

May 2, 2017 | 10:00 AM – 12:00 PM

H-GAC Commercial Food Waste Diversion Roundtable



ECONOMICS

STRATEGY

STAKEHOLDERS

SUSTAINABILITY

www.newgenstrategies.net

Agenda

Project Background

Phase 2: H-GAC and NewGen Efforts

Development of Database and GIS Mapping

- **Interactive demonstration**

Outreach to Entities in Database

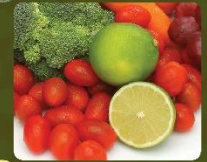
- *Stores / Food Processors/Manufacturers / Collectors*

Conduct of Commercial Food Waste Diversion Round Table | May 2, 2017

- **Discussion with Food Waste Collection Companies (and Audience)**

Recommendations

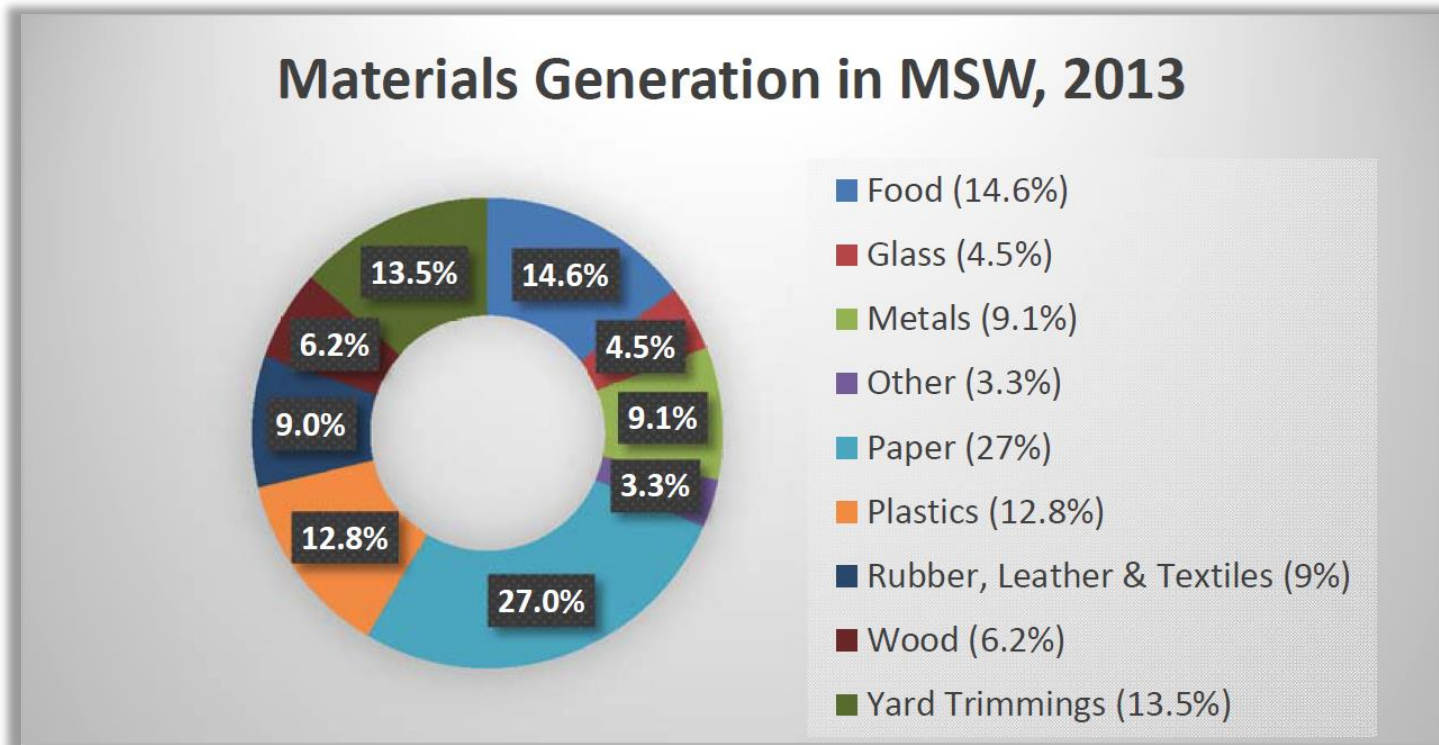




Project Background

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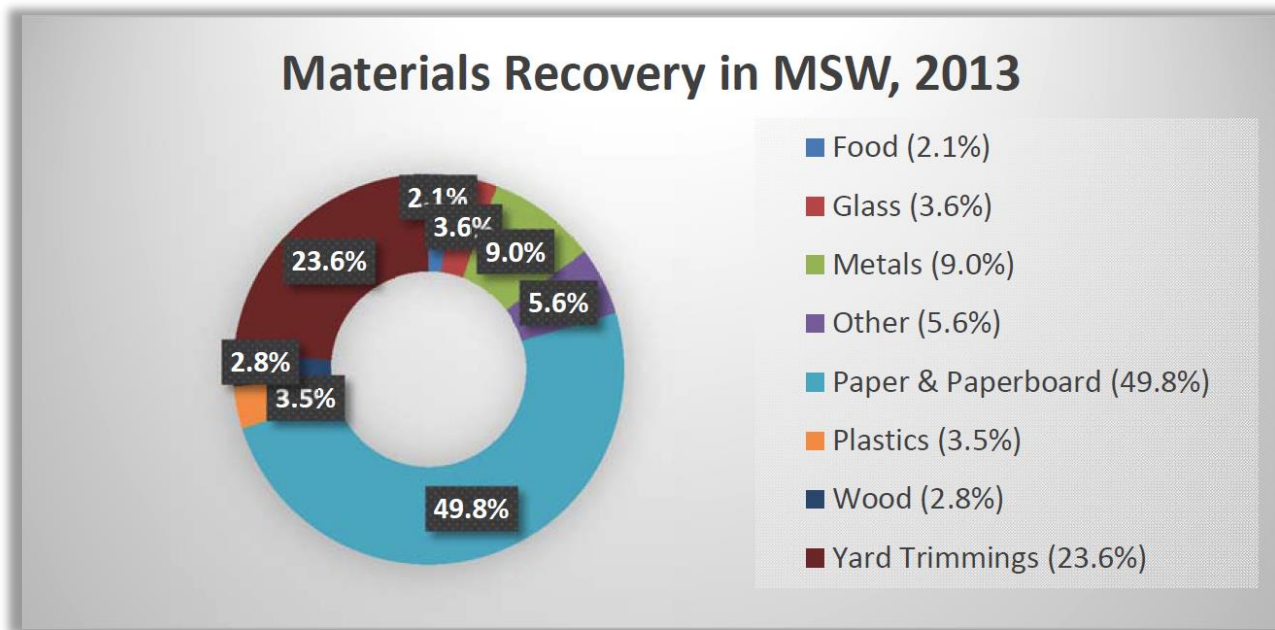
- Americans generated 254 million tons of municipal solid waste in 2013



Source: EPA Advancing Sustainable Materials Management: Facts and Figures 2013

Project Background (cont.)

- 34 percent of the 254 million tons were recovered¹
- ***Of the 37 million tons of food scraps generated in 2013², only 1.82 million tons were recovered, or less than five percent³***



¹ 254 million tons * 14.6% = 37 million tons.

² 2.1% * 87 million tons = 1.82 million tons. 1.82 million tons ÷ 37 million tons = 4.94%.

³ EPA has since published the 2014 factsheet: [2014 EPA SMM Factsheet](#)

1960 – 2014 *(source: EPA)*

Table 3. Generation, Recycling, Composting, Combustion with Energy Recovery and Landfilling of MSW, 1960 to 2014 (in millions of tons)

Activity	1960	1970	1980	1990	2000	2005	2010	2012	2013	2014
Generation	88.1	121.1	151.6	208.3	243.5	253.7	251.1	251.8	255.0	258.5
Recycling	5.6	8.0	14.5	29.0	53.0	59.2	65.3	65.6	65.1	66.4
Composting*	neg.	neg.	neg.	4.2	16.5	20.6	20.2	21.3	22.4	23.0
Combustion with energy recovery†	0.0	0.5	2.8	29.8	33.7	31.7	29.3	32.5	33.2	33.1
Landfilling and other disposal‡	82.5	112.6	134.3	145.3	140.3	142.2	136.3	132.4	134.3	136.0

* Composting of yard trimmings, food and other MSW organic material. Does not include backyard composting.

† Includes combustion of MSW in mass burn or refuse-derived fuel form, and combustion with energy recovery of source separated materials in MSW (e.g., wood pallets, tire-derived fuel).

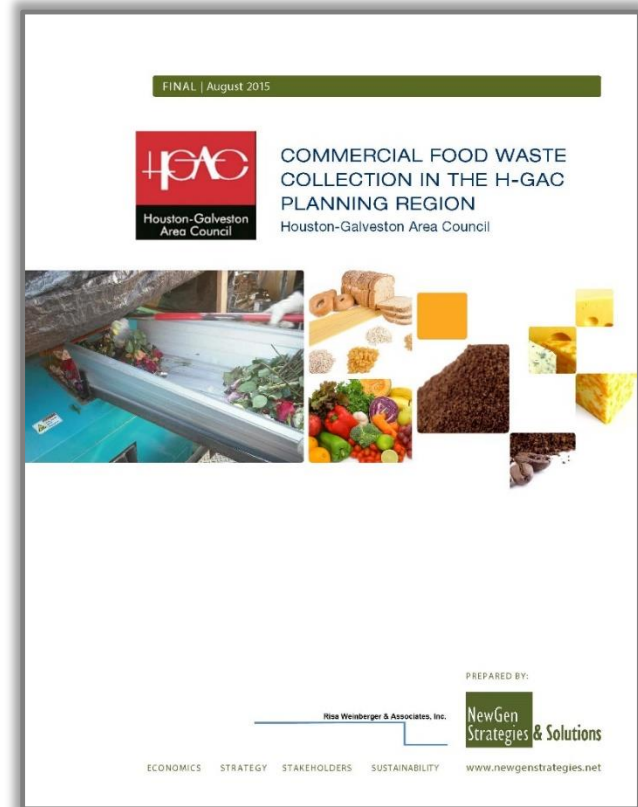
‡ Landfilling after recycling, composting and combustion with energy recovery. Includes combustion without energy recovery.

Details might not add to totals due to rounding.

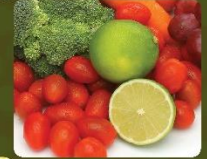
neg. Negligible = less than 5,000 tons or 0.05 percent.

Purpose of Project

- Food waste is one of the largest components of the waste stream
- Identify and analyze the challenges, opportunities, and solutions to cost effective commercial food waste collection
- How can commercial food waste diversion be implemented?
 - Voluntary
 - Collaborative



Link to report on H-GAC's website: <https://www.h-gac.com/community/recycling/documents/CommercialFoodWasteCollectionStudy2015.pdf>



Findings from Prior Report

Select findings from August 2015 prior report (11 total)

Section 4 (Prior Study) – Select Findings (11 Total in Report)

2. H-GAC area compost processors have significant excess capacity to accept additional food waste

The estimated excess capacity and new capacity in the H-GAC region should be 85,000 to 95,000 tons per year of food waste

3. Some grocery stores and commercial food processors in the H-GAC region are currently active in food waste diversion
5. One of the biggest barriers to a more active commercial food waste program is the lack of food waste collection companies in the H-GAC region (“chicken or the egg” scenario)
 - Premium costs for service
 - Route density challenges
 - Heavy loads

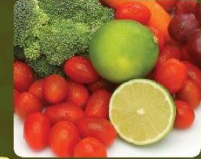
Section 4 (Prior Study) – Select Findings (cont.)

8. Most compost processors are hesitant to accept post-consumer food waste due to contamination issues
9. Many businesses who already participate in a food waste program do so because of their dedication to sustainable practices
10. Successful commercial food waste collection programs require on-going education



Accepted vs. Not Accepted Food Waste Flyer pub

Charleston County Environmental Management



Recommendations from Prior Study

Select recommendations from August 2015 prior report (18 total)

Section 5 (Prior Study) – Select Recommendations *(18 Total in Report)*

1. H-GAC to host future roundtables
 - Identify and map a process to address the short-, mid-, and long-term recommendations

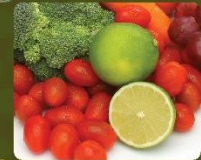
5. Focus initial food waste diversion efforts on commercial food processors, wholesale food distributors, and grocery stores
 - These entities are the largest generators of food waste
 - These facilities generate between 3 – 5 tons of food waste per week

6. Pursue food waste on Produce Row
 - NewGen believes there is material that can be diverted for consumption and composting from this facility

Section 5 (Prior Study)

Select Recommendations (cont.)

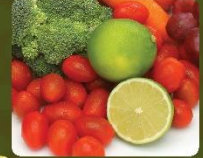
8. Follow up with collection companies regarding expansion into food waste
11. Begin development of a GIS database of food waste generators, collectors and processors in the H-GAC planning region
12. Develop a database to track generators, collectors and processors of food waste – location, volumes, frequency, etc.



Phase 2: H-GAC and NewGen Efforts

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- Develop a GIS database of food waste generators, collectors, and processors in the H-GAC planning region
- Outreach to entities in database
- Roundtable to address key issues concerning the generation, collection, and processing of food waste in the H-GAC region



Development of Database & GIS Mapping

Database and GIS Mapping

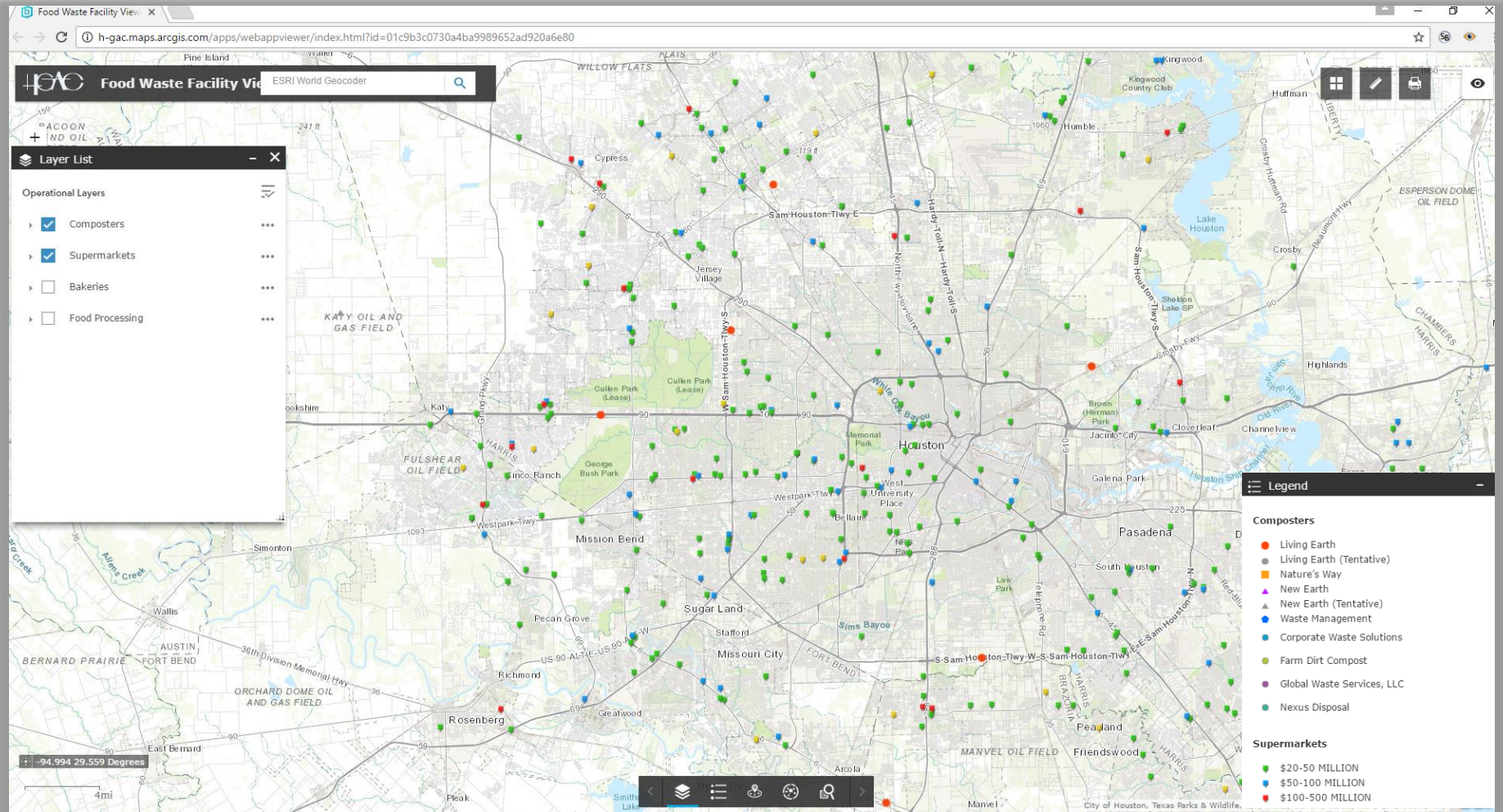
- Collaborative tool developed by H-GAC
- Connects haulers, composters, and generators
- Tool will evolve and expand over time
- Initial efforts include:
 - 175+ grocery stores (*with sale volumes greater than \$20 million*)
 - 45+ food processors (*with sale volumes greater than \$20 million*)

Database and GIS Mapping (cont.)

OBJECT ID	Company	City	County	NAICS Code	NAICS Description	Sale Volume	SqFt	Distance to Composter (Mile)
40	CORPORATE BRAND FOODS AMERI	HOUSTON	HARRIS	31199906	ALL OTHER MISCELLANEOUS FOOD MANUFACTURING	\$500M - \$1 BILLION	100,000+	7.5
720	GULF RICE MILLING INC	HOUSTON	HARRIS	31121201	RICE MILLING	\$500M - \$1 BILLION	100,000+	3.7
697	AMERICAN RICE INC	FREEPORT	BRAZORIA	31121201	RICE MILLING	\$100-500 MILLION	100,000+	30.8
705	RICETEC	ALVIN	BRAZORIA	31121201	RICE MILLING	\$100-500 MILLION	100,000+	7.4
36	SUPER LOPEZ TORTILLA FACTORY	HOUSTON	HARRIS	31199905	ALL OTHER MISCELLANEOUS FOOD MANUFACTURING	\$50-100 MILLION	40,000 - 99,999	6.8
37	AMY FOOD INC	HOUSTON	HARRIS	31199906	ALL OTHER MISCELLANEOUS FOOD MANUFACTURING	\$50-100 MILLION	40,000 - 99,999	7.7
135	RICH PRODUCTS CORP	MISSOURI CITY	FORT BEND	31141202	FROZEN SPECIALTY FOOD MANUFACTURING	\$50-100 MILLION	100,000+	10.1
239	VA M FOODS LLC	CONROE	MONTGOMERY	31141202	FROZEN SPECIALTY FOOD MANUFACTURING	\$50-100 MILLION	100,000+	3.7
252	GLOBAL COMMODITIES CORP	HOUSTON	HARRIS	31131403	CANE SUGAR MANUFACTURING	\$50-100 MILLION	100,000+	7.3
593	WHOLESOME SWEETENERS INC	SUGAR LAND	FORT BEND	31131403	CANE SUGAR MANUFACTURING	\$50-100 MILLION	100,000+	12.4
702	CAL-TEX CITRUS JUICE LP	HOUSTON	HARRIS	31142101	FRUIT & VEGETABLE CANNING	\$50-100 MILLION	100,000+	9.8
718	SUNBEAM BREAD-SCHOTT'S BAKER	HOUSTON	HARRIS	31181202	COMMERCIAL BAKERIES	\$50-100 MILLION	100,000+	9.6

Company	Address	City	County	Employment Size	Sale Size	Distance	SqFt	composter
H-E-B FOODS	9595 SIX PINES DR # 579	THE WOODLANDS	MONTGOMERY	250-499	\$100-500 MILLION	2.3	100,000+	LIVING EARTH - THE WOODLANDS
H-E-B FOODS	1621 S MASON RD	KATY	HARRIS	250-499	\$100-500 MILLION	5.1	100,000+	LIVING EARTH - KATY WEST
H-E-B FOODS	6711 S FRY RD	KATY	FORT BEND	500-999	\$100-500 MILLION	7.8	100,000+	LIVING EARTH - KATY WEST
RANDALLS	4800 W BELLFORT ST	HOUSTON	HARRIS	250-499	\$100-500 MILLION	8.8	100,000+	LIVING EARTH - SOUTH BELTWAY
H-E-B FOODS	24224 NORTHWEST FWY	CYPRESS	HARRIS	250-499	\$100-500 MILLION	9.3	100,000+	LIVING EARTH - CUTTEN ROAD
FIESTA MART	8320 CYPRESS CREEK PKWY	HOUSTON	HARRIS	100-249	\$50-100 MILLION	1.7	100,000+	LIVING EARTH - CUTTEN ROAD
H E B STORE	6100 FUQUA ST	HOUSTON	HARRIS	100-249	\$50-100 MILLION	1.9	2,500 - 4,999	LIVING EARTH - SOUTH BELTWAY
KROGER	4747 RESEARCH FOREST DR # 300	THE WOODLANDS	MONTGOMERY	250-499	\$50-100 MILLION	2.4	100,000+	LIVING EARTH - THE WOODLANDS
KROGER	1705 N FRY RD # A	KATY	HARRIS	100-249	\$50-100 MILLION	3.0	100,000+	LIVING EARTH - KATY WEST
KROGER	15802 CHAMPION FOREST DR	SPRING	HARRIS	100-249	\$50-100 MILLION	3.0	100,000+	LIVING EARTH - CUTTEN ROAD
RANDALLS	2250 BUCKTHORNE PL # 100	THE WOODLANDS	MONTGOMERY	100-249	\$50-100 MILLION	4.0	100,000+	LIVING EARTH - THE WOODLANDS
H-E-B FOODS	10919 LOUETTA RD	HOUSTON	HARRIS	250-499	\$50-100 MILLION	4.2	100,000+	LIVING EARTH - CUTTEN ROAD
H-E-B FOODS	7310 LOUETTA RD	SPRING	HARRIS	250-499	\$50-100 MILLION	4.3	100,000+	LIVING EARTH - CUTTEN ROAD
DI MARE FRESH INC	9221 PARK SOUTH VW	HOUSTON	HARRIS	100-249	\$50-100 MILLION	4.6	100,000+	LIVING EARTH - SOUTH BELTWAY
99 RANCH MARKET	1005 BLALOCK RD	HOUSTON	HARRIS	100-249	\$50-100 MILLION	4.8	100,000+	LIVING EARTH - CRAWFORD ROAD
H-E-B FOODS	130 SAWDUST RD	SPRING	MONTGOMERY	100-249	\$50-100 MILLION	4.8	100,000+	LIVING EARTH - THE WOODLANDS
RANDALLS	1525 S MASON RD	KATY	HARRIS	250-499	\$50-100 MILLION	5.0	100,000+	LIVING EARTH - KATY WEST
H-E-B FOODS	10777 KUYKENDAHL RD	SPRING	MONTGOMERY	100-249	\$50-100 MILLION	5.2	100,000+	LIVING EARTH - THE WOODLANDS
KROGER	2222 INTERSTATE 45 N	CONROE	MONTGOMERY	100-249	\$50-100 MILLION	5.6	100,000+	NEW EARTH INC
H-E-B FOODS	14498 BELLAIRE BLVD	HOUSTON	HARRIS	250-499	\$50-100 MILLION	5.8	100,000+	LIVING EARTH - KATY WEST

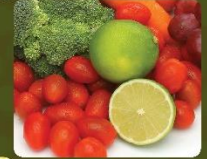
Database and GIS Mapping (cont.)



Database and GIS Mapping (cont.)

- Demonstration of GIS tool

[H-GAC Food Waste Collaboration Tool](#)



Outreach to Entities in Database

Outreach – Stores

- NewGen contacted grocery store chains (via phone and email)
- Information is still considered proprietary and is difficult to obtain
- Kroger provided anecdotal information: each store department (bakery, produce, etc.) will work with various food rescue organizations near the store to divert food scraps (*activities vary by store location*)



Outreach – Food Processors/Manufacturers

- NewGen contacted 30+ entities (via phone and email)
- Information is still considered proprietary and is difficult to obtain
- **Success story:** tortilla factory in Houston (*\$50-100 million sale volume*) sends their scraps to area ranches for animal feed product(s)



Success Story: 8th Wonder Brewery

- Craft brewery in a dome-like warehouse located in East Downtown Houston
- Spent grain (material remaining after the brewing process) is collected by local farmers in 55 gallon drums
 - Collected 3 x week
 - Compost
 - Tilled into fields
 - Used for animal feed

150–200 drums per week!



8th Wonder Brewery
2202 Dallas Street
Houston, TX 77003

Aaron Corsi, Brewmaster | Co-Founder
832.818.3298

aaron@8thwonderbrew.com

Outreach – Collection Companies

- Third party management company for waste and recycling services
- Presently negotiating contracts with several grocery stores, restaurants, and food processors
- Planning to start collection services in May 2017
- Offering 32 & 64 gallon carts, looking at 1 CY container option



Corporate Waste Solutions, LLC
565 South Mason Road #457
Katy, Texas 77450

Candace Seger, LEED AP O+M
President
713.817.1062
cseger@divertmore.com

Outreach – Collection Companies (cont.)



Farm Dirt Compost



Farm Dirt Compost

801 N. Emile St.
(entrance on Buck St.)
Houston, TX 77020

Danny Wilson
281.552.8119

email@farmdirtcompost.com

- Material travels no more than 41 miles in its entire life cycle
- Two-month process
- Fruit/vegetable (and some wood chips)
- Volume varies (50 to 100 tons per week)
- Farm Dirt collects 64-gallon containers from grocery stores
- Wholesalers deliver pallets and Gaylord boxes (~1.5 CY)

Outreach – Collection Companies (cont.)



Global Waste Services, LLC
7213 East Mount Houston Rd.
Houston, Texas 77050

Larry Gronewold
281.449.8500

<http://globalwasteusa.com>

- Houston company servicing commercial, residential, and industrial customers
- Fleet of over 80 collection vehicles
- Regarding food waste: customer base consists of mainly produce companies and grocery stores
- Material is transported to a third party composting facility

Outreach – Collection Companies (cont.)

- Established in 2002
- Front load collection trucks as well as roll-off container trucks
- Limited food waste collection
- Challenges are route density and weight issues



Nexus Disposal

6131 Thomas Road
Houston, Texas 77041

Steven Zapata
713.996.9090

steven@nexusdisposal.com

Outreach – Collection Companies (cont.)

- Management company that delivers waste minimization services
- Serves a variety of industries including: grocery stores, retailers, and restaurants
- **Success story:** Worked with a large grocery store chain to:
 - Recycle more than **27,000 tons of organics**
 - Recycle nearly **1,000,000 gallons of used cooking oil**
 - Recycle more than **5,500 tons of meat & seafood**



Quest Resource Management Group
3481 Plano Pkwy
The Colony, TX 75056

Stacey Lyons
Senior Client Services Manager
877.321.1811

StaceyL@QuestRMG.com

Outreach – Collection Companies (cont.)



REPUBLIC
SERVICES

Republic Services
5301 Brookglen Drive
Houston, Texas 77017

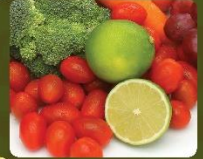
Jaclyn Boltinghouse
281.850.9863

jboltinghouse@republicservices.com

- One of the largest solid waste service providers
 - Commercial, industrial, municipal, and residential customers
- Food waste customers: large distributors
- ***Material must be contamination free!***
- Collaborate with Living Earth

Outreach – Collection Companies (cont.)

- Other collection companies
 - Liquid Environmental Solutions
 - Waste Management
 - TAP Environmental?
 - Town & Country Garbage?
 - Little Joy Recycling: no longer offers food waste collection; focusing on traditional recycling

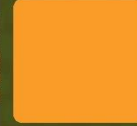


Discussion with Food Waste Collection Companies

Discussion with Food Waste Collection Companies

- Company background
- Customer base
- Material collected
- Challenges
- Advice

Questions from the audience?



Recommendations

Recommendations

1. Utilize H-GAC's GIS based mapping tool

enter:  collection company  composter
(hauler)

2. Highlight success stories on H-GAC's website, dedicated page on the following topics:
 - GIS mapping tool
 - Success stories
 - Collection company contacts
 - Other information...
3. Network (H-GAC members, trade associations, etc.)
4. Continue to encourage sharing of “proprietary” information (i.e., where food waste is going)
5. Keep “plugging away” – not easy, but important!



Thank You!
Questions?

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