



**To:** Zero Waste Advisory Commission

**From:** Bob Gedert, Director  
Austin Resource Recovery Department

**Date:** November 13, 2013

**Subject:** **Director's Report**

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### ***Landfill Gas-to-Energy Update***

The FM 812 City of Austin Landfill was operated as a Type I MSW landfill from the 1960's until 1999. It accepted C&D material until 2009 prior to the landfill closing. Methane and Carbon Dioxide are byproducts of the decomposition of putrescible municipal solid waste, and are greenhouse gases. The current landfill gas collection system captures these landfill gases and flares them on-site through a permit from the TCEQ. It is anticipated that the methane generation will continue for at least 15 to 20 years and will be available for use in gas to energy systems.

The ARR Master Plan notes the need to capture and use these gases for beneficial reuse, while reducing the environmental impact of the burning flare. Austin Resource Recovery recently completed a feasibility study on the landfill gas generation at the FM 812 landfill site. Based upon the study it is likely there is enough LFG generation to support a Landfill Gas-to-Energy project but further work is needed:

Phase 1 (completed): Consisted of repair work on existing system, replacement of existing wellheads with ones that allow fine tuning, vacuum source for vacuum curtain wells. Results show increased methane percentage.

Phase 2 (In progress): Install additional wells, replace pinched wells, connect existing leachate risers, install pneumatic pumps in wells with liquid column heights > 50% of total well depth, replace existing electrical pumps in four condensate sumps with pneumatic pumps. Overall results should result with higher gas capture ration and higher volume flow rate.

It is anticipated that the Phase 1 and Phase 2 work will improve and increase the methane content and flow rate. Measurements will be taken and the results will be reviewed. If the results are favorable, ARR plans to release an IFP or RFP for the Landfill Gas-to-Energy project.

### ***Mobile Food Vendors Update***

As part of the URO Phase 2 discussion, staff is conducting stakeholder meetings specific to mobile food vendors. Staff provided an update at the ZWAC URO Phase 2 Committee meeting on August 13 followed by a focused stakeholder meeting on October 7, including city staff from Watershed Protection, Planning Development and Review, Code Compliance, and Health and Human Services Departments. Staff from the Public Information Office facilitated the meeting, including a Spanish translator. Stakeholders attending the meeting included service providers, restaurant owners, commissary kitchen owners, a mobile food court property owner, and owners of mobile food trailers.

During the meeting, stakeholders described how materials diversion currently worked within their operations and identified challenges and concerns with recycling and composting. Stakeholders identified conflicts within the City code (health code, land development code, universal recycling ordinance) and stated that flexibility was needed in order to divert waste. Stakeholders also described the differences among mobile food vendors – some are primarily mobile, some are periodically mobile and some are stationary (often in a “food court”). Stakeholders identified three possible options for diverting materials to recycling and composting:

1. Signed agreement with a property owner to utilize containers on the property
2. Transport materials to containers at a commissary kitchen
3. Contract with a service provider to haul materials

Additionally, on October 15, the Planning Commission’s Codes and Ordinances Committee voted in favor of initiating an amendment to the Land Development Code to establish standards and regulations for mobile food vendor courts. ARR staff will participate in the future discussions.

An additional URO Phase 2 stakeholder meeting focused on mobile food vendors is scheduled for December 4 from 2pm-4pm at City Hall in Room 1029. To supplement the in-person discussion and provide opportunities for more participation in developing solutions, staff is working with the Public Information Office to host an online forum through *SpeakUpAustin*. Staff will report a summary of findings to the ZWAC URO Phase 2 Committee meeting on December 17.

### ***Hornsby Bend Operation Update***

Yard trimmings and brush are currently collected by ARR crews from single-family residences and delivered for co-composting with biosolids at Hornsby Bend (Hornsby Bend) Biosolids Management Plant, operated by the Austin Water Utility (AWU). In FY13, ARR processed 34,861 tons of yard trimmings and brush delivered to Hornsby Bend for co-composting. The vast majority of the material was processed at Hornsby Bend for the Dillo Dirt Program.

When the February 2013 fire occurred, ARR received temporary permission from the TCEQ to receive and grind Brush and Yard Trimmings at the FM812 Landfill, until normal operations could be restarted at Hornsby-Bend. Much of this mulch material was given away to residents, or used in the maintenance process of the landfill grounds, with the remainder taken to Hornsby Bend after the cleanup was completed.

The February fire at Hornsby Bend started in a pile of “curing” compost in preparation for screening to produce Dillo Dirt. With high winds (up to 60 mph) the fire spread quickly eastward to the basins, eventually involving all five storage basins. Basins 1 and 3 contained “premix”: a combination of biosolids and yard/tree trimmings made in preparation for composting, Basin 2 contained yard and tree trimmings and ARR equipment, and Basins 4 and 5 contained stored Class B biosolids.

All materials were targeted for beneficial reuse. Initially AWU went out for proposals on removing these fire damaged materials, but the proposals all involved some landfilling and were very expensive. So it was decided to try to beneficially reuse these materials through a larger version of the biosolids land application land composting contract that has been in place for some years. City Council recently approved this new larger biosolids land application and composting contract which AWU expects to award in November. This new contract will be primarily focused on land application of fresh biosolids produced at the belt presses following digestion, but this contract will also compost the premix in Basins 1 and 3, utilizing the final product for agricultural application. The staff at Hornsby Bend will also be utilizing the old premix from Basins 1 and 3 for composting. Biosolids in Basin 4 and 5 will be tested for Class A and given away or used for offsite land application through the contract.

As a result of the fire and the resulting cleanup, Austin Resource Recovery and Austin Water Utility are re-evaluating the composting and bio-solids programs and plan to redesign the programs to accommodate the addition of residential sourced food waste and to establish and implement fire prevention measures.

***Twelve Market Categories of Recyclable Materials – Chapter 9.2***  
***(Part 5 of a series describing the chapters of the ARR Master Plan)***

Throughout the ARR Master Plan are references to “Materials Management”. Materials management uses and reuses resources at their highest and most productive level throughout the materials’ life cycles. A materials management systems approach considers the life-cycle impacts of disposal and carbon footprint reductions from source reduction, reuse, remanufacturing, recycling and composting. Environmentally preferable purchasing policies, upstream redesign, extended producer responsibility systems and clean manufacturing practices are additional methods of materials management.

Materials management also provides the City with the economic development potential of reusing valuable discarded materials locally. The City can encourage local economic development by working with stakeholders to adopt policies and programs that incentivize, encourage, and even require more environmental responsibility or use of locally produced products made of recycled content to stimulate a sustainable green market economy.

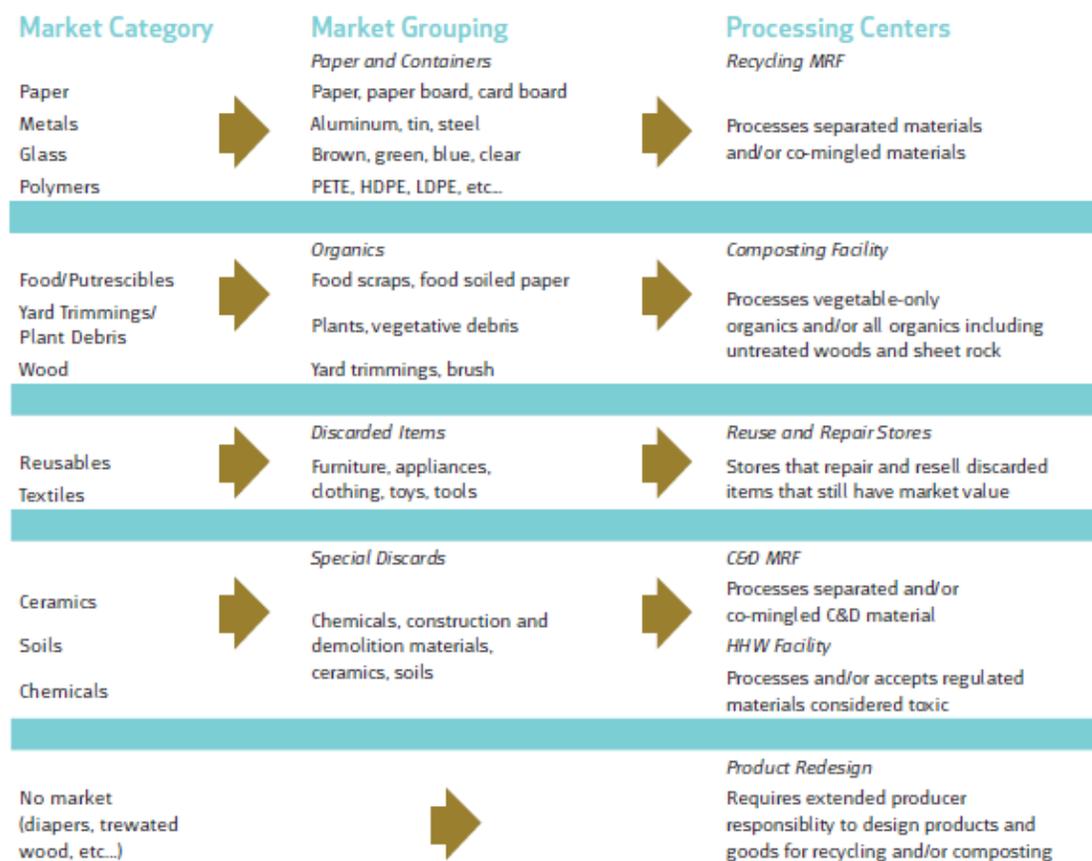
A materials management systems approach diverts materials currently being disposed in landfills through source reduction, reuse, remanufacturing, recycling and composting. All discards can be sorted into 12 basic categories of divertable materials, representing 90 percent of the overall waste stream. Thus, 90 percent of discarded materials are either recyclable or compostable in today’s marketplace. An explanation of how these 12 market categories are managed is presented in Fig. 15 Twelve Major Categories of Discarded Materials. (presented in the illustration on the next page)

The Department plans to conduct a waste characterization study of its various waste streams through a 12–market category inventory of the City residential, commercial, industrial and institutional waste streams. The results of this study will enable the Department to focus on marketable materials currently disposed in local landfills.

Source: Austin Resource Recovery Master Plan, excerpts from Chapter 9

**Fig. 15 - Material Management of Twelve Market Categories** (page 91 – Master Plan)

**Fig. 15 - Material Management of Twelve Market Categories**



**Staff Hires and Promotion Updates**

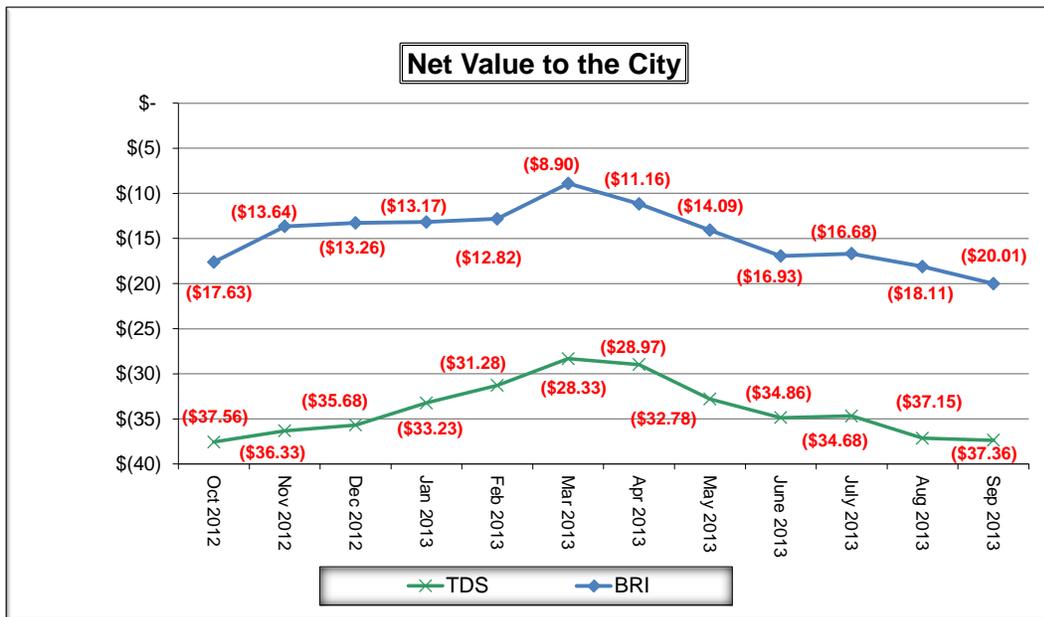
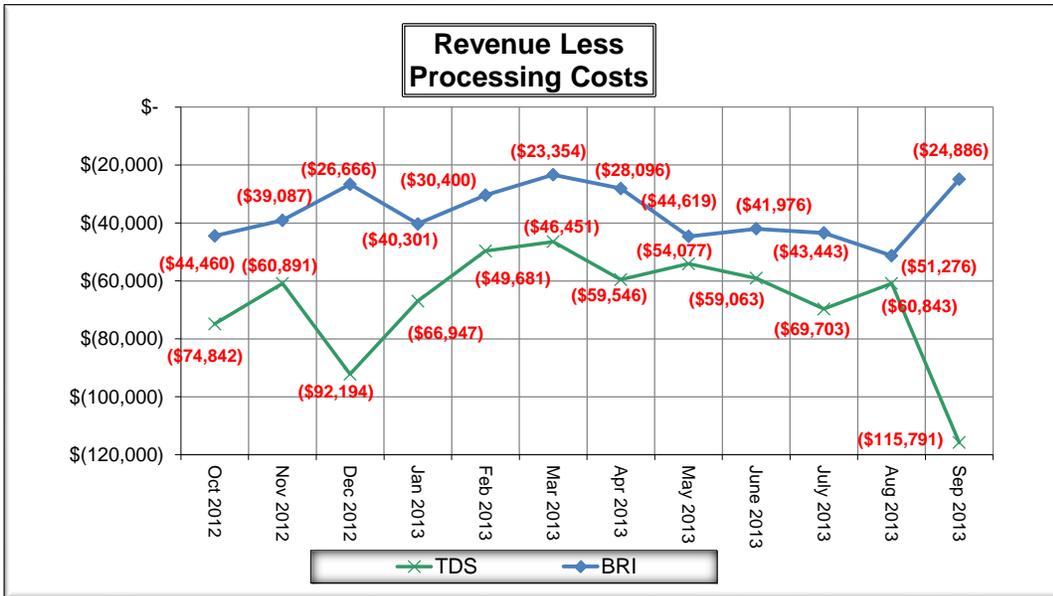
<b>New employee</b>	<b>Promotions</b>	<b>Notes: Title/ Division</b>
Christine Whitney		Brownfields Program Manager
Marissa Monroy		Public Information Specialist
Arnold Castellanos		Austin Resource Recovery Operator Sp
Nathaniel Hicks		Austin Resource Recovery Operator
Charles Mark		Temporary Associate
Jackie Scott		Temporary Associate
Gilbert Vera		Temporary Associate
	Augustin Martinez	Austin Resource Recovery Operator Sp Senior



# Single Stream Recycling Statistical Report - November 13, 2013 ZWAC Meeting

FY 2012-13: October, 2012 through September, 2013

Texas Disposal Systems (TDS) and Balcones Resources, Inc. (BRI)



# Austin Resource Recovery Curbside Collection and HHW Operations

		LAST FISCAL YEAR				CURRENT FISCAL YEAR				
		FY 2012	FY 2012 <i>Goal</i>	August 2012	September 2012	FY 2012 (Oct-Sept)	Aug 2013	Sept 2013	FYTD 2013 (Oct-Sept)	FY 2013 <i>Goal</i>
Tons Disposed	Tons of curbside Garbage	129,653	123,000	10,801	9,331	129,653	10,145	9,908	124,183	127,000
	Tons of Curbside Bulk Disposed	7,611	7,500	832	568	7,611	753	1,011	8,500	6,600
	HHW Operations Tons Disposed	434	400	23	44	434	39	14	381	400
	<b>Total Disposed Tons Collected Curbside and from HHW Operations</b>	<b>137,698</b>	<b>130,900</b>	<b>11,656</b>	<b>9,943</b>	<b>137,698</b>	<b>10,937</b>	<b>10,933</b>	<b>133,064</b>	<b>134,000</b>
Tons Diverted	Tons of curbside recycling	54,009	60,000	4,549	4,023	54,009	4,451	4,327	53,702	63,000
	HHW Operations Tons recycled/reused	208	150	23	17	208	17	13	240	150
	Tons of Curbside Yard Trimmings	21,712	25,000	1,210	1,122	21,712	1,103	1,201	25,898	27,000
	Tons of Curbside Bulk Recycled	233	200	13	16	233	11	14	181	800
	Tons of Curbside Brush Collected	7,720	7,500	730	963	7,720	524	748	7,359	6,400
	<b>Total Diverted Tons Collected Curbside and from HHW Operations</b>	<b>83,882</b>	<b>92,850</b>	<b>6,525</b>	<b>6,141</b>	<b>83,883</b>	<b>6,106</b>	<b>6,303</b>	<b>87,380</b>	<b>97,350</b>
<b>Total Tons Collected Curbside and from HHW Operations</b>		<b>221,580</b>	<b>223,750</b>	<b>18,181</b>	<b>16,084</b>	<b>221,580</b>	<b>17,043</b>	<b>17,236</b>	<b>220,444</b>	<b>231,350</b>
<b>Percent of Waste Stream Diverted by Curbside and HHW Operations</b>		<b>37.86%</b>	<b>41.50%</b>	<b>35.89%</b>	<b>38.18%</b>	<b>37.86%</b>	<b>35.83%</b>	<b>36.57%</b>	<b>39.64%</b>	<b>42%</b>
<b>Pounds of Garbage collected per customer per pickup</b>		<b>27.05</b>	<b>25.06</b>	<b>26.79</b>	<b>23.24</b>	<b>27.05</b>	<b>24.74</b>	<b>24.21</b>	<b>25.53</b>	<b>26.03</b>
Number of Garbage customers		184,316	188,807	186,246	184,989	184,316	189,408	188,626	187,105	187,676
<b>Pounds of Recycled materials collected per customer per pickup (every other week)</b>		<b>22.71</b>	<b>24.44</b>	<b>22.74</b>	<b>20.20</b>	<b>22.71</b>	<b>21.89</b>	<b>21.31</b>	<b>22.25</b>	<b>25.82</b>
Pounds of Yard Trimmings collected per customer per week		4.56	5.09	3.02	2.82	4.56	2.71	2.96	5.37	5.53
Number of Recycling and Yard Trimmings customers		182,971	188,807	184,783	183,531	182,971	187,865	187,109	185,658	187,676
Total tons of Dead Animals Collected from COA rights-of-way and the animal shelter		69	115	4	4	69	3	5	50	85

## Austin Resource Recovery Curbside Collection and HHW Operations

