

Recycling Update:  
Where we were, where we are, and  
where we're going.

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City of Houston SWD  
November 19, 2014

# Solid Waste Management

- The Solid Waste Management Department (SWMD) provides solid waste services to the citizens of Houston through the collection, disposal and recycling of discarded material in a manner that is safe, efficient, environmentally sound and cost-effective.



# Curbside Recycling History

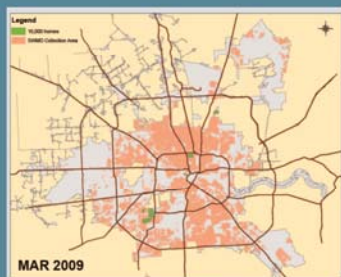
- Curbside recycling began as a pilot program in 1990, with the small 18-gallon bins being provided in large part through donations from local and major corporations;
- The original program had only 27,000 homes, which grew to over 200,000 homes with the small dual stream bins before the City began converting and expanding the single stream program.
- Starting early 2015, Houston will for the first time achieve it's goal of offering curbside recycling to all homes with City solid waste services. A big win!



# How to Revolutionize Curbside Recycling in Houston

- 2009 March, pilot 10,000 homes
- 2009 August, 12,000 homes
- 2010 January, \$3M DOE grant adds 50,000 homes
- 2010 December, 30,000 homes
- 2013 July, 33,000 homes
- 2013 December, 70,000 homes
- 2014 June, 62,000
- 2015 remaining 109,000 homes

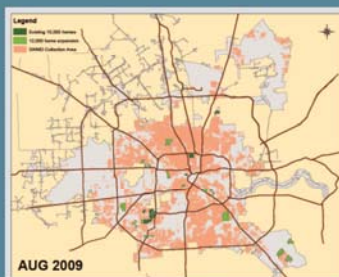




**Phase 1**  
In 2009, the City of Houston introduced the Single Stream recycling program. 96,000 homes were distributed to approximately 10,000 homes. Recycling items include newspapers, magazines, office paper, park mail, cardboard, paper bags, glass bottles and jars, aluminum cans, tin and steel cans and plastic 1, 2, 3 and 7 can be easily collected in one container without having to separate the materials.

380,000 On the Waiting list for Single Stream Recycling Service

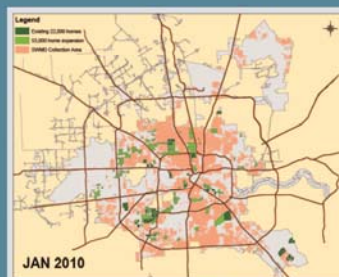
10,000 Homes with Single Stream Recycling collection



**Phase 2**  
Since first implementing the initiative in 2009, residents have been able to use the curbside recycling program. The program has been successful in allowing residents to place their unwanted recyclables, including glass, in one city-provided container with wheels that makes it easy to take to the curb.

37,000 On the Waiting list for Single Stream Recycling Service

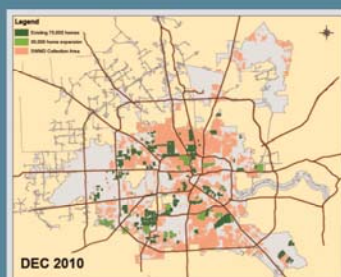
22,000 Homes with Single Stream Recycling collection



**Phase 3**  
With the help of a CDBG grant, the City of Houston was able to purchase new containers and expand the Single Stream Recycling program to more than 50,000 residents.

227,000 On the Waiting list for Single Stream Recycling Service

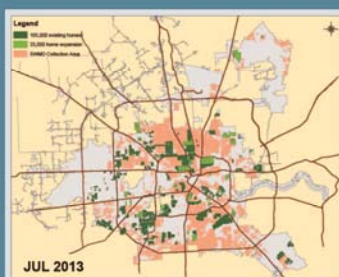
75,000 Homes with Single Stream Recycling collection



**Phase 4**  
With the 30,000 home expansion the city now serves 100,000 households out of about 2,700,000 in Houston. The program has many benefits for so many people and has been the greatest effort over the past year by our residents. That allowed us to further expand our automated recycling program to other Houston neighborhoods." Harry Higgins

274,000 On the Waiting list for Single Stream Recycling Service

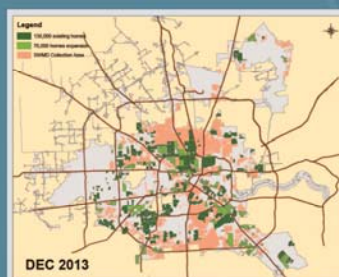
105,000 Homes with Single Stream Recycling collection



**Phase 5**  
Without changing residents a monthly recycling fee, the Solid Waste Management Department was able to expand one more time the Single Stream Recycling Program to more than 200,000 homes. The garbage is truly on wheels and we put them to work in a right." Harry Higgins

241,000 On the Waiting list for Single Stream Recycling Service

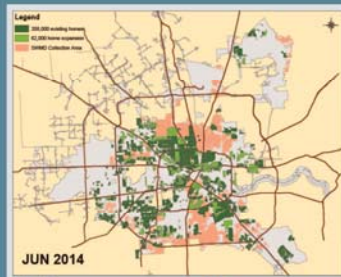
130,000 Homes with Single Stream Recycling collection



**Phase 6**  
"We've been able to give the program by strategically adding the single and increase material from one expansion and reworking it into each succeeding expansion. Through the automated approach of what we've done, we've been able to grow the program from 10,000 households in 2009 to 174,000 current households, which is more than half of the homes in our service area."

271,000 On the Waiting list for Single Stream Recycling Service

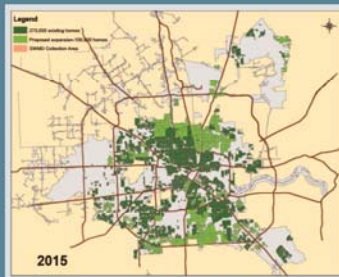
208,000 Homes with Single Stream Recycling collection



**Phase 7**  
This expansion moves us closer to our goal of having all Houstonians on the program by the end of 2015. This is a long-term goal that was established by the Solid Waste Management Department in 2009. 2007. Our residents have been able to use the program for their homes."

199,000 On the Waiting list for Single Stream Recycling Service

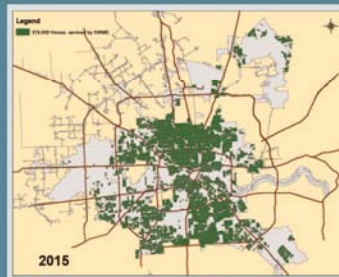
270,000 Homes with Single Stream Recycling collection



**Phase 8**  
Since first implementing the initiative in 2009, residents have been able to use the curbside recycling program. The program has been successful in allowing residents to place their unwanted recyclables, including glass, in one city-provided container with wheels that makes it easy to take to the curb."

194,000 On the Waiting list for Single Stream Recycling Service

270,000 Homes with Single Stream Recycling collection



**Phase 9**  
Since first implementing the initiative in 2009, residents have been able to use the curbside recycling program. The program has been successful in allowing residents to place their unwanted recyclables, including glass, in one city-provided container with wheels that makes it easy to take to the curb."

379,000 On the Waiting list for Single Stream Recycling Service

300,000 Homes with Single Stream Recycling collection

## Single Stream Recycling Program Expansion

Under the Automated Recycling Program, recyclables will be collected using automated collection vehicles. Homes participating in the program are issued a 66-gallon green automated cart similar to the black automated garbage can. There are currently 211,000 homes participating in the Automated Recycling program. Participants are able to put all of their unsorted recyclables into one city-provided container.

Although the cart is much bigger than the 18-gallon green bin currently used in the Curbside Recycling Program, it has wheels, making it much easier to move the recyclables to the curb. Also, the cart has a lid which contains the recyclables and keeps them from getting wet. Printed on the lid is a list of the items that can go in the cart. This program allows participants to recycle glass, which is not collected in the Curbside Recycling Program.



City of Houston  
Solid Waste Management Department

[www.houstonsolidwaste.org](http://www.houstonsolidwaste.org)



# Financial Improvements

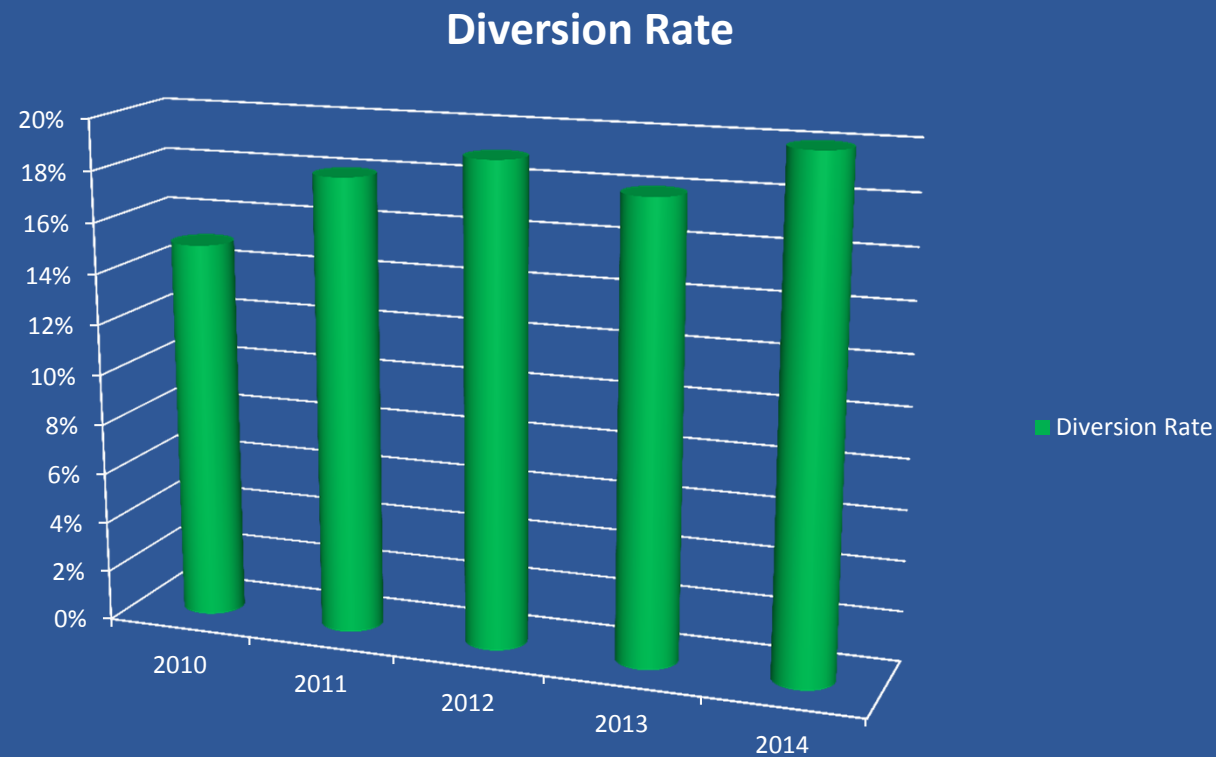
- Expansions made possible by sharp fiscal responsibility:
  - Disposal contract negotiations (saved \$14M/year and \$150M over the life of the contract)
  - Creation of recycling revenue fund;
  - Debt service finance agreement with Finance Dept
  - Departmental savings returned to SWMD



**Revenue and departmental savings along with debt service allowed the single stream program to flourish.**

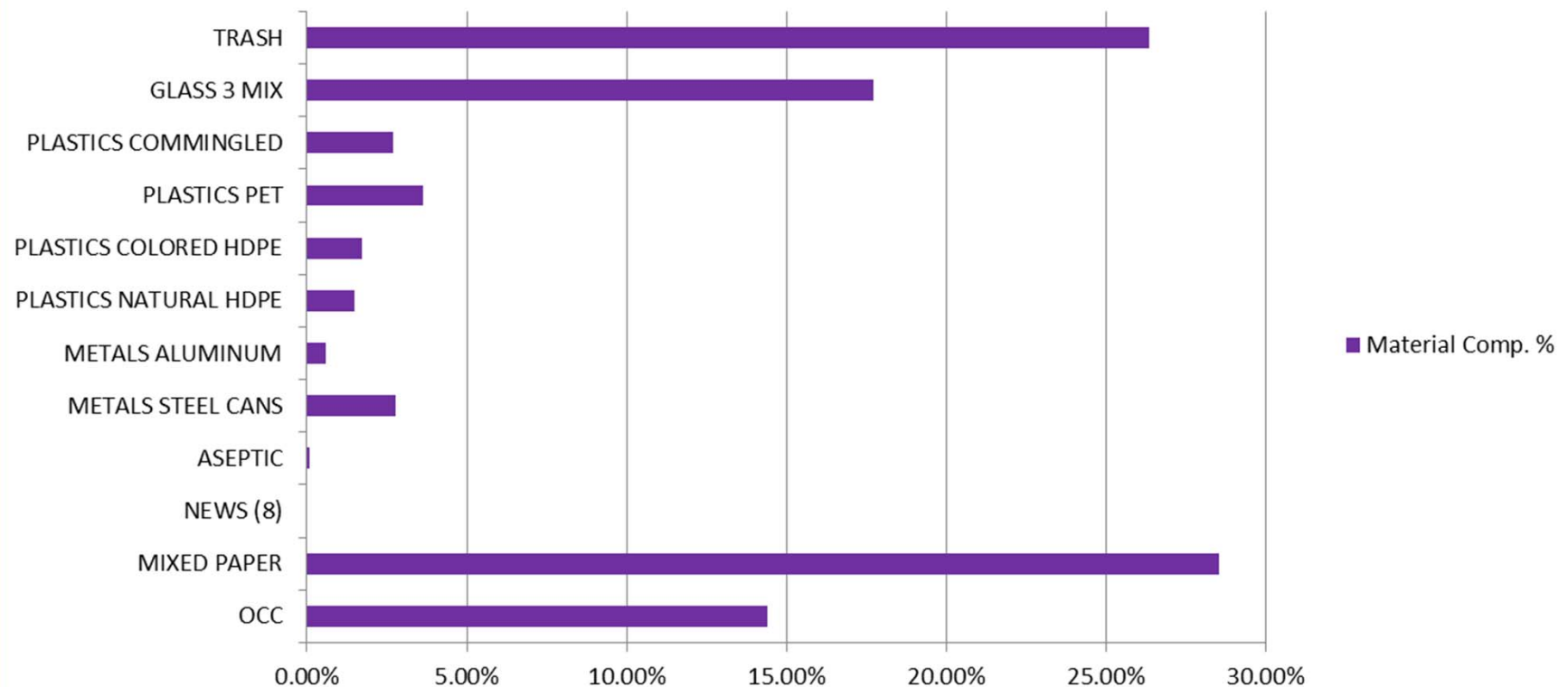
# Environmental Improvements

- Significant increases in diversion rate from residential programs.



# Single Stream Composition

**Single Stream Audit Results September 2014**





# Please Don't Put These in Recycling

Shrink wrap  
and pet food  
bags are NOT  
recyclable in  
the Houston  
program.



# Please Don't Put These in Recycling



So much film plastic!

Bags  
Table cloth  
Packaging



# Please Don't Put These in Recycling



## Please remember:

- No film plastic
- Please remove cardboard from plastic
- Don't "nest" recyclables within one another



# Westpark Recycling Center



- BOPA
- E-scrap
- Paper and magazines
- Plastics (1-5 and 7)
- Glass
- Tin and aluminum
- Corrugated cardboard
- Phone books
- Styrofoam
- Textiles

Services between 12,000 – 15,000 cars/month

# Recycling Drop-off Sites



- Kingwood
- Ellington
- Brittmore

AND

6 Neighborhood  
Depository sites

# Environmental Service Centers



- Accept household hazardous waste, e-scrap, and CFLs;
- Service between 500-700 households each month.



# Reuse Warehouse

- In the Houston area, **38%** of the waste stream is made up of construction and demolition material, much of which could be diverted and re-used.
- The Reuse Warehouse accepts donated construction materials from individuals, supply companies, builders, and remodelers. These materials are made freely available for use by any non-profit organization.
- The Reuse Warehouse is partially funded by an H-GAC Solid Waste Implementation grant.



The Reuse Warehouse opened April 2009. Since that time 2,269 tons have been diverted from the landfill. Of those 88% or 1,998 tons have been given back to the community for reuse through non-profit organizations.

# Expanded Partnerships

- 2009 June, Reuse Warehouse opens
- 2011 June, Business Recycling Program begins
- 2011 September, CompuCycle partners with City of Houston to provide monthly drop-off events for e-waste in Kingwood and Clear Lake
- 2011 November, Houston Apartment Association and City partner to recognize “Go Green Communities”
- 2012 June, Total Petrochemicals donates Styrofoam densifier to Westpark Recycling Center



# Expanded Partnerships



- 2013 September, Houston Furniture Bank partners with City to collect and recycle mattresses
- 2013 October, GreenSpot Dropoff, CompuCycle and City partner to expand permanent e-waste drop-off sites to over 30 storage facilities throughout the city
- 2014 April, Carton Council and City partner to include aseptic packaging and cartons in curbside and drop-off recycling programs
- 2014 August, Cherry Company and City partner to include concrete collection at depositories for recycling
- 2014 August, ATRS and City partner to pilot textile recycling collection at three drop-off locations

# Compostable Bag Highlights

- Since program inception there has been **no significant increase in garbage tonnage** and has seen **67% less yard waste** placed at the curb for collection.
- Major public information/education campaign effort has resulted in **voluntary compliance** by citizens, and enforcement actions have not been necessary.
- City **saves over \$1.2M annually** due to yard waste being diverted from area landfills.
- City receives revenue of \$5.25/ton from LETCO





# Treewaste Highlights

**Average annual heavy trash collected was ~300,000 tons.**



- 30%-40% Green Waste
- Since separating tree waste and heavy trash collection days, an average of 50,000 tons of tree waste is diverted and turned to mulch each year.
- The disposal savings from this program are over \$500,000/year.

# Thank you!



# Questions?