sent to a landfill. It allows goods to be sold at lower prices, compared to retail, and can benefit those with lower incomes and people who enjoy buying used goods. Diversion of goods can provide greater contributions to the economy as compared to disposal.

Program Design and Implementation Considerations for Pinellas County

It is anticipated that this particular model will be difficult for Pinellas County to replicate. The original model grew from a vision of some very dedicated residents with a passion for the environment. The Urban Ore facility is a unique establishment due to its sheer size and business model.

The County would need to allow scavenging on the tipping floor or a designated space in order to make this particular model work. In this day and age, there is heightened sensitivity

to health and safety issues associated with scavenging from a tipping floor at a transfer station. The County would need to identify an organization to scavenge, transport, and manage materials scavenged from the MINI or an alternate location.

A more common model is for municipalities to construct a small facility to house reusable materials that can be dropped off by residents at a transfer station or recycling center. These are often run by non-profit agencies and can provide valuable job skill/learning opportunities for workers. This keeps material cleaner and items with good resale value can be selected from those materials dropped off.

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1.2 Case Study Subject Community: Simcoe County, Ontario, Canada

General Description

Simcoe County (the County) is a community in Ontario, Canada with a population of approximately 305,000. Simcoe County provides a comprehensive suite of solid waste management services to the residential and small commercial sectors with curbside collection of garbage, recyclables, organics, leaf and yard waste, and bulky waste. Additional opportunities for diversion and disposal are located at various County waste management facilities. The County is responsible for a geographic area covering 1,800 acres and had, at one time, 17 landfills located throughout the County to manage waste. Only four landfills are currently operational, with the remainder closed and/or serving as drop-off facilities only. One of the four landfills is almost at capacity and will close shortly. The County exports a portion of waste to a disposal facility in Ontario.

Background

About ten years ago, the County had planned to develop a new landfill but shelved plans after public protest. The County has put a concerted effort into waste diversion to minimize waste disposal, and currently diverts 60.7 percent of residential waste from disposal (2016). The County has also taken proactive steps to preserve landfill space through a shredding program. This allows for greater compaction and landfill density, and most importantly to this municipality, conservation of landfill airspace.

Methodology

In 2012, the County commissioned a trial to determine the cost/benefit analysis of purchasing a shredder to extend landfill life. In 2013, the County purchased a Doppstadt 3060K shredder and associated equipment and hired an equipment operator. Depending on the equipment used and the material composition, 50 to 100 tons per hour throughput is not uncommon. Certain materials can be problematic such as large steel members and concrete when compared to furniture and mattresses.

The shredder is located at one of the larger remaining landfills. Material is transported to the site and fed into the shredder using a tracked excavator. Processed material is loaded into an articulating dump truck, transported to the active landfill cell and compacted into the landfill.

Performance

Shredding was estimated to increase density by 47 percent (since the last full year without shredding), adding approximately four years of life to the landfill and avoiding waste export disposal costs. The County continues to use the shredder as it has demonstrated beneficial results.

Impacts on Tonnage and Diversion/Recycling

This option does not contribute towards diversion or recycling but rather is a methodology to increase the efficiency of the use of airspace at a landfill.

Operation and Cost Impacts

While there are annual operation and maintenance costs associated with the grinding/shredding of waste, they are offset by the significant costs of locating new disposal capacity and exporting garbage to an outside facility.

Customer Convenience Issues and Benefits

This option does not affect customers so there are no issues or benefits.

Program Design and Implementation Considerations for Pinellas County

Bulky materials are difficult to manage at both waste to energy (WTE) facilities and landfills. Items such as furniture and mattresses are awkward to manage and, in a landfill, do not compact well and consume valuable airspace. Recycling or deconstruction of these materials is also difficult and expensive, and at this time in Florida there are limited facilities that can undertake these activities at a reasonable cost. Some states are developing mattress recycling programs, some as part of stewardship programs; however, that does not appear to be a near term solution in Florida.

Pinellas County typically manages bulky waste at its landfill; however, as described above, these items are consuming valuable airspace. For a standalone operation, capital costs for a basic shredder with ferrous metal separation are in the order of \$1.1 to \$1.2 million. Should further processing be required, screens, density separation, non-ferrous separation etc. can be added at a cost in the order of \$300,000 to \$500,000 each, plus the required conveyors. If secondary shredding of the clean wood fraction is desired, additional equipment in the order of \$800,000 to \$1.6 million would be required, depending on the volume of wood and final size required.

Pinellas County is familiar with shredders at their current waste tire processing area (operated by the County) and tub grinders at their yard waste processing area (contract operation). With the processing of bulky waste, the potential for contaminants that can cause damage to equipment increases. Bulky waste and some of the materials received may have properties and components such as wire that when not shredded become a nuisance due to wrapping around shears and drive shafts which can cause significant damage if not addressed regularly. Wear on knives is expected to increase as well as overall maintenance. Concrete and steel such as structural members and rebar are also problematic and need to be removed unless the shredder is designed appropriately.

At this time, it is difficult to estimate the throughput the County may require, but based on a throughput of 35 tons per hour, two to three workers per shift would be required. Fuel costs would depend on the throughput. Onsite electrical could offset fuel use and the operations could be contracted under a similar arrangement as the tub grinding operation. Terms and conditions would need to account for a variable input stream and potential liabilities with problematic materials and inadvertent hazardous materials in the waste stream.

Unlike Simcoe County, Pinellas County can direct the size reduced bulky waste to the tip floor for transfer to the WTE facility for processing. By reducing the overall size of bulky waste materials, they could easily be loaded into the feed chute hoppers. The combustion process serves as waste reduction yielding significantly less volume than the pre or post shredded materials but would not be achieved without shredding.



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2 Organize collection services in unincorporated area using exclusive franchise/service contract

2.1 Case Study Subject Community: Hillsborough County, FL

General Description

Residents in the Pinellas County unincorporated area (outside of the Lealman MSBU) are currently provided collection services on an open market subscription basis by selecting from one of eight currently licensed haulers in the County. As an alternative to hiring a licensed hauler to provide curbside collection, residents may self-haul to the Disposal Complex and bring recyclables to the many drop off locations around the County, including the solid waste Disposal Complex. Commercial collection is handled in the open market, where businesses select their own hauler, without any direct involvement from the County.

Solid waste collection services similarly evolved in the counties of Hillsborough, Pasco, and Pinellas starting in the 1940s and 1950s, where private haulers established businesses to offer solid waste collection service to customers without direct oversight or involvement on the part of the counties. Hillsborough County was chosen for this case study because of its very similar beginnings to Pinellas County, and for its lessons learned for how Pinellas County could choose to evolve its collection services in its unincorporated area. To understand the evolution and lessons learned, a brief history of Hillsborough County collection follows.

Background

During the 1960s and 1970s, the open market approach turned into defined geographic areas for each of five private haulers, essentially defined by the private haulers, and not Hillsborough County.

In 1971, Hillsborough County adopted an ordinance empowering the Board of County Commissioners (BOCC) to issue exclusive and non-exclusive franchises for solid waste collection in the unincorporated area of the County, and to fix rates for service; prescribing the duties and obligations of franchise holders; and regulating the accumulation removal and sanitary disposition of solid waste. This change essentially meant that Hillsborough County mandated solid waste collection for the five haulers in these specified franchise areas. This change was motivated in part because homes were disposing of garbage in an unspecified manner, such as illegal dumping. However, exemptions could be requested by customers to avoid paying the private hauler, and instead self-haul to the disposal location. This change in 1971 meant that Hillsborough County staff provided oversight of the franchised haulers and responded to customer complaints; however, while the County set maximum rates for service, customers still paid the hauler directly for collection and disposal. Customers could request and receive an exemption from collection services, and many did, avoiding paying the private hauler directly, and instead paying at the disposal site.

Throughout the late 1970s and early 1980s, rate disputes occurred when several thousand, primarily rural residents who preferred only once per week collection, dropped collection

services with the franchised hauler because the ordinance required service twice per week, and they believed they should not have to pay for more service than they needed. Concurrently, acquisition of smaller haulers by larger haulers began to contribute to the County Solid Waste staff's sense of the need to competitively procure collection services. Not only were some customers paying for more service than they wanted, but the lack of economies of scale with many customers opting for exemption led to the need for rate increases. (By 1978, the unincorporated areas of the County were served by five haulers in five distinct geographic areas. These areas, however, did not encompass the entire unincorporated area of the County).

By 1983, rates for the County's 76,000 residential customers increased from \$10.33 per month to \$11.13, while approximately 44,000 residents did not subscribe to collection services. The fees, which covered both collection and disposal costs, were still at the time paid by the customers to the haulers. For customers that self-hauled to the disposal site, disposal fees were paid at the disposal site.

In 1986, the method of paying for the disposal portion changed. The BOCC passed County Ordinance 85-20 that provided for the separation of collection and disposal fees, and the mandate that disposal fees for all residents in unincorporated Hillsborough County be placed on each resident's annual property tax bill as a separate service fee. This came as a surprise to many residents since the majority of people in the County had historically paid a franchised hauler for the collection and disposal of their solid waste. The franchised hauler would then remit to the County the disposal portion of the collection fee. Since people who did not subscribe to a franchise service and disposed of their own garbage also paid the disposal service fee on the County tax bill, these residents were no longer charged to dispose of their garbage at a County disposal facility.

During this change in the fee collection process, it was the opinion of some in the County that there was a need to competitively procure the collection areas, even with the disposal portion of fees being billed directly to customers, as the collection portion of the fees paid directly to the franchised haulers was still based on rates determined through negotiations with those haulers. A serious attempt to move the County to a competitively procured system where the lowest priced qualified haulers would be awarded the collection areas began in 1987. This attempt in 1987 failed, as did other attempts in 1988. (By 1988, the five areas were serviced by four haulers.)

In 1989 and 1990, the County began pilot testing curbside recycling collection. By September of 1990, the County approved expanding recycling services, which meant that nearly 132,000 households in unincorporated Hillsborough County would have curbside recycling by the fall of 1991. However, the County staff were directed to first attempt to negotiate rates for the added service with the haulers already holding franchises, and it was stipulated that the County could go through the competitive procurement process only if it failed to reach an agreement with the existing franchise holders. The County concluded that it received fair prices from the existing franchise holders, and a competitive procurement was still not approved by the BOCC.

In 1995, an additional attempt was made by County solid waste staff to competitively procure collection haulers; which was not immediately successful. However, in November of 1996, the BOCC approved a mandatory collection charge, and also approved competitively

procuring haulers. In a narrow four to three vote, Commissioners decided to levy a mandatory charge for trash collection on most residential property taxes, to begin in 1997. One Commissioner noted that abandoning the current system of letting residents choose between getting billed by a hauler for pickup or dropping off their trash at a County collection center should save \$1 million per year. Hillsborough County awarded contracts to three solid waste haulers, covering five County designated collection zones encompassing the entire unincorporated area, and providing exclusive rights to both residential and commercial garbage collection services to the selected haulers. By making these changes to the County's franchised solid waste collection system it was anticipated that Hillsborough consumers would save about 30 percent on their garbage bills, according to County estimates at the time. The haulers were awarded 7-year franchise agreements. (By 1996, the five zones were serviced by three haulers, since the County bids allowed that an individual hauler could win two of the collections zones.)

Since the first competitively procured 7-year term franchise agreements were awarded in 1996, the County extended the agreements once and increased rates four times without further competitive bidding of the franchise agreements again, until 2013. During the competitive procurement process in 2013, the County decided to make a substantial change to the service levels by requiring haulers to provide automated collection using carts.

Today, Hillsborough County continues to be divided into five County designated collection zones, which are served by three haulers. As was demonstrated during the 2013 procurement process, the County maintains control over service levels, which they can adjust as deemed necessary. In 2013, the County requested pricing on different frequencies of service for curbside recycling, and pricing to potentially add curbside bulk collection. (The County selected once per week recyclables collection and opted not to include bulk collection.) The procurement process allowed the County to make informed decisions about service levels. Minimum qualifications of proposers were also specified by the County and reviewed to ensure qualified haulers are providing the specific services the County stipulated in the procurement process. The County is assured of receiving competitive pricing due to the nature of the procurement process where price is one of the determining factors for selection, and the haulers are assured of the number of customers they will serve.

Methodology

- Prior to 1971, five private haulers, in an open market, organized five collection areas of unequal size; customers were not required to use their collection services. These areas did not encompass the entire unincorporated area.
- In 1971, the County officially established the five collection areas with the five private haulers and set maximum rates; customers could get an exemption from collection services and pay disposal fees directly at the disposal site.
- In 1986, the County implemented disposal fees on property tax bills; customers paid disposal fees through property taxes rather than through their private hauler or at the disposal site. The five areas were serviced by four private haulers.
- In 1996, the County implemented both collection and disposal fees on property taxes, and competitively procured collection services in five zones; customers could no longer be exempted from collection service and paid the County directly for both collection and disposal through property taxes. The five zones were serviced by three haulers and encompassed all of the unincorporated area.



Performance

- **Open market** (prior to 1971):
 - Private haulers saw the benefit of organizing into their own designated service areas for efficiency purposes and did so without official County approval or oversight.
 - Private haulers could not force residents to use their collection services.
 - The County could not control minimum specifications or service levels.
- **Exclusive franchise, not mandatory participation, hauler billing for collection and disposal.** County formally recognized the established collection areas, with customer exemptions allowed and haulers handling the billing (beginning in 1971):
 - The County could set minimum levels of service and maximum rates.
 - The County received, and resolved with haulers, customer complaints.
 - County did not mandate every resident participate, and many were exempted.
 - County did not directly handle billing of customers for collection or disposal.
- **Exclusive franchise, not mandatory participation, hauler billing only for collection.** County established disposal fees on property taxes (beginning in 1986):
 - County directly and efficiently receives disposal fees to equitably cover the cost of disposal activities.
 - Continued to have many residents exempted from collection service.
 - County did not directly handle billing of customers for collection.
- **Exclusive franchise, mandatory participation, County billing collection and disposal.** County implemented collection and disposal on property tax bills and competitively procured collection services in all five County established zones for the first time (beginning in 1996):
 - County directly and efficiently receives fees to equitably cover the cost of disposal activities.
 - County no longer allows exemptions, providing for better economies of scale for haulers.
 - Competitive pricing for customers.
 - County controls billing for collection and disposal.

Operation and Cost Impacts

The following table summarizes the administrative impacts of each of the three forms of providing collection services historically in Hillsborough County. Operational impacts are not applicable, as the County did not provide collection services with County personnel at any time in its history of collection services.

Table 1 Administrative impacts

Administrative Impacts	
Open market	<ul style="list-style-type: none"> • No administrative impacts for the County
Exclusive areas, without mandatory participation, without County billing	<ul style="list-style-type: none"> • County sets service levels and maximum rates • County handles customer service complaints • County regulates duties of the haulers
Exclusive zones, with mandatory participation, with County billing	<ul style="list-style-type: none"> • County sets service levels and rates • County handles customer service complaints • County regulates the duties of the haulers • County handles payment for collection service through property tax bills • County makes payments to hauler



Customer Convenience Issues and Benefits

The following table summarizes the customer convenience issues and benefits of each of the three forms of providing collection services in Hillsborough County.

Table 2 Customer convenience issues and benefits

	Issues (Disadvantages)	Benefits (Advantages)
Open Market	<ul style="list-style-type: none"> • Have to identify a hauler (or self-haul) • Prices may be higher due to lack of economies of scale • Potential for multiple collection vehicles on the same street 	<ul style="list-style-type: none"> • Choice of hauler • Choice in service levels • Choice to self-haul
Exclusive areas, without mandatory participation, without County billing	<ul style="list-style-type: none"> • No choice of hauler • Limited choice in service levels 	<ul style="list-style-type: none"> • Choice to self-haul • Potential for reduced number of collection vehicles on the same street
Exclusive zones, with mandatory participation, with County billing	<ul style="list-style-type: none"> • No choice to self-haul • No choice in hauler • Limited choice in service levels 	<ul style="list-style-type: none"> • Prices likely lower • Neighborhood aesthetics with uniform services for all customers, County-wide • Potential for reduced number of collection vehicles on the same street

Program Design and Implementation Considerations for Pinellas County

Considering the history of collection services in Hillsborough County, there are a number of applicable lessons learned to consider for the organization of collection services in the unincorporated area of Pinellas County.

- Negotiating with specific haulers for specific zones, without a competitive procurement process can lead to complaints from customers about a lack of choice and whether rates are competitive.
- Allowing for customers to receive exemptions from collection services negatively impacted by the economies of scale for efficient collection, which impacts rates. (Note that Pinellas County offers certain exemptions in the current Lealman MSBU franchised area, which while not a burden currently, could become a factor to consider revising if the County elects to franchise the entire unincorporated area.)
- County billing for collection services added administrative burdens, but also allowed for greater control over payments from residential customers. Commercial customers pay haulers directly due to the varied service levels and frequency, which is typical for commercial collection services.
- Hillsborough County waited nearly twenty years to repeat the competitive procurement process (from 1996 to 2013), which is not advisable as innovations in collection occurred during that time. Checking fair market value more often would allow the County to ensure competitive rates and take advantage of innovations more regularly. (Most procurement processes allow a local government to reject all bids if it

is deemed to be in the local government's best interest to do so. Pinellas County has this provision in its procurement process).

It should be noted that Florida Statute Chapter 403.70605, referred to as the "displacement law", which requires local governments to either provide three years notice or remit fifteen months gross receipts to any hauler being displaced by the actions of the local government, did not go into effect until after the 1996 competitive procurement in Hillsborough County. Further, at the time of this writing, the displacement law is being considered in the state legislature for revisions including extended the timeline of notice from three years to five years. The displacement law will need to be considered for Pinellas County.

Another consideration for Pinellas County is that Hillsborough County includes residential and commercial solid waste collection as part of the current exclusive franchise. Including residential and commercial solid waste collection together provides haulers with a larger customer base, which can improve prices. However, given the current eight licensed haulers in Pinellas County, keeping commercial collection in the open market may allow for more haulers to continue collecting in the County in some way, which may make a change to exclusive franchising more palatable for the current licensed haulers.

Hillsborough County is divided into five zones, which allows for more than one hauler to provide services. Multiple zones are another way that Pinellas County could continue to have multiple haulers operating in the unincorporated area. While initially, the five zones in Hillsborough County resulted from private haulers creating the unequal areas back in the 1960's, Pinellas County could be more deliberate in dividing the unincorporated county into multiple zones in such a way to allow for a greater number of haulers to meet minimum specifications for certain zones, thereby increasing competition. The specific number of zones would need to be analyzed to determine the appropriate balance of zones versus number of customers in each zone to reach economies of scale for best pricing.

Residential curbside recycling is included as part of the base services for which residents pay, which essentially makes recycling collection universal for the residential sector. Pinellas County could do the same with its exclusive franchises, should the County elect to exclusively franchise the unincorporated area. The procurement process could also be used to receive pricing on different service levels and style to allow the County to make informed decisions about the best service types, levels, and frequencies to include in the exclusive franchise(s).

Given the current situation in Pinellas County, the County may elect to move toward exclusive franchises over time. The first step could be to go from the current licensing procedure to a non-exclusive franchise system. Non-exclusive franchises would give the County more control than the current licensing system, but not as much control as exclusive franchises. Then, over time, the County could move to exclusive franchises, as the displacement law and local preferences allow.

3 Implement universal recycling ordinance for residential and commercial sectors

3.1 Case Study Subject Community: Lee County, FL

General Description

The focus of this case study centers on universal recycling in the business sector. While this could also be extended to the residential sector, this is more commonly approached as part of organizing franchised collection services and establishing a base service level that includes curbside recycling. This example demonstrates a participation based strategy and businesses are not required to recycle but must have services provided to allow for recycling at their business. Curbside collection of recyclables under an organized collection service follow the same criteria.

Lee County implemented mandatory commercial recycling in 2007, via County Code of Ordinance, Chapter 17, Section 283, Business Recycling Requirements The ordinance is included as part of Appendix A, which also includes the forms and education materials provided. Property owners or managers must contract and coordinate with an appropriate franchised service provider for the collection of solid waste from all commercial facilities, businesses, and multi-family dwellings of five or more units. For the purposes of this case study, the term businesses will encompass these three types of generators.

The entity responsible for garbage service must comply with the Mandatory Business Recycling Ordinance. Businesses must establish a service contract with a recycling hauler, which can be the franchise hauler providing garbage service. Businesses may also self-haul to a recycling center or to a vendor that will provide documentation of compliance with the ordinance (i.e., receipt and weigh tickets)

Background

The ordinance requires all businesses in unincorporated Lee County to participate in recycling. The program allows for businesses on minimum service (i.e., can/bag service, 70 gallons or less) to be exempt. The ordinance also requires that new businesses comply within 14 days of starting waste service. This program affects about 7,500 commercial units and 110,000 multi-family units. The businesses are required to recycle at least one material type from a list of materials included in the ordinance which is generated in the greatest quantities by weight at the business. The two primary materials are fiber which includes corrugated cardboard, box board, office paper, and mixed paper. The second is containers which includes plastic bottles, aluminum cans, glass bottles, and steel cans. Recognizing that certain businesses may have unique abilities to recycle certain business specific materials, the ordinance does allow these businesses to satisfy the ordinance using their unique material. An example of this is recycled tires from a maintenance shop.

Methodology

Lee County requires businesses to complete a recycling plan form which must be maintained and made available to County staff if requested. The form documents the materials to be recycled, name of service provider, and methods of education of residents/staff.

The ordinance allows for enforcement through an advance disposal fee (ADF), which can be assessed monthly on each commercial location's refuse billing statement for non-compliance with the business recycling requirements. The fees vary based on business type and square footage, or number of units, and associated waste generation assumptions. To date, no business has been assessed a fee. However, the County reserves the right to check records and inspect businesses for compliance. County solid waste staff continues to be available to assist businesses in setting up recycling programs. Pinellas would need to determine what resources are available through other county departments to identify and track businesses.

Performance

Lee County has achieved near 100 percent compliance through education by recycling staff, field inspectors, and customer service staff. Two County representatives visited nearly every business (7,500 total businesses) in unincorporated Lee County over the initial 18 month implementation period. The County originally anticipated a grace period of a calendar quarter but extended it to allow for added outreach. The County also held several workshops leading into implementation and individual franchise areas were targeted with a postcard mailer which prompted customer service calls and helped identify non-compliant businesses.

Due to state law, commercial recyclables cannot be made a part of an exclusive franchise. Lee County can require businesses to recycle, and can require their exclusively franchised haulers to offer recyclables collection but cannot require businesses to contract with the exclusively franchised hauler. The franchised haulers bill the businesses directly, based on size of container and frequency of collection. Private hauler billing methods vary.

Lee County developed a master database that is exchanged monthly with the exclusively franchised haulers in the County to confirm what services businesses are receiving. Additionally, the County had to identify all the businesses that are using a private hauler, and monitor the services those businesses are receiving. The franchised hauler is required to notify the County of any business account service changes.

Impacts on Tonnage and Diversion/Recycling

Because commercial recyclables cannot be subject to local government control, collection of recyclables is an open market. Thus, the private haulers have no obligation to share any information with the County. However, qualitative information provided by the County indicated that the County materials recycling facility's container line (dual-stream at the time the ordinance was adopted) did not see a slow down during off-peak times, which was an indication that more material was being recycled. While the business recycling requirements were implemented at the start of the economic downturn, total tonnage remained relatively flat.

The following table presents the total tons recycled, Countywide recycling rate, and the percent of commercial businesses subscribing to recycling services within Lee County over the most recent six years for which data is available from FDEP. When looking at the data, it is important to note that only about 55 percent of the County's total population lives within unincorporated Lee County where the mandatory commercial recycling ordinance is applicable.

It is clear that there was a noticeable increase in all three metrics from 2007 (prior to implementation of the ordinance) to 2008 when the ordinance was first implemented.



Table 3 Recycling rates and participation

	2007	2008	2009	2010	2011	2012	2013
Total tons recycled	482,990	519,953	460,711	432,293	496,990	482,368	568,320
Countywide recycling rate	39%	43%	41%	41%	45%	44%	46%
Percent of commercial businesses participating in recycling services	85%	95%	95%	95%	95%	90%	95%

Source: FDEP

Operation and Cost Impacts

Program costs borne by Lee County for the commercial recycling program include enforcement efforts consisting primarily of staff time. The County estimates these costs to be approximately \$100,000 per year, including one person, benefits, and a vehicle. The County also has a recycling coordinator who assists with these efforts that is not included in the cost estimate, as the recycling coordinator position covers more responsibilities, and would exist even without the recycling ordinance. Additionally, the County has six inspectors who are responsible for contract performance with the franchised haulers. These inspectors assist with enforcement of the commercial recycling ordinance because an estimated 70 percent or more of the businesses use the exclusive franchise hauler for their recycling service. Because the commercial establishments contract directly with a hauler for collection of recyclables, cost to customers varies, but if using the franchise hauler, costs cannot exceed MSW service of an equal level of service.

Customer Convenience Issues and Benefits

One of the biggest challenges the County faced was receiving accurate data from the franchise haulers regarding businesses in the unincorporated areas of the County, and what services they were receiving. Two County representatives visited nearly every business in unincorporated Lee County over the initial 18 month implementation period. In visiting, they evaluated options for recycling but also made sure that garbage service was appropriate, and in many cases the business ended up saving money. The best examples were bars that eliminated trash service or reduced their trash service to just curbside can service with 10-plus carts for recycling cans and bottles.

The commercial sector was generally in favor of the program. As it is more of a participation ordinance, and costs were low using the franchised hauler, the businesses didn't have many reasons not to do it.

Strip malls were especially challenging, as generally the businesses did not contract the garbage service directly; or in some cases was a hybrid where a big generator had their own service but other tenants were managed by the property manager.

Program Design and Implementation Considerations for Pinellas County

Implementation of a similar ordinance in Pinellas County would be expected to have similar effects but would be limited to unincorporated Pinellas County which represents approximately 60 percent of the generating units in the County. There are over 160,000 generating units (2017) from commercial establishments (106,879 units) and multifamily units (53,535 units) in Pinellas County compared to the 118,000 generating units (2017) represented above (7,500 commercial units and 110,000 multifamily units) in the Lee County example. As noted in the Lee County example, part of their success was driven by a measured approach to implementation. Pinellas County should consider a phased approach along with dialogue with the business community on best steps forward.

Should Pinellas County enact such an ordinance, municipalities within the county could be encouraged to follow suit. In Lee County, both the city of Bonita Springs and the town of Fort Myers Beach adopted the same language as Lee County. It should be noted that both of these communities subscribed to the County's franchise collection system. Fort Myers Beach did adopt an ordinance similar to Lee County's without similar enforcement and monitoring as Lee County.

As mentioned above, the ordinance is primarily focused on participation. If commercial businesses must pay for a service, they will likely use the service although they are not judged as to how well they use the service. In the case of multi-family properties, service was available through the franchise haulers at no additional cost but the multi-family property owners would not provide the service without being forced to do so. Pinellas County could consider something similar or choose to require greater demonstration of compliance.

4 Collect electronics along with municipal solid waste

4.1 Case Study Subject Communities: Hillsborough County, FL, Lee County, FL and Sarasota County, FL

General Description

Electronic waste includes any device or appliance with a cord. Electronic waste and its relationship to household hazardous waste (HHW) programs relates to these same electronics but only those that contain certain metals or components that could have a hazardous nature under the right conditions. Typically, the materials of concern are lead, mercury, and other heavy metals. A common source for these various heavy metals is motherboards or circuit boards for electronic devices and appliances. Classic tube style screens or cathode ray tubes (CRTs) use leaded glass for the screen material and lead is also used in the sealant to attach the screen to the cone.

In Pinellas County, these materials are directed to either the County's mobile collection events, Customer Convenience Centers at certain municipalities or can be dropped off at the Household Electronics and Chemical Collection Center (HEC₃) at the Disposal Complex on 2855 109th Ave. N. in St. Petersburg, FL. The County's website lists the following targeted items for drop off:

Cell phones, computer towers/CPUs, drives (*e.g., hard drives, CD drives*), laptops, monitors, rechargeable batteries (*remove from device, place device in garbage*), smart phones, tablets, televisions (*must be whole*).

This case study will focus on the activities of several counties in Florida and changes made to HHW programs regarding all or portions of the electronic waste managed. All three counties in this case study, Hillsborough, Lee, and Sarasota, have chosen to dispose of electronic waste with municipal solid waste (MSW) by either combusting electronic waste at a WTE facility or landfilling a portion of the waste, specifically CRTs, in the case of Sarasota.

Background

Recycling of electronic waste has been fraught with difficulties including the availability of reliable vendors, increasing processing costs, and concerns for the final disposition of materials destined for recycling. The Basel Action Network has been a watchdog group uncovering instances of materials being transported to locations where recycling practices have been limited to non-existent and often cause greater environmental impact. Through some of their efforts, recyclers that have claimed to have been operating properly and in some instances carrying industry certifications were found to be shipping materials illegally (under international laws but not US laws) to countries that are restricted from receipt of these materials and generally represent developing countries.^{1,2}

¹ <http://www.ban.org/news/2019/2/6/gps-trackers-discover-illegal-e-waste-exports-to-africa-and-asia>

² <http://www.ban.org/news/2018/1/17/watchdog-groups-gps-trackers-find-certified-fake-recyclers-in-texas-georgia-and-florida-sending-e-waste-to-asia>

Electronic waste generated by a household is considered household waste and as such carries an exemption from being regulated as hazardous waste. From the EPA's website on HHW:

“Specifically, wastes covered by the Household Hazardous Waste exclusion must satisfy two criteria:

- 1. The waste must be generated by individuals on the premise of a temporary or permanent residence, and*
- 2. The waste stream must be composed primarily of materials found in wastes generated by consumers in their homes.*

State regulatory requirements for generators may be more stringent than those in the federal program. Be sure to [check your state's policies](#).”

As noted by FDEP (emphasis added): *“These facilities (HHW Collection Centers) are intended to provide free collections of **non-regulated hazardous waste** from households and to provide short-term storage of potentially hazardous waste generated by small businesses”.*

The EPA website continues:

“Although household hazardous waste is excluded from Subtitle C of RCRA, it is regulated under Subtitle D of this law as a solid waste. In other words, household hazardous waste is regulated on the state and local level”.

With a WTE facility, electronic waste represents materials that are likely already present in the waste stream whether from electronics already being disposed or other items that have similar materials but might not be considered a concern by the average resident. Rechargeable batteries in small appliances, battery powered lighting in shoes, and other knick-knacks, personal care products, and residues in cleaning product containers are all examples of HHW that may be present in the MSW stream. WTE facilities are highly regulated and tested annually for emissions. Note that along with air emissions, facilities will test ash for pH which is an indicator on the ash's ability to bind metals. Heavy metals and dioxins represent constituents of concern from WTE facilities and are also items of concern regarding the disposal of electronics.

Some communities have looked to other alternatives for management. In Hillsborough County and Lee County, increasing costs for recycling as well as handling of electronic waste caused them to shift management of these products to the WTE facility and reliance on the advanced air pollution control and ash management systems.

Sarasota County directs CRTs and large format screen televisions for landfill disposal, as much of the circuit board containing materials can still be recycled at little to no cost and in some cases still earn minor levels of revenue. The landfill is a Class I landfill including a double lined high-density polyethylene (HDPE) liner system with leachate collection.

Methodology

All three counties operate HHW collection programs where residents are encouraged to divert electronics and other materials classified as HHW.

- Hillsborough operates several Community Collection Centers where bulky wastes and electronic waste are collected.
- Lee County operates one household chemical waste (HCW) collection location and collects electronic waste curbside. Curbside collection is performed with either a flatbed or box truck but is always a non-compacting vehicle. At the collection centers, electronic waste is either palletized and shrink wrapped or placed in shipping totes. These pallets or totes are then loaded into a semi-trailer for transport to the recycler's facility. Over the past decade, transport and processing costs per trailer have gone from little to no expense to upwards of \$4,600 per trailer. Where a trailer was shipped about weekly, this equated to approximately \$200,000 annually to recycle these materials.
- Sarasota County collects HHW and electronic waste at its collection centers at the site of the former Bee Ridge Landfill as well as at the current Central County Solid Waste Disposal Complex (CCSWDC).

All three counties have experienced turnover with recycling companies and procuring vendors with long established operations has become increasingly difficult. The lack of available vendors was also exacerbated by the demand from other counties for similar services stressing the ability of the limited vendor pool to respond. The counties made the following policy changes related to electronic waste.

- In Lee County, the franchise collection companies were directed to collect curbside electronics with MSW on the regular route if the materials were of a manageable size. Oversized electronics like projection televisions are collected with the bulky routes, often with rear load compaction vehicles. If residents brought electronics to their HCW facility, Lee County would ship them to their e-Waste processor.
- In Hillsborough County, the electronics are consolidated with bulky waste at the Customer Convenience Centers and delivered to the WTE facility.
- In Sarasota County, CRTs and televisions are collected at the HHW collection centers and transported to the CCSWDC landfill for disposal.

In each case, as there was no direct service change for residential customers, no program changes needed to be communicated.

Performance

All three counties continue with their respective practices with little impact to overall operations.

Impacts on Tonnage and Diversion/Recycling

While Sarasota County sees a slight decrease in recycling credits from materials being landfilled, the quantity is not such that it has an impact of the County's recycling efforts. Both Hillsborough County and Lee County receive energy recycling credits for combustion of waste under the FDEP's recycling credit methodology but this credits equates to roughly 50 percent of the traditional recycling credit value that was received when the materials were recycled by their vendors.

Operation and Cost Impacts

None of the communities faced any operational challenges when implementing this change. The adjustment in Lee County was less impactful than in Hillsborough County as the change did not require additional operations for County staff due to the curbside program.

For Lee County, shipments of electronic waste decreased from approximately 40 to under 12 per year. At a current contracted cost of \$4,600 per load this represents over \$100,000 per year savings. No impacts were seen with the hauler as this eliminated a special collection truck route and quantities of these materials were not of an amount that the bulky waste routes were burdened. Extra effort is required in franchise areas with automated MSW collection as the electronic waste would need to be hand loaded into the side load container, most often using a Curotto can which uses a container with an arm attachment operated on the forks of a front load collection vehicle. For Hillsborough and Sarasota Counties, collected electronic waste is comingled with other wastes in roll off containers and delivered to the WTE facility in Hillsborough and to the CCSWDC landfill in Sarasota's case. There is an increase in transportation routes for these loads but this was absorbed into regular operations.

Customer Convenience Issues and Benefits

As there were no changes to service in any of the counties, impacts or issues to customers was negligible. While all the communities do not object to recycling of electronic waste, they would reconsider if the marketplace became more reliable with vendors and recycling assurances from the vendors. As the primary costs in electronic waste programs is related to CRT containing devices, these materials should continue to decrease over time as the technology becomes obsolete with the onset of LED and plasma screens.

Program Design and Implementation Considerations for Pinellas County

The collection system in Pinellas County is similar to Hillsborough County. Electronic waste could be collected at the HEC₃, consolidated, and delivered to the WTE by the County's on-site disposal contractor. As the materials were collected from households, consolidation does not eliminate the federal and state exemption classification.

Under Title V permits for WTE facilities in Florida, specific conditions refer to other solid waste and Non-MSW Material. Electronic waste is not considered Non-MSW Material and would not be subject to segregated waste requirements but would need to meet general requirements that MSW materials are well mixed. Further, the definition of MSW under 40 CFR 60.51b or Section 403.706(5) F.S. both are broad enough that these materials are considered MSW which is the primary fuel at the WTE facility.

As the current service to the resident would be unchanged, there are no impacts or changes to how residents are directed to manage this waste. Pinellas County would need to review public outreach materials to ensure that the information is representative of disposal or recycling of these materials and should emphasize proper management. Whether the County consolidates collection services or not, the County could consider instructing residents to put electronic waste at the curb for collection with MSW.

5 Diversion of food waste to anaerobic digesters in the County

5.1 Case Study Subject Community: Los Angeles Sanitation District Joint Water Pollution Control Plant Food Waste Program

General Description

According to the EPA, over 75 communities across the country manage a portion of their food waste/organic wastes through anaerobic digester (AD) processing at existing wastewater treatment plants (WWTPs). This case study examines the implementation of a food waste processing program at the Los Angeles Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) located in Carson, CA. This facility serves 3.5 million people throughout Los Angeles County and treats 280 million gallons per day, making it one of the largest wastewater treatment plants in the world. The JWPCP uses the biogas from 24 digesters to fuel three 9 MW gas turbines and uses the exhaust heat to generate steam to power an 8.7 MW steam turbine generator.

Background

The food waste program initiative has been in place since 2011. It began with a series of pilot initiatives in 2011-2012. In 2011, the Districts completed a feasibility study. The conclusion of that effort was that a project at the JWPCP was technically feasible, was allowable under regulations in effect, and would assist county and cities and haulers with diversion efforts. In 2012, they performed bench scale testing of the co-digestion which confirmed that there were no negative impacts on digester operation, confirmed the positive impact on biogas production and helped develop the food waste specifications. The bench scale testing indicated the amount of methane gas production with ~10 percent added food waste by volume could double the gas production.

In 2013, the Los Angeles Sanitation Districts and Waste Management entered into a multiyear demonstration program agreement. Beginning in February 2014, the parties began to ramp up the quantities delivered to the JWPCP, with the target being ~60 tons per day. The purpose of the demonstration program was to evaluate the feasibility and provide the operating staff time to adjust to the addition of this feedstock into the system.

Methodology

Waste Management developed the Centralized Organic Recycle and Energy (COrE®) to support the recycling goals of the County and to minimize collection and processing costs by placing the food waste processing equipment at their existing Orange County facility. Waste Management collected food waste from restaurants, food processing plants, cafeterias and grocery stores. The materials were inspected prior to processing at the Waste Management transfer station. Food waste was processed to remove physical contaminants via the COrE® process and was blended to produce engineered bio slurry (EBS™), which was loaded into tanker trucks and delivered to a specially constructed receiving station at the WWTP. The slurry was delivered into sealed tanks, with the displaced air being passed

through an odor control filter (modified from the initial biofilter to carbon filter canisters to address hydrogen sulfide odors).

Performance

During the demonstration program, the slurry was introduced into the test digester at the ratio of 9 percent food waste/91 percent solids, with a targeted feed rate of 61 diverted tons (or 20,000 gallons of slurry) per day. The amount of food waste diverted during the demonstration program grew from four tons per day in 2014 to ~60 tons per day by 2016. During the demonstration program, the food waste handling and storage systems worked as designed, there were no major impacts on treatment plant operations and biogas production increased as expected, leading the Districts to expand the program.

The Districts and Waste Management ended the successful demonstration project in April 2018, as the Districts moved forward with implementation of a larger program. Under the new program, the food waste slurry delivery point was moved to the Liquid Waste Disposal System (LWDS) at the headworks of the treatment plant, where slurry from other haulers was already being received. The advantage of the LWDS is that it was easy to implement with almost no additional capital cost and permitted the Districts to move forward with implementation of a full scale food waste program in early 2018.

As part of this initiative, the Districts purchased and installed processing equipment to convert the source separated food waste from restaurants and grocery stores into a pumpable slurry at its Puente Hills Materials Recovery Facility. This slurry is transported by trucks (an average of 14 truckloads per week) to the JWPCP facility. Currently slurry produced from over 100 tons per day of diverted food waste is delivered by four different haulers to the headworks. The Districts are continuing to expand the amount of material they are diverting in this manner.

Impacts on Tonnage and Diversion/Recycling

As noted, the phased implementation of the diversion program resulted in increasing the tons of food waste diverted from five tons per day at the outset to over 100 tons per day.

Customer Convenience Issues and Benefits

Implementing the food waste diversion program required modifying the separation practices at the generating source and the collection practices by the haulers. The issues that had to be addressed at the source included training generator staff to separately place the food waste in containers on site to be collected by the haulers in separate collection runs. Haulers had to modify their collection practices to facilitate the separate collection of the food waste fraction.

Lessons learned

The process involved a multi-year pilot/demonstration program leading to a successful conclusion that processing of suitably clean food waste can be integrated as a regular component of an existing WWTP facility. This supported the ramping up of the program to the next level. Lessons learned included

- 1) the importance of developing the data to support the value added proposition,
- 2) the value of starting with a pilot program to develop site specific experience, including giving the operating staff the time to become comfortable with the impacts of the change, and

- 3) the importance of communicating with and where appropriate, establishing partnerships with the private sector organizations involved in generating, collecting and managing the targeted waste stream.

Program Design and Implementation Considerations for Pinellas County

Key program design and implementation considerations for Pinellas County include:

- 1) Working with the WWTP technical and operating staff to put in place the required feedstock specification and to allow them the time to become comfortable with incorporation of food waste as part of their operations.
- 2) Working with the generators and haulers to implement separate collection of food waste that minimizes the degree of contamination.
- 3) Establishing processing capability either at transfer stations or at the receiving facility to prepare the as collected food waste to meet the required input specifications established by the WWTP.



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A

Appendix A – Lee County

- Mandatory recycling ordinance
- Commercial recycling brochure
- Commercial recycling plan form

LEE COUNTY ORDINANCE NO. 07-25

AN ORDINANCE RELATING TO MANDATORY RECYCLING OF COMMERCIAL AND MULTI-FAMILY RESIDENTIAL SOLID WASTE, AND CONSTRUCTION AND DEMOLITION DEBRIS; PROVIDING FOR PURPOSE AND SCOPE OF ORDINANCE; PROVIDING FOR DEFINITIONS; PROVIDING FOR BUSINESS RECYCLING REQUIREMENTS; PROVIDING FOR MULTI-FAMILY RECYCLING REQUIREMENTS; PROVIDING FOR CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING REQUIREMENTS; PROVIDING FOR CHANGES TO FEES AND PENALTIES; PROVIDING FOR CONFLICTS OF LAW, SEVERABILITY, CODIFICATION, INCLUSION IN CODE AND SCRIVENER'S ERRORS, AND EFFECTIVE DATE.

WHEREAS, the Board of County Commissioners of Lee County is the governing body in and for Lee County, Florida; and

WHEREAS, the Board of County Commissioners of Lee County, Florida is authorized pursuant to Chapter 125, Florida Statutes, to enact Ordinances necessary in the exercise of its powers; and

WHEREAS, Lee County is responsible pursuant to Chapter 403, Florida Statutes, for the proper disposal of all solid waste generated in the County; and

WHEREAS, collection of recyclables is beneficial to the environment through the reuse and/or recycling of recovered materials; and

WHEREAS, Lee County finds that mandatory recycling of commercial and multi-family residential solid waste, and construction and demolition debris will extend the life of County operated landfills and waste-to-energy facilities.

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY, FLORIDA, that:

SECTION 1: PURPOSE AND SCOPE OF ORDINANCE

- A. The purpose of this Ordinance is to establish mandatory recycling to ensure that recyclable materials generated and accumulated by multi-family properties, commercial establishments, and construction and demolition activities be source separated and collected from the solid waste so that such recyclable materials are not deposited at a landfill, but are processed and reused.
- B. Lee County requires that all businesses and multi-family properties in unincorporated Lee County must provide sufficient on-site recycling services. Under this requirement, business properties must continue to use the designated franchise hauler for refuse collection for their service area and shall choose a service provider and negotiate prices for recycling services. Multi-family properties shall utilize the designated franchise hauler for collection of recycling materials required under this Ordinance. The Recycling guidelines contained within this document are intended to articulate the standards and expectations for commercial and multi-family recyclables collection. Commercial businesses on minimum refuse service as defined by the Solid Waste Division are exempt from the requirements of this Ordinance. Construction and demolition activities may select any service provider and negotiate prices for recycling services.

SECTION 2: DEFINITIONS

For the purposes of this Ordinance, the definitions contained in this Section shall apply unless otherwise specifically stated. When consistent with the context, words used in the present tense include the future, words in the plural include the singular and words in the singular include the plural. The words “shall” or “will” are mandatory and not discretionary. For further clarification of definitions, refer to Section 403.703, Florida Statutes, and Fla. Admin. Code R. 62-701.200 as either may be amended from time to time and is incorporated herein by reference.

In the event of any conflict between a definition as made in this Ordinance and one contained in either Section 403.703, Florida Statutes, or Fla. Admin. Code R. 62-701.200, as either may be amended from time to time, the statutory or administrative definition shall control.

- A. **Advanced Disposal Fee** shall mean a fee imposed upon commercial entities or properties for failure to comply with the requirements of this Ordinance.
- B. **Agreement** shall mean the franchise agreements executed by the County and awarded to certain collection contractors.
- C. **Board** shall mean the Board of County Commissioners of Lee County, Florida.
- D. **Business** or **Commercial Business** means any business, proprietorship, firm, partnership, person in representative or fiduciary capacity, association, venture, trust, governmental office, educational facility, corporation which is organized for financial gain or for profit, or non-profit

corporation or entity, including all commercial, governmental, industrial, and institutional entities.

- E. **Certified Recycling Facility** means a recycling, composting, materials recovery or re-use facility for which the Director has identified as compliant with the intent of this Ordinance
- F. **Collect** or **Collection** includes accept, accumulate, store, process, transport, market or dispose of as required by County Ordinance, state and federal law.
- G. **Collection System** (1) for business properties means a system which includes the following components: (a) receptacles for individual employees and/or centrally located receptacles expressly for the collection and storage of recyclable materials separated by employees; (b) a contract with a hauler for collection of the recyclable materials and transport to a recycling processor or end-user, or proof of self-haul to a permitted material recycling facility; and (c) educational materials to inform employees of how to properly use collection receptacles; and (2) for multi-family properties means a system that includes the following components: (a) at-the-unit or centrally located receptacles expressly for the collection and storage of recyclable materials separated by tenants; (b) a contract with a hauler for collection of the recyclable materials and transport to a recycling processor or end-user, or proof of self-haul to a permitted material recycling facility; and (c) educational materials to inform tenants of how to properly use collection receptacles.

- H. **Construction** means the building of any facility or structure or any portion thereof including any tenant improvements to a previously unoccupied existing facility or structure. "Construction" does not include a project limited to interior plumbing work, electrical work or mechanical work.
- I. **Construction and Demolition Debris** or C&D means used or commonly discarded materials removed from premises of a Covered Project during construction, remodeling, repair, demolition, deconstruction or renovation resulting from construction, renovation, remodeling, repair, deconstruction, or demolition operations on any pavement, house, commercial building, or other structure, or from landscaping. Such materials include, but are not limited to, dirt, sand, rock, gravel, bricks, plaster, gypsum wallboard, aluminum, glass, asphalt material, plastic pipe, roofing material, carpeting, concrete, wood, masonry, rocks, trees, remnants of new materials, including paper, plastic, carpet scraps, wood scraps, scrap metal, building materials, packaging and rubble resulting from construction, remodeling, renovation, repair and demolition operations on pavements, houses, commercial buildings and other structures
- J. **Construction and Demolition Diversion Fee** or **Diversion Fee** means any money order, cash, or certified check submitted to the County pursuant to this Ordinance.
- K. **Conversion Rate** means the rate set forth in the tables provided in the County's Construction and Demolition Materials Management Plan pursuant to this Ordinance for use in estimating the volume or weight of

materials identified pursuant to the requirements of the County's Construction and Demolition Materials Management Plan.

- L. **County** shall mean Lee County, Florida.
- M. **Covered Project** means a project for which a building, demolition, or other similar permit is required by County Ordinance.
- N. **Customer** means a Business or a Multi-Family Property that has arranged for recycling collection services to be provided by a service provider with or without compensation. Where several businesses share garbage containers and collection service, "Customer" refers only to the entity that arranges the collection service for all.
- O. **Deconstruction** means a process to dismantle or remove useable materials from structures, in a manner which maximizes the recovery of building materials for reuse and recycling and minimizes the amount of waste transported for disposal in landfills and transformation facilities
- P. **Demolition** means the destruction, razing, ruining, tearing down or wrecking of any facility, structure, pavement, or building, whether in whole or in part, whether interior or exterior
- Q. **Director** means the Director of the Solid Waste Division or his/her designated representative.
- R. **Diversion Requirement** means the diversion of at least fifty percent (50%) of the total Construction and Demolition Debris generated by a Covered Project by reuse or recycling, unless the Permittee has been granted an exemption pursuant to this Chapter. If the Permittee has been

granted an exemption, the Diversion Requirement shall be the maximum feasible diversion rate established by the Director for the Project.

- S. **Divert** or **Diversion** means activities which reduce or eliminate the amount of C&D Material from disposal in a landfill.
- T. **Exempt Project** shall have the meaning set forth in Section 5.G. of this Ordinance.
- U. **Franchise Contractor** means those firms specifically authorized by a solid waste franchise collection contract with Lee County to provide solid waste collection services within Lee County.
- V. **Governmental Property** for the purposes of this Ordinance, means property owned by the United States of America or the State of Florida or any of their agencies, a special district, and an independent statutory district.
- W. **Material Recovery Facility (MRF)** is any business, organization or facility that receives recyclable materials from residential or business sources and processes those materials by sorting, baling, crushing and/or granulating, for the purpose of marketing such materials.
- X. **Multi-Family Property** means any multi-family dwelling building or group of buildings that contain(s) five (5) dwelling units or more on a single parcel including apartments, condominiums, mobile home parks, recreational vehicle parks, etc.
- Y. **Owner** shall mean any persons, corporation, partnership or entity, or its agent (such as a condominium or homeowners association), jointly or

severally, having an ownership interest in a multi-family property or business and otherwise responsible for solid waste collection.

- Z. **Permittee** means any person, firm, limited liability company, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever required to apply for an applicable permit to undertake any Construction, Demolition, or Renovation project within the County. A Permittee must comply with the requirements of this Ordinance.
- AA. **Project** means any activity for which a permit for a building, demolition, parking area construction or other permit is required. See also “Covered Project”.
- BB. **Recyclable Material(s)** means a material which otherwise would be abandoned or discarded but which can be utilized in a secondary material market. Such materials include, but are not limited to, corrugated cardboard, newspaper, wood, junk mail, paper (all colors), aluminum, steel and tin cans, glass bottles and jars, and #1 - #7 plastic containers.
- CC. **Recycling** means a series of activities, including collection, separation, and processing, by which products or materials are recovered from or otherwise diverted from the solid waste stream.
- DD. **Recycling Program** means a recyclable material separation plan and collection system which a business or multi-family property makes a commitment to comply with the County’s recycling requirement, specifying which materials it will recycle and designating a service provider.

- EE. **Renovation** means any change, addition, or modification to an existing structure that requires a building permit or demolition permit but does not include a project limited to interior plumbing work, electrical work or mechanical work.
- FF. **Reuse** means further or repeated use of materials.
- GG. **Salvage** means the controlled removal of Construction or Demolition Debris from a building or Demolition project for the purposes of Recycling, Reuse, or storage for later Recycling or Reuse.
- HH. **Self-Haul** when used in reference to recyclable materials generated by a business subject to this Ordinance, means the collection and transportation of such material where an owner or employee of the entity hauls the recyclable material to a MRF rather than hiring a service provider to perform this function.
- II. **Service Provider** means a person, firm or corporation engaged in the removal of Recyclable Material from any location within Lee County and includes Franchise Contractors.
- JJ. **Solid Waste** means the definition as stated at Section 403.703, Florida Statutes, and Fla. Admin. Code R. 62-701.200 as either may be amended from time to time. Solid waste generally means any garbage, rubbish, industrial waste, horticultural waste, extraordinary waste or other semi-solid material resulting from domestic, commercial, industrial, agricultural, or governmental operations including refuse and bulky waste, but excluding hazardous waste, sludge, septic tank pump age, asphalt, tar, oil

and grease, and also excluding any hazardous substances set forth in 40 CFR Part 261.

KK. **Source Separation** shall mean a process that separates the Recyclable Material from solid waste into homogeneous, marketable, and separate Recyclable Materials prior to collection for the purpose of Recycling.

SECTION 3: BUSINESS RECYCLING REQUIREMENTS

A. Program Requirements

All Businesses within unincorporated areas of Lee County shall establish an on-site recycling program and recycle a minimum of one (1) Recyclable Material that the business generates. This primary Recyclable Material shall be the Recyclable Material that makes up the largest portion of the Business' waste stream. The business can sell or exchange at fair market value its own Recyclable Materials for Recycling.

1. Each Business shall enter into a written service agreement, with a Service Provider. The service agreement must provide at a minimum one (1) collection every two (2) weeks of Recyclable Materials. The on-site Business recycling program shall be initiated within three (3) months of the effective date of this Ordinance.
2. A Service Provider or Business shall be responsible for the collection, intermediate storage or transfer, transportation, and/or sale of Recyclable Materials to a processor, broker, or market engaged in the reuse of materials.

3. All Service Providers who collect recyclable material from businesses in unincorporated Lee County must comply with applicable federal, state, and county laws, and regulations.
4. All Businesses must maintain a Recycling Program form on-site for review by the County effective January 1, 2008 or within fourteen (14) days of beginning operations after the effective date of this Ordinance. Where a Business covers multiple service locations, the Business shall maintain a Recycling Program form for each location. Recycling programs shall be maintained in effect regardless of any change of building ownership or service provider.
5. Recycling collection schedules and pickup locations shall be mutually agreed upon by the business and the Service Provider and shall be indicated in a written service agreement. The County is not responsible for any problems, unauthorized collections, liabilities, or any other difficulties that arise between the Service Provider and the Business except when the service provider is the County's Franchise Contractor performing in their service area.
6. Each Business shall recycle a minimum of one (1) material listed below or other non-listed materials that are approved by the Director. Materials should be prepared and/or separated in a manner mutually acceptable to the Service Provider and the Business. This paragraph does not limit the recycling of additional materials as desired by the business, nor does it prohibit a

business from Self-Hauling material to a Material Recovery Facility, processor, or material broker.

- Fiber Products – which include, at a minimum, mixed office paper (white and colored), newspaper, corrugated cardboard, and paperboard
- Co-mingled containers – which include at a minimum, aluminum cans, tin/steel cans, glass bottles and jars, and #1-#7 plastic containers
- Ferrous metal
- Non-ferrous metal
- Wood

7. The County reserves the authority to add or delete materials to the above list. Substitutions for items on the list will be considered by the Solid Waste Division Director on a case by case basis subject.

8 Containers

- a. Containers provided by the Service Provider or Business for Recyclable Materials, including compactors, shall be clearly and sufficiently labeled in English (and in other languages if appropriate) and shall indicate the Recyclable Material to be placed in the container, the word “recycling” or “recyclable” or the “chasing arrows” recycling symbol shall be indicated and indicate “No Trash” or other suitable language restricting the use of the container to Recyclables only..

- b. Containers used to collect Recyclable Material shall have adequate capacity and durability to function efficiently and meet the spatial constraints of the business. The type of containers used for collection of Recyclable Materials will be established between the Business and the Service Provider.
 - c. Any recycling containers required for a Recycling program will be provided by the Service Provider or Business.
 - d. Containers located outdoors shall be covered and otherwise secured to prevent container and material from blowing, leaking or falling out and to protect the materials from vector populations and the elements.
- 9. Indoor collection/storage areas shall be established in accordance with appropriate fire, building and/or safety codes.
 - 10. Exterior Recyclable Materials storage areas shall be established in accordance with County requirements for solid waste enclosures.
 - 11. The Business property owner shall maintain all Recyclable Material storage areas, including the containers, in a clean, sanitary and litter-free manner.

B. Promotion and Education

- 1. A Business subject to this ordinance is responsible for notifying and continually educating its employees on recycling practices at the Business through a formal and ongoing education program. Each Business shall distribute to new employees and to all existing

employees at least annually, general recycling information and current program recycling guidelines.

2. The Business shall provide recycling service options that enhance convenience for employees/tenants in order to gain and maintain maximum participation in the program, thus reducing the volume of solid waste generated.
3. The County will provide general promotional material such as posters and introductory letters. If requested the County will also assist with information for site-specific Recycling programs.

C. Recordkeeping

1. All businesses shall maintain records and reports as required herein and promptly respond to periodic requests from the Solid Waste Division for such records and reports that are directly pertinent to its Recycling Program.
2. The County reserves the right to obtain copies of the service agreement and/or scale receipts, and enter the premises to inspect the recycling program. Information requested by the County shall be provided or made available to the County within twenty (20) working days of a written request for any relevant, non-financial information from the Business as may be needed to satisfy the requirements of this Ordinance. If the County inspects a business pursuant to this Ordinance, Recycling Program information shall be made available during the inspection. Upon inspection of the

business premises, the County may inspect all relevant information related to the Recycling Program as necessary to verify sale or delivery of collected Recyclable Materials. If records are not kept on-site, the business owner will make them available within twenty (20) business days of the County's written request.

D. Temporary Exemptions for Recyclable Materials

1. Commercial businesses on minimum refuse service as defined by the Solid Waste Division are exempt from the requirements of this ordinance.
2. Limited exemptions, as set forth below, may be approved by the Director or his/her designee. Applications for an exemption from the requirements of this Ordinance shall be submitted in writing to the Director. An exemption may be allowed where compliance with the Ordinance would result in unnecessary hardship to the Business and the need for an exemption would not be shared generally by other Businesses. All exemptions are to be construed as temporary, for a period not to exceed one (1) year, and shall be considered withdrawn on the first to occur of (a) a change in the condition(s) which prompted the exemption, or (b) the expiration of the time period granted in the exemption. Should an exemption be withdrawn because the time period has expired, an applicant may apply for renewal of the exemption. Applications are evaluated against the following criteria:

- a. Incompatibility of compliance with the requirements of this Ordinance and compliance with other Lee County ordinances or other laws;
- b. Unavailability of collectors or acceptors (defined as licensed haulers of Recyclable Materials or intermediate or final processors of Recyclable Materials);
- c. Unavailability of on-site space for the separate and temporary storage of one (1) or more of the required recyclable materials;
- d. Extreme disparity between the applicant's costs of recycling one (1) or more of the required materials and the costs of disposal of the same material(s);
- e. Negligible generation rates of one (1) or more of the required recyclable materials.
- f. Other conditions, in the opinion of the Director, that are considered as adequate justification for adaptation consideration.
- g. The Director will consider these criteria in evaluating the application and will consider the compliance rate, implementation plans, and recycling programs of similar businesses in Lee County. The Director will direct solid waste division staff to make a site visit and prepare a report on the applicant's property.

2. After reviewing the information described in subsection (1) above, the Director may take one (1) of the following actions:

- a. Grant an adaptation that requires the applicant to recycle alternative materials identified by the Director;
- b. Grant an adaptation that reduces the number of types of materials required to be recycled; or
- c. Deny the request for an adaptation.

E. Compliance and Enforcement for Business Recycling Programs

1. An Advance Disposal Fee (ADF) will be assessed monthly on each commercial location refuse billing statement for non-compliance with this Ordinance. These fees are outlined below. Commencement of billing will occur after the effective date of this Ordinance. The solid waste generation rate category is the category that corresponds to the type of business (Florida DOR Classification) as set forth in Ordinance 96-09 and the applicable waste generation range for such businesses per unit. Upon presentation of the information and materials required, the ADF may be waived for a Business for a period of one year. Continued waiver of this fee is contingent on submittal of an exemption and approval by the Solid Waste Division of an updated Recycling Program and appropriate agreements and provisions.

Solid Waste Generation Rate Category	ADF Fee
A, B	\$100
C	\$250
D, E	\$500

2. In evaluating whether a violation of this Ordinance has occurred, County staff have the right to visit the Business and determine the presence and capacity of recycling containers, the presence and quantities of Recyclable Materials in recycling containers, the presence of signs, flyers, stickers and other information which promotes recycling, and engage in discussion with employees, tenants and owners, and Service Providers regarding the Business' Recycling Program. Any separation and storage of Recyclable Materials shall be undertaken in a location suitable and adequate for such activity. Separation and storage facilities shall comply with all applicable laws.

3. The owner, unless he or she has otherwise arranged for and received approval from the Solid Waste Division Director for more time, will be given twenty (20) business days from the date of the notification to provide the County with a written explanation of the pertinent events and circumstances relative to the alleged violation.

4. Lee County Solid Waste Division staff will be available for assistance in setting up a satisfactory Recycling System and achieving compliance with this Ordinance.
5. Should the owner, after the provided twenty (20) business days, be found to continue to be in violation of this Ordinance, the owner will be assessed the Advance Disposal Fee from the date of the initial violation until such time that the owner can demonstrate, to the satisfaction of the Director that the owner is again in compliance with the Ordinance.
6. Should the owner be found to be in violation of this Ordinance due to a suspension of service due to non-payment of invoices from the service provider, the owner will be assessed \$300 for each violation from the date of the initial violation until such time that the owner can demonstrate, to the satisfaction of the Solid Waste Division staff that the owner is again in compliance with the Ordinance.

F. Enforcement Actions for Business Properties

1. The Lee County Solid Waste Division, the Division of Codes and Building Services, and the Lee County Sheriff's Office have the concurrent authority and jurisdiction to enforce the provisions of this Ordinance. In addition to the procedures and penalties set forth below, the County also has recourse to any remedies available at law or in equity, including injunctive relief and damages.

2. Civil Action: The County may take civil action to enforce the provisions of this Ordinance in accordance with the following procedures:

a. Hearing Examiner Process:

The provisions of this Ordinance are enforceable through the Hearing Examiner process in accordance with the procedures as set forth in Chapter 162, Florida Statutes, the Lee County Land Development Code Ch. 2., Art. VII, and the Lee County Administrative Code Section 2-14, as amended from time to time.

b. Citation Process:

The provisions of this Ordinance are enforceable through the citation process in accordance with the requirements as set forth in Chapter 162, Florida Statutes, the Lee County Land Development Code Section 2-430 and Lee County Administrative Code 12-5 (each as amended).

3. Criminal Action: The County may take criminal action when appropriate to enforce the provisions of this Ordinance in accordance and in conjunction with Florida Statutes.

4. Penalties:

a. Civil: A violation of this Ordinance may subject the property owner to a fine of up to \$500.00 per violation. For purposes

of this Ordinance, each day a violation continues to exist constitutes a separate violation.

b. Criminal: A violation of this Ordinance may also constitute a second-degree misdemeanor punishable in accordance with Florida Statutes by:

- (1) A \$500.00 fine,
- (2) Up to ten (10) days imprisonment or community service, or
- (3) Both fine and imprisonment or community service.

SECTION 4: MULTI-FAMILY RECYCLING REQUIREMENTS

A. Program Requirements

1. All properties in the County identified as Multi-Family shall institute an on-site recycling program, and provide a collection system for collection of mixed paper, office paper, newspaper, paperboard, and corrugated cardboard, glass containers, #1 through #7 plastic containers, metal and aluminum cans, white goods, and electronic devices. Such recycling shall be done in compliance with this Ordinance and Lee County Ordinance 05-13, as may be revised or amended from time to time.
2. All Multi-Family properties must provide a Recycling Program effective January 1, 2008, or within fourteen (14) days of initial occupancy, after the effective date of this Ordinance. Where a

Multi-Family entity consists of multiple properties the Multi-Family entity shall maintain a Recycling Program for each property.

3. Recycling collection pickup locations shall be mutually agreed upon by the Multi-Family property owner and the Service Provider. The collection schedule shall be at a minimum weekly.
4. Containers:
 - a. Containers provided by the Service Provider or Multi-Family property for Recyclable Materials, including compactors, shall be clearly and sufficiently labeled in English (and in other languages if appropriate), shall indicate the Material to be placed in the container and the word “recycling” or “recyclable” or the “chasing arrows” recycling symbol shall be indicated and indicate “No Trash” or other suitable language restricting the use of the container to Recyclables only.
 - b. Containers used to collect Recyclable Material shall have adequate capacity and durability to function efficiently and meet the spatial constraints of the business. The type of containers used for collection of Recyclable Materials will be established between the Business and the Service Provider.
 - c. Any recycling containers required for a Recycling program will be provided by the Service Provider or Multi-Family property.

- d. Containers located outside the Multi-Family properties shall be covered and otherwise secured to prevent container and material from blowing, leaking or falling out and to protect the materials from vector populations and the elements.
- e. Indoor collection/storage areas shall be established in accordance with appropriate fire, building and/or safety codes.
- f. Exterior Recyclable Materials storage areas shall be established in accordance with County requirements for solid waste enclosures.
- g. The Multi-Family property shall maintain all Recyclable Material storage areas, including the containers, in a clean, sanitary and litter-free manner.

B. Promotion and Education

- 1. A Multi-Family property is responsible for notifying and continually educating its tenants on recycling practices at the Multi-Family property through a formal and ongoing education program. Each Multi-Family property shall distribute to new tenants and to all existing tenants at least annually, general recycling program information and current program recycling guidelines applicable to the Multi-Family property.

2. The County will provide general promotional material such as posters and introductory letters. If requested the County will also assist with information for site-specific recycling programs.

C. Temporary Exemptions for Materials

1. Limited exemptions, as set forth below, may be approved by the Director. Applications for an exemption from the requirements of this Ordinance shall be submitted to the Director. An exemption may be allowed where compliance with the Ordinance would result in unnecessary hardship to the Multi-Family property and the need for an exemption would not be shared generally by other Multi-Family properties. All exemptions are to be construed as temporary, for a period not to exceed one (1) year, and shall be considered withdrawn on the first to occur of (a) a change in the condition(s) which prompted the exemption, or (b) the expiration of the time period granted in the exemption. Should an exemption be withdrawn because the time period has expired, an applicant may apply for renewal of the exemption. Application forms are available from the County's Solid Waste Division. Applications are evaluated against the following criteria:
 - a. Incompatibility of compliance with the requirements of this Ordinance and compliance with other Lee County ordinances or other laws;

- b. Unavailability of on-site space for the separate and temporary storage of one (1) or more of the required recyclable materials; or
 2. The Director will consider the above-mentioned criteria in evaluating the application and will consider the compliance rate, implementation plans, and recycling programs of similar multi-family businesses in Lee County. The Director will direct Solid Waste Division staff to make a site visit and prepare a report on the Multi-Family property.
 3. After reviewing the information described in subsection (1) above, the Director may take one (1) of the following actions:
 - a. Grant an adaptation that requires the applicant to recycle alternative materials identified by the Director;
 - b. Grant an adaptation that reduces the number of types of materials required to be recycled; or
 - c. Deny the request for an adaptation.

D. Recordkeeping

1. All Multi-Family properties shall maintain records and reports as required herein and promptly respond to periodic requests for such records and reports that are directly pertinent to the recycling guidelines.
2. The County reserves the right to obtain copies of the service agreement and/or scale receipts, and enter the premises to inspect

the recycling program. Information requested by the County shall be provided or made available to the County within twenty (20) business days of a written request for any relevant, non-financial information from the Multi-Family property as may be needed to satisfy the requirements of the Ordinance. If the County inspects a Multi-Family property as provided in the Ordinance, Recycling program records shall be made available during the inspection. Upon inspection of the Multi-Family property, the County may request other relevant information related to the Recycling Program, including receipts or invoices necessary to verify sale or delivery of collected Recyclable Materials. If records are not kept on-site, the Multi-Family property will make them available within twenty (20) business days of the written request.

E. Compliance & Enforcement

1. In evaluating whether a violation of County Ordinance has occurred, County staff have the right to visit the premises and determine the presence and capacity of recycling containers, the presence and quantities of Recyclable Materials in recycling containers, the presence of signs, flyers, stickers and other information which promotes recycling, and engage in discussion with employees, tenants and owners, and Contractor regarding their recycling program. Any processing and storage of Recyclable Materials shall be undertaken in a location suitable and adequate

for such activity. Processing and storage facilities shall comply with all applicable zoning ordinances and any other applicable local and state statutes, ordinances and regulations.

2. The County may initiate an enforcement action based on its own observations or a complaint from others for violation of County Ordinance. The County will deliver notice of the violation to the property owner describing the nature of the violation and providing a point of contact with County staff to remedy the problem.
3. The owner, unless he has otherwise arranged for and received approval from the Solid Waste Services Director for more time, will be given twenty (20) business days from the date of the notification to provide the County with a written explanation of the pertinent events and circumstances relative to the alleged violation.
4. Solid Waste Division staff will be available for assistance in setting up a satisfactory recycling system and achieving compliance with this ordinance.
5. Should the owner, after the provided twenty (20) business days, be found to continue to be in violation of this Ordinance, the owner will be assessed \$300 for each violation from the date of the initial violation until such time that the owner can demonstrate, to the satisfaction of the Solid Waste Division staff that the owner is again in compliance with the Ordinance.

F. Enforcement Actions for Multi-Family Properties

1. The Lee County Solid Waste Division, the Division of Codes and Building Services, and the Lee County Sheriff's Office have the concurrent authority and jurisdiction to enforce the provisions of this Ordinance. In addition to the procedures and penalties set forth below, the County also has recourse to any remedies available at law or in equity, including injunctive relief and damages.
2. Civil Action: The County may take civil action to enforce the provisions of this Ordinance in accordance with the following procedures:
 - a. Hearing Examiner Process:

The provisions of this Ordinance are enforceable through the Hearing Examiner process in accordance with the procedures as set forth in Chapter 162, Florida Statutes, the Lee County Land Development Code Ch. 2., Art. VII, and the Lee County Administrative Code Section 2-14, as amended from time to time.
 - b. Citation Process:

The provisions of this Ordinance are enforceable through the citation process in accordance with the requirements as set forth in Chapter 162, Florida Statutes, the Lee County Land Development Code Section 2-430 and Lee County Administrative Code 12-5 (each as amended).

3. Criminal Action: The County may take criminal action when appropriate to enforce the provisions of this Ordinance in accordance and in conjunction with Florida Statutes.
4. Penalties:
 - a. Civil: A violation of this Ordinance may subject the property owner to a fine of up to \$500.00 per violation. For purposes of this Ordinance, each day a violation continues to exist constitutes a separate violation.
 - b. Criminal: A violation of this Ordinance may also constitute a second-degree misdemeanor punishable in accordance with Florida Statutes by:
 - (1) A \$500.00 fine,
 - (2) Up to ten (10) days imprisonment or community service, or
 - (3) Both fine and imprisonment or community service.

SECTION 5: CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING REQUIREMENTS

- A. Covered Projects
 1. Effective June 1, 2008 and except as otherwise provided in this Ordinance, each Permittee's Covered Project for which a permit application was submitted after January 1, 2008 shall be required to comply with the provisions of the County's Construction and

Demolition Materials Management Plan ("C&DMMP"), as described in this Ordinance, unless the project is exempted, as described below.

2. No Diversion Fee shall be required for any of the following:
 - a. Work for which a building permit is not required by this Ordinance;
 - b. Any new residential construction project less than \$90,000 dollars;
 - c. Any new commercial construction project less than \$90,000;
 - d. Residential alterations less than \$10,000;
 - e. Commercial alterations less than \$10,000;
 - f. Projects for which only a plumbing permit, electrical permit or mechanical permit is required;
 - g. Roofing projects that do not include removal of the existing roof;
 - h. Demolition or Construction required to protect public health or safety in an emergency, as may be amended from time to time.

B. Construction and Demolition Materials Management Plans

1. The County will prepare a standard Construction and Demolition Materials Management Plan ("C&DMMP") for the use of Permittees during the course of the permit period. The C&DMMP will require that the Permittee perform all of the following: (1) estimate the

volume or weight of Project C&D Materials, by materials type, to be generated; (2) estimate the maximum volume or weight of C&D Materials that it is feasible to divert, considering cost, energy consumption and delays, via reuse or recycling; (3) designate the vendors or facilities that the Permittee proposes to use to collect, divert, market, reuse and/or receive the C&D Materials; and (4) estimate the volume or weight of residual C&D Materials that would be transported for disposal.

2. In estimating the volume or weight of materials identified in the C&DMMP, the Applicant shall use the standardized Conversion Rates approved by the County for this purpose.
3. Permittees for building or demolition permits involving the removal of all or part of an existing structure shall consider Deconstruction, to the maximum extent feasible, and shall consider making the materials generated therefore available for Salvage prior to being transported for disposal in a landfill or transformation facility.

C. Diversion of waste

1. For the purposes of this Ordinance, diversion may be accomplished using any of the following methods:
 - a. Use of new construction methods, as approved by the Director, that reduce the amount of waste generated.
 - b. On-site reuse of the waste.

- c. Delivery of the waste from the site to a County Approved Recycling Facility as described in this Ordinance.
 - d. Other methods approved by the Director.
 2. All of the waste diversion methods which may qualify for a waiver of the Diversion Fee are subject to restrictions and documentation requirements as set forth by the Director.
- D. Approved Recycling Facilities
 1. The Director shall issue approval only if the owner or operator of the facility submits documentation satisfactory to the Director:
 - a. That the facility has obtained all applicable Federal, State, and local permits and is in full compliance with all applicable regulations; and
 - b. The percentage of incoming waste from construction, demolition, and alteration activities that is diverted from landfill disposal meets the required minimum percentage set forth in this Ordinance.
 - c. The Director will indicate whether a facility approval allows for commingled or source separated materials and which materials are included with the approval.
 2. The County shall make available a current list of Approved Recycling Facilities that may change from time to time.

E. Construction and Demolition Materials Management Plan Diversion Fee

1. Each Permittee for a Covered Project shall be subject to a Diversion Fee per the conditions of Section F below. The amount of the Diversion Fee shall be calculated as indicated below:

- a. Roofing - \$100
- b. Residential home - \$300
- c. Commercial less than 10,000 square feet (sf) - \$500
- d. Commercial between 10,000 sf and 100,000 sf - \$1,000
- e. Commercial greater than 100,000 sf - \$5,000
- f. Residential alterations - \$100
- g. Commercial alterations - \$300
- h. Demolition value less than or equal to \$10,000 - \$300
- i. Demolition value greater than \$10,000 - \$750

F. Assessment of Diversion Fee

1. Prior to issuance of a Certificate of Occupancy or a Certificate of Compliance for any Covered Project, as applicable, the Permittee may submit to the Director documentation that the Permittee has satisfied the Diversion Requirement for the project. This documentation shall include all of the following:

- a. Receipts and gate tickets from the vendor(s) or facility(s) that collected or received C&D Debris from the Covered Project showing the actual weight or volume of that material;

- b. Any additional information the Permittee believes is relevant in determining its efforts to comply with this Ordinance.
- c. A complete C&DMMP applicable to the covered project.
- d. A certified statement using the County approved form attesting to the validity and accuracy of the supporting information and that the Covered Project was performed in compliance with the requirements of this Ordinance.

If the Permittee fails to submit the required documentation and certification, the Permittee shall submit a Diversion Fee as defined along with all other applicable fees at the time of issuance of the Certificate of Occupancy or Certificate of Compliance.

2. Applicants shall make reasonable efforts to ensure that all C&D Materials diverted, or delivered to disposal facilities for disposal, are measured and recorded using the most accurate method of measurement reasonably available. To the extent practical, all C&D debris shall be weighed on scales. Such scales shall be in compliance with all regulatory requirements for accuracy and maintenance. For C&D debris for which weighing is not practical due to size or other considerations, a volumetric measurement may be used. For conversion of volumetric measurements to weight, the Applicant shall use the standardized conversion rates approved by the Director for this purpose. Documentation of the foregoing shall

consist of photocopies of receipts, weight tickets, gate tickets, and other records from recycling facilities, deconstruction contractors, solid waste enterprises and disposal facilities.

3. The Director shall review the information submitted and determine whether the Permittee has complied with the requirements of this Ordinance for material diversion, as follows:
 - a. If the Director determines that the documentation and certification provided by the Permittee does not fully comply with the requirements of this Ordinance, the Permittee will be found to be in violation of this Ordinance and issued a citation or the County may take other actions as set forth in Section 5.H. of this Ordinance.
 - b. The Director may authorize the refund of any Diversion Fee which was erroneously paid or collected.
 - c. The Director may authorize the refund of a Diversion Fee if the building or demolition permit application is withdrawn or cancelled before any work has begun.
6. Should the owner be found to be in violation of this Ordinance, the Permittee will be assessed three times (3X) the Diversion Fee as defined for the Covered Project.

G. Exemptions from Diversion Requirements

1. If a Permittee for a Covered Project experiences or anticipates unique circumstances that the Permittee believes make it not

feasible to comply with the Diversion Requirement, the Permittee may apply in writing for an exemption with the Solid Waste Division prior to submission of the required documentation and certification. The Permittee shall indicate to the Solid Waste Division the maximum rate of diversion the Permittee believes is feasible for each material and the specific circumstances that the Permittee believes make it not feasible to comply with the diversion requirement.

2. The Director shall review the information supplied by the Permittee and may meet with the Permittee to discuss possible ways of meeting the diversion requirement. Based on the information supplied by the Permittee, the Director shall determine whether it is possible for the Permittee to meet the diversion requirement.
3. If the Director determines that it is not feasible for the Permittee to meet the diversion requirement, the Director shall determine the maximum feasible diversion rate for each material. This determination will be used for comparison purposes upon request for Certificate of Occupancy or for refund of the Diversion Fee, as applicable.
4. If the Director determines that it is possible for the Permittee to meet the Diversion Requirement, the Director shall so inform and give reason(s) to the Permittee.

H. Enforcement Actions for Covered Projects

1. The Lee County Solid Waste Division, the Division of Codes and Building Services, and the Lee County Sheriff's Office have the concurrent authority and jurisdiction to enforce the provisions of this Ordinance. In addition to the procedures and penalties set forth below, the County also has recourse to any remedies available at law or in equity, including injunctive relief and damages.
2. Civil Action: The County may take civil action to enforce the provisions of this Ordinance in accordance with the following procedures:
 - a. Hearing Examiner Process:

The provisions of this Ordinance are enforceable through the Hearing Examiner process in accordance with the procedures as set forth in Chapter 162, Florida Statutes, the Lee County Land Development Code Ch. 2., Art. VII, and the Lee County Administrative Code Section 2-14, as amended from time to time.
 - b. Citation Process:

The provisions of this Ordinance are enforceable through the citation process in accordance with the requirements as set forth in Chapter 162, Florida Statutes, the Lee County Land Development Code Section 2-430 and Lee County Administrative Code 12-5 (each as amended).

3. Criminal Action: The County may take criminal action when appropriate to enforce the provisions of this Ordinance in accordance and in conjunction with Florida Statutes.
4. Penalties:
 - a. Civil: A violation of this Ordinance may subject the Permittee to a fine of up to \$15,000 per violation. For purposes of this Ordinance, each day a violation continues to exist constitutes a separate violation.
 - b. Criminal: A violation of this Ordinance may also constitute a second-degree misdemeanor punishable in accordance with Florida Statutes by:
 - (1) A \$500.00 fine,
 - (2) Up to ten (10) days imprisonment or community service, or
 - (3) Both fine and imprisonment or community service.

SECTION 6: PROCEDURE FOR ADOPTING CHANGES TO FEES AND PENALTIES

Any future changes or adjustments to Advance Disposal Fees, Diversion Fees, penalties or other fees or charges related to this Ordinance will be made by County Resolution adopted by a majority of the Board of County Commissioners at a regular meeting.

SECTION 7: CONFLICTS OF LAWS

Whenever the requirements or provisions of this Ordinance are in conflict with the requirements or provisions of any other lawfully adopted Lee County Ordinance or Florida Statute, the more restrictive shall apply.

SECTION 8: SEVERABILITY

The provisions of this Ordinance are severable and it is the intention to confer upon the whole or any part of the powers herein provided for. If any of the provisions of this Ordinance shall be held unconstitutional by any Court or competent jurisdiction, the decision of such Court shall not affect or impair any remaining provisions of this Ordinance. It is hereby declared to be the legislative intent that this Ordinance would have been adopted had such unconstitutional provision not been included therein.

SECTION 9: CODIFICATION, INCLUSION IN CODE AND SCRIVENER'S ERRORS

It is the intention of the Board of County Commissioners that the provisions of this Ordinance shall become and be made a part of the Lee County Code, and that sections of this Ordinance may be renumbered or relettered and that the word "Ordinance" may be changed to "section", "article", or such other appropriate word or phrase in order to accomplish such intention, and regardless of whether such inclusion in the Code is accomplished, sections of this Ordinance may be renumbered or relettered and typographical errors which do not affect the intent may be authorized by the County Manager or the County Manager's designee, without need of public hearing, by filing a corrected or recodified copy of same with the Clerk of Circuit Court.

SECTION 10: EFFECTIVE DATE

This Ordinance, if adopted by the Board, shall take effect January 1, 2008 upon its filing with the Office of the Secretary of the Florida Department of State.

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Commissioner Hall made a motion to adopt the foregoing Ordinance, seconded by Commissioner Mann. The vote was as follows:

BOB JANES	<u>Aye</u>
BRIAN BIGELOW	<u>Aye</u>
RAY JUDAH	<u>Aye</u>
TAMMY HALL	<u>Aye</u>
FRANK MANN	<u>Aye</u>

DULY PASSED AND ADOPTED THIS 11th day of September 2007.

ATTEST: CHARLIE GREEN
CLERK OF COURTS

BY:


Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

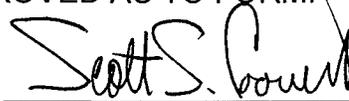
BY:


Chair



APPROVED AS TO FORM:

BY:



Scott S. Covert

Assistant County Attorney

Office of the County Attorney



FLORIDA DEPARTMENT of STATE

CHARLIE CRIST
Governor

STATE LIBRARY AND ARCHIVES OF FLORIDA

KURT S. BROWNING
Secretary of State

September 17, 2007

Honorable Charlie Green
Clerk of Court
Lee County
Post Office Box 2469
Fort Myers, Florida 33902-2469

Attention: Patricia Weseman, Deputy Clerk

Dear Mr. Green:

Pursuant to the provisions of Section 125.66, Florida Statutes, this will acknowledge receipt of your letters dated September 13, 2007 and certified copies of Lee County Ordinance Nos. 07-25 and 07-26, which were filed in this office on September 14, 2007.

Sincerely,

Liz Cloud
Program Administrator

LC/lbh

RECEIVED
MINUTES OFFICE
2007 SEP 20 AM 10:53

DIRECTOR'S OFFICE

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250
850.245.6600 • FAX: 850.245.6735 • TDD: 850.922.4085 • <http://dlis.dos.state.fl.us>

COMMUNITY DEVELOPMENT
850.245.6600 • FAX: 850.245.6643

STATE LIBRARY OF FLORIDA
850.245.6600 • FAX: 850.245.6744

STATE ARCHIVES OF FLORIDA
850.245.6700 • FAX: 850.488.4894

LEGISLATIVE LIBRARY SERVICE
850.488.2812 • FAX: 850.488.9879

RECORDS MANAGEMENT SERVICES
850.245.6750 • FAX: 850.245.6795

ADMINISTRATIVE CODE AND WEEKLY
850.245.6270 • FAX: 850.245.6282

FOR ASSISTANCE CALL 533-8000

WHO IS RESPONSIBLE:

The individual responsible for your company's garbage collection is the person responsible for meeting the requirements of this Ordinance

This person may be a property manager for a strip mall, the building owner, or an individual business owner.



Record Keeping

HOW TO MEET THE REQUIREMENTS OF THE ORDINANCE:

1. You must recycle that type of recyclable material that by weight takes up most of your solid waste stream. It may be one of the following:

- a) Fiber (office paper, cardboard, newsprint, magazines, junk-mail, fiberboard boxes, phone books, etc.)
- b) Commingled containers (plastic #1-7, container glass, aluminum, steel, tin cans)
- c) Ferrous metal
- d) Non-Ferrous metal (aluminum)
- e) Wood
- f) Other (by Solid Waste Department approval)

MANDATORY BUSINESS RECYCLING

2. Decide if your business will establish a service contract with a Recycling Hauler or choose to self haul.

Option 1 - Establish A Service Contract

- Franchise haulers providing service within their franchise service area must provide this service at the negotiated rate of \$1.65 per cubic yard (FY 2014/2015 rate).
- Other haulers as well as franchise haulers outside their service area can negotiate rates with individual customers. A known hauler list can be found on our website.

Option 2 - Choose To Self Haul

- A business may self haul to a recycling center or vendor. This requires additional record keeping to demonstrate compliance with the ordinance, including receipts and/or weigh tickets.

Complete a Recycling Plan Form and maintain on-site for review by County staff, if requested.



RECYCLING: IT'S SMART BUSINESS

3. Ensure your business has sufficient bins for the collection of recyclables.

The hauler with whom you entered into a Service Agreement will be able to supply you the necessary bins and/or containers for your recyclable material.

Self haulers may purchase recycling bins or use containers that are clearly labeled for their employee use.



Shop around for cost savings

FOUR EASY STEPS TO YOUR

BUSINESS PARTICIPATION

FOR MORE INFORMATION
WWW.LEE.GOV.COM/SOLIDWASTE

4. Provide an educational program for your employees.

One of the requirements is that all businesses must educate new employees upon hire and remind staff, at a minimum annually, regarding the company's recycling program.

Some examples of educational materials include:

- Informational Posters
- Distribution Memos
- Reminders on Pay Stubs
- Other creative ideas to spread the word about the company's program

Various samples may be downloaded from our website at:

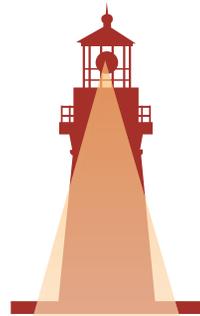
<http://www.leegov.com/solidwaste>



We Gladly Provide Assistance - Call 533-8000



We Can Provide On Site Employee Education As Well As Waste Audits To Help Get You Started



“Well-run recycling programs cost less to operate than waste collection, landfilling, and incineration.”

- National Recycling Coalition

Lee County Solid Waste Division
10500 Buckingham Road
Fort Myers, FL 33905

(239) 533-8000

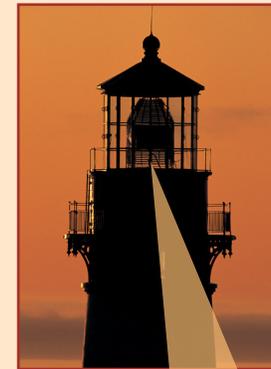
www.leegov.com/solidwaste

Providing Economic & Environmentally
Responsible Recycling & Disposal Services

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LEE COUNTY

MANDATORY
BUSINESS
RECYCLING



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