AUSTIN RESOURCE RECOVERY
A City of Austin Service Department

To: Zero Waste Advisory Commission

From: Bob Gedert, Director
Austin Resource Recovery Department

Date: May 13, 2015

Subject: **Director's Report to ZWAC**

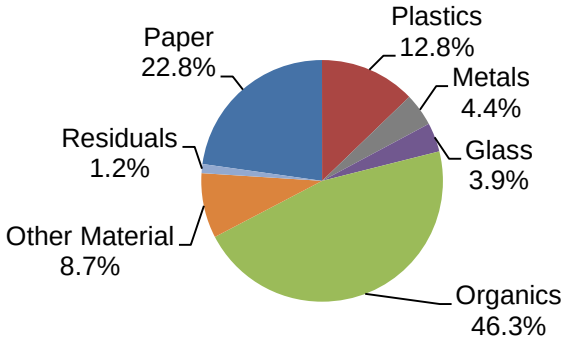
Waste Characterization Study

In order to track progress towards its Zero Waste goal and identify needs and opportunities for diversion of particular materials, the Master Plan recommended that a waste characterization study be completed and then updated every five years. CB&I were hired to perform two studies: a waste characterization study (2014-15), and a city-wide diversion assessment (2015-16).

To evaluate the specific composition of the City's waste stream, CB&I conducted a field sorting study in September and October of 2014 to determine the composition of the curbside trash and curbside recyclables collected by ARR. The composition of the ARR-collected trash stream by material class is shown in Figure 11 (below). Organics (including food wastes, yard trimmings, wood, and other organic materials) comprise nearly half of the disposed waste stream. Traditional recyclable materials (paper, plastics, metals, and glass) comprise an additional 44% of the disposed waste stream.

A significant portion of the ARR-collected trash stream is potentially recoverable and could be diverted from disposal by residents through the curbside recycling program. Materials classified as "other" (e.g., other paper, other plastic) are less likely to be recoverable, unless the processing facilities accept them (e.g., aseptic containers, plastics #3-7 which were not separately characterized in the sorting study).

FIGURE 11. ARR-COLLECTED TRASH STREAM, BY MATERIAL CLASS



Source: CB&I, City-Serviced Residential Waste Characterization Study, 2014

The final report from CB&I on the Waste Characterization Study offers a stark view of the "waste" discarded into the residential trash carts. Of the residential trash sent to the landfill, 44.8% is recyclables and 46.3% is organics. This study demonstrates that 90% of what is sent to the landfill can be diverted toward recycling and organic composting.

CB&I provided a number of recommendations for near-term implementation that may increase diversion cost-effectively.

1. Continue customer education
2. Perform an analysis of diversion rates on a route basis throughout the City
3. Expand access to curbside organics collection services to increase diversion of food waste from disposal
4. Review existing contracts with recycling and composting facilities and identify incentives to increase diversion that may be included in the next contract
5. Investigate recycling options for bulk items which are currently disposed, such as furniture and mattresses
6. Implement a textiles collection program

CB&I also provided longer term recommendations:

1. Implement a ban on yard trimmings in trash
2. Provide recycling collection service every week
3. Provide trash collection every other week

The Director has met with staff regarding these recommendations, and will be presenting changes to department programs in the near future. Given the physical results as well as the recommendations from this study, ARR will discuss new directions and program changes with ZWAC in the coming months.

Excerpts: CB&I, City-Serviced Residential Waste Characterization Study, 2014
{with editorial comments and additions from Bob Gedert}

Universal Recycling Ordinance Update

Purpose
The purpose of this report is to provide the public with a status of the Universal Recycling Ordinance (URO or Ordinance) implementation.

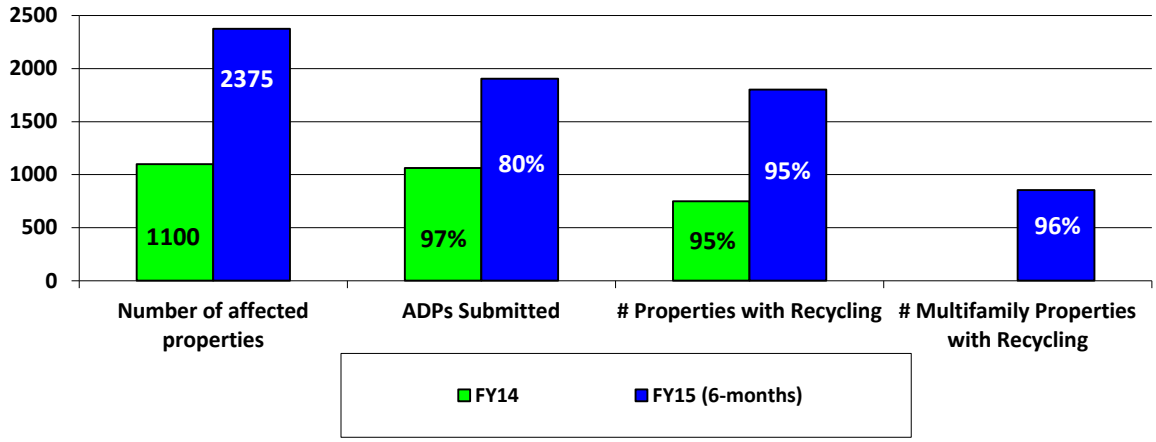
Background
ARR's Business Outreach Team (BOT), part of the Strategic Initiatives Division, is focused on helping the business community make progress towards Austin's Zero Waste goal. In addition to developing educational materials, coordinating outreach events, delivering presentations and conducting onsite technical assistance, the six person team is also responsible for establishing processes and systems to implement the Ordinance.

Intent of the URO
To ensure that recycling is available to tenants and employees at affected commercial properties, particularly multifamily properties.

Key Performance Measures

- Percentage of properties with recycling – measures affected properties that report recycling service is available to tenants and employees. A higher percentage indicates access to recycling is available at more properties in Austin.
    - Percentage of affected multifamily properties with recycling – focuses on the proportion of affected multifamily properties with recycling available to residents. A higher percentage indicates more multifamily tenants have access to recycling. *Note: FY14 Information not readily available due to reporting system limitations.*
- Percentage of properties submitting Annual Diversion Plans (ADPs) – measures affected properties reporting as proportion of the total properties required to report. A higher percentage indicates that more affected properties are aware of the ordinance and its requirements.

GRAPH OF KEY PERFORMANCE MEASURES (FY14 vs. FY15)



Detail of Key Performance Measures

The following key performance measures indicate effectiveness of the URO:

	FY2014	FY2015 (YTD as of 4/15/2015)	What does this measure tell us? What is the expectation of this measure over time?
# Affected Properties	1100	2375	Indicates the magnitude of properties ARR is required to communicate with and regulate. Over time, the # of URO affected properties increases dramatically to more than 19,000 by FY19. *NOTE: The number of affected properties increased 69% from FY13 to FY14 and an additional 126% from FY14 to FY15.*
# Plans Submitted	1064 (97% submitted)	1904 (80% submitted)	Indicates awareness of ordinance and requirements. FY15 is the first year of online database submittal. As more surveys are completed the reliability and consistency of data will increase.
# of Properties with Onsite Recycling	750 (94.6% with onsite recycling)	1801 (94.5% with onsite recycling)	Indicates the number of properties compliant with requirement to provide access to recycling. As smaller properties are affected by the ordinance over the next few years, staff anticipates this percentage to fall slightly before increasing again as the ordinance reaches full implementation for recycling requirements in 2018.
# of Multifamily Properties with Onsite Recycling	N/A	854 (96% of multifamily properties)	Indicates the number of multifamily properties that have onsite recycling available for tenants and employees. As smaller multifamily properties, especially condominiums, are affected by the ordinance over the next few years, staff anticipates this percentage to fall slightly before increasing again as the ordinance reaches full implementation for recycling requirements in 2018. *NOTE: The total number of affected multifamily properties in FY15 is 1097. Because information for FY14 was submitted using the old ADP, data for this measure is not readily available for FY14*

MAJOR MILESTONE - New Annual Diversion Plan (ADP)
The most important achievement by the Business Outreach Team was launching the new online Annual Diversion Plan (previously called the Recycling Plan) on Oct. 1, 2014. The original intent of the ADP was to use the information collected to develop more effective outreach materials, initiatives, and policies that result in higher diversion rates in Austin. Key features with the new ADP that were not possible with the old ADP include:

- Password protection for the customer;
- Cloud-based database that allows multiple ways for customers to report diversion;
- Auto-calculation of capacity which provides immediate feedback to the customer;
- Tracking of submissions by facility, by year, in order to analyze trends
- Capability of tracking waivers, compliance actions and customer contacts all in one place.

The new system is far more reliable and stable than the previous system and will be essential in monitoring effectiveness of the URO. The ADP can be accessed at: (http://www.austintexas.gov/department/annual-diversion-plan-recycling-plan)

Additional Business Outreach Successes in 2014

- Conducted 41 business-focused training events attended by more than 820 participants.
- Improved the Business Outreach website including creating a "Business Hub" for easy access of online materials http://www.austintexas.gov/department/services-business
- Created the URO Technical Guide for haulers and facility managers: http://www.austintexas.gov/sites/default/files/files/URO_Technical_Guide_web_201501.compressed.pdf
- Produced the first "Zero Waste 101" video: https://www.youtube.com/watch?v=zL5a9e9IH04

Case Studies
ARR staff provides more than compliance information. They are dedicated to ensuring that the recycling programs established at properties are effective and sustainable. This level of service takes time, but reaps significant, long-lasting benefits:

- **Paddock at Norwood.** A 228 unit multifamily development in Austin for lower-income tenants. Property management was concerned about participation and overall costs. BOT Staff met with the property manager to develop a plan for recycling available on opening day which included a "Resident Welcome" event to raise awareness about the recycling program. During the leasing process, residents now receive a recycling starter kit that includes a blue 4.5-gallon "multi-recycler" bucket and a FAQs pamphlet for effective recycling. Residents also take an orientation tour which includes apartment staff pointing out the location of recycling receptacles.

- **Music Labs** – Music Labs' staff were apprehensive about implementing a recycling program, concerned that their customers/tenants would not participate. Their "before" discard capacity included a 6 -yard trash dumpster collected 3 times per week and no recycling. After meeting with ARR staff, Music Labs now has a 6-cubic yard dumpster for recycling that is collected twice per week, a single 96-gallon cart for trash and a 92.7% diversion rate.

- **JuiceLand** –JuiceLand participated in the Commercial Recycling Rebate Pilot. With BOT staff guidance, JuiceLand successfully integrated both recycling and composting into all 12 Austin-area juice bars.

Single Use Bag Ordinance Update Recommendation No. 20150114-003a

Scope:

To determine the effectiveness of the single use bag ordinance in Austin, TX, both according to environmental and economic impact.

Direction:

The first step to find the clearest assessment of the impact of the ordinance was to conduct research at all possible levels, from interviews with government officials, industry executives, scientists, attorneys, and non-profit directors and staff. Coupled with literature review, this serves as a methodology to gain baseline information and perspective from as many stakeholders as were willing to cooperate.

The second step was to coordinate a comparative litter analysis of municipalities both with and without an ordinance. This was completed with the cooperation of Keep Fort Worth Beautiful and Keep Austin Beautiful. Fort Worth holds an annual "Cowtown Cleanup" to remove litter on a large scale in highly visible locations. Keep Austin Beautiful was asked to coordinate their team leaders during the annual "Clean Sweep" event and ask them to collect plastic bag numbers as a component of total litter collected. Data is still pending from their analysis.

The third step was to coordinate an "audit with and audit" at both Balcones and Texas Disposal Systems. During the semi-annual recycling composition analysis, plastic bags of both the single use and reusable varietals were collected, weighed, sorted, characterized, and weighed again to obtain precise numbers from each MRF. All plastic bags (reusable and single use) comprised **0.052%** of the total, while single use bags comprised **0.002%** of the total recyclable material throughput. This data will serve as a baseline for the recycling composition comparison figures. The same methodology will be carried out at TDS with a recycling stream from an unknown municipality to contrast the findings.

Litter Impact:

Litter is the largest post-consumer environment impactor from single use bags. While there is not much data on the actual impact to ecosystem services these bags, and their subsequent removal, have had on the Central Texas area, the Lower Colorado River, and the Gulf of Mexico; There is a high likelihood that the ordinance has changed the consumer mentality by shifting behavior towards becoming more conscious in their choices at the store. In Fort Worth, preliminary analysis shows a plastic bag litter composition of **0.13%** by weight of all litter picked up by volunteers. The full results from Austin are still pending; however, early results indicate a much lower figure for the Austin area. Anecdotally, the reduction has been dramatic. One source suggested a possible reduction of up to *90%* compared to the pre-ordinance era. Figure 1 shows the difference two years can make, as the photos on the left were taken one week before the ordinance, and the photos on the right were taken 2 years and one month after the ordinance went into effect. Both sets of pictures were taken at the same location on a windy day.

FIGURE 2. Before and After photos from the Allied Waste Services landfill in Austin, Texas.
Photos on the left were taken on the 25th of February, 2013.
Photos on the right were taken on the 24th of March, 2015.
While the photographers were different, the locations were replicated as accurately as possible.

Photo Credit for Above: K. Getter, Balcones Resources

Photo Credit for Above: A. Waters – Austin Resource Recovery

Actions Taken By City Council

There were no Council actions regarding Austin Resource Recovery submitted items from January through April. The Open Space, Environment & Sustainability Council Committee meeting, held on Wednesday April 29th, briefly discussed Councilmember Zimmerman proposed expansion of HHW services to all ten districts. No action was taken. The Public Utilities Council Committee plans to discuss the 5-year Organics Collection service, however that discussion has not been scheduled to date.

Personnel Changes April 2015

New Employee	Retirees	Promotions	Title
		Michael Turner	ARR Crew Leader
		Christopher Farr	ARR Crew Leader
		Kevin Roland	ARR Crew Leader
		Glenn Davis	ARR Oper. Specialist, Sr.
Eli Duran			Temporary, ARR Associate
Cedric Henry			Temporary, ARR Associate
Patrick Rostro			Temporary, ARR Associate
Christopher Williams			Occ Health/Safety Spec Sr.
Marketh Biscoe			Temporary, ARR Associate
Hope Davis			Temp, Admin - Finance
Dwight Hawkins			Temporary, ARR Associate
Eric Hernandez			Temporary, ARR Associate
Ronald Neumond			Temp, Waste Div. Planner
Gilbert Sanchez			Temporary, ARR Associate
Raymond Selby			Temporary, ARR Associate
Melissa Heald			Public Information Spec
	Lynn Wolfe		HR Advisor
	Debbie Kelton		Occ Health/Safety Spec Sr.
	Cirilio Sanchez		ARR Operator Sr
	Laura Williams		ARR Operator Sr
	Diane Almanza		Contract Compliance Specialist

Positions we are looking to fill in May 2015

Position	# open	Contact Manager	Posting Status
Support Services Supervisor	1	Jessica Frazier	Position Posted
Temp Waste Diversion Planner	4	Jessica King	Top candidates to start
Waste Diversion Planner	1	Jessica King	Position to be Posted
Planner Senior	1	Jessica King	Top candidate to start
Public Information Spec. Senior	1	Jessica King	Top candidate selected
Research Analyst	1	Tammie Williamson	Position to be Posted
Temporary HR Assistant	1	Blanche Quarterman	Screening Applications
Performance Consultant	1	Blanche Quarterman	Position to be Posted
Occ. Health + Safety Spec Sr.	1	Jeff Dilbert	Position Posted
ARR Operator	5	Ron Romero	Top candidates to start
ARR Crew Leader	1	Ron Romero	Position posted
ARR Operator Sr.	1	Ron Romero	Position posted
ARR Operator Sr.	2	Donald Hardee	Top candidates to start
Temporary Grant Coordinator	1	Donald Hardee	Position posted
Envir. Program Specialist	2	Donald Hardee	Top candidates selected
ARR Operator (YT)	5	Richard McHale	Screening applications
ARR Operator Sr. Brush/Bulk	2	Richard McHale	Position posted
ARR Oper. Sr. Blvd Sweeping	1	Richard McHale	Interviews Scheduled
ARR Operator Sr. Litter Control	1	Richard McHale	Interviews Scheduled
Temporary, ARR Associate	8	McHale/Romero	Screening applications

* Temporary denotes a Temporary worker

Zero Waste Advisory Commission - May 13, 2015
Single Stream Recycling Statistical Report
FY 2014-15: October, 2014 - March, 2015
Texas Disposal Systems (TDS) and Balcones Resources, Inc. (BRI)

Month and Year	Contractor	Tons Delivered	Contractor Payments			Net Value to the City	Landfill Cost Avoidance	
			Revenue	Processing Cost	Net Amount Due/(Owed)	$ per ton value	Cost Per Ton	Total
October 2014	TDS	1,794.16	$109,458	$164,166	($54,708)	($30.49)	$21.49	$38,556
	BRI	2,973.81	$161,505	$235,645	($74,140)	($24.93)	$21.49	$63,907
	Total	4,767.97	$270,963	$399,811	($128,848)			$102,464
November 2014	TDS	1,696.79	$99,202	$155,256	($56,054)	($33.04)	$21.49	$36,464
	BRI	2,587.55	$146,047	$206,077	($60,030)	($23.20)	$21.49	$55,606
	Total	4,284.34	$245,249	$361,333	($116,085)			$92,070
December 2014	TDS	2,291.38	$132,131	$209,661	($77,531)	($33.84)	$21.49	$49,242
	BRI	3,042.85	$169,341	$240,930	($71,589)	($23.53)	$21.49	$65,391
	Total	5,334.23	$301,472	$450,592	($149,120)			$114,633
January 2015	TDS	2,054.29	$107,991	$187,968	($79,976)	($38.93)	$21.49	$44,147
	BRI	3,078.17	$158,610	$243,634	($85,024)	($27.62)	$21.49	$66,150
	Total	5,132.46	$266,601	$431,601	($165,000)			$110,297
February 2015	TDS	1,665.75	$77,949	$152,416	($74,467)	($44.70)	$21.49	$35,797
	BRI	2,542.52	$118,863	$202,630	($83,767)	($32.95)	$21.49	$54,639
	Total	4,208.27	$196,812	$355,046	($158,234)			$90,436
March 2015	TDS	2,294.45	$107,883	$209,942	($102,059)	($44.48)	$21.49	$49,308
	BRI	2,336.33	$109,013	$186,846	($77,833)	($33.31)	$21.49	$50,208
	Total	4,630.78	$216,896	$396,788	($179,892)			$99,515
FY 2014-15 Totals		**28,358.05**	**$1,497,992**	**$2,395,171**	**($897,179)**			**$609,414**

Material Composition Percentages

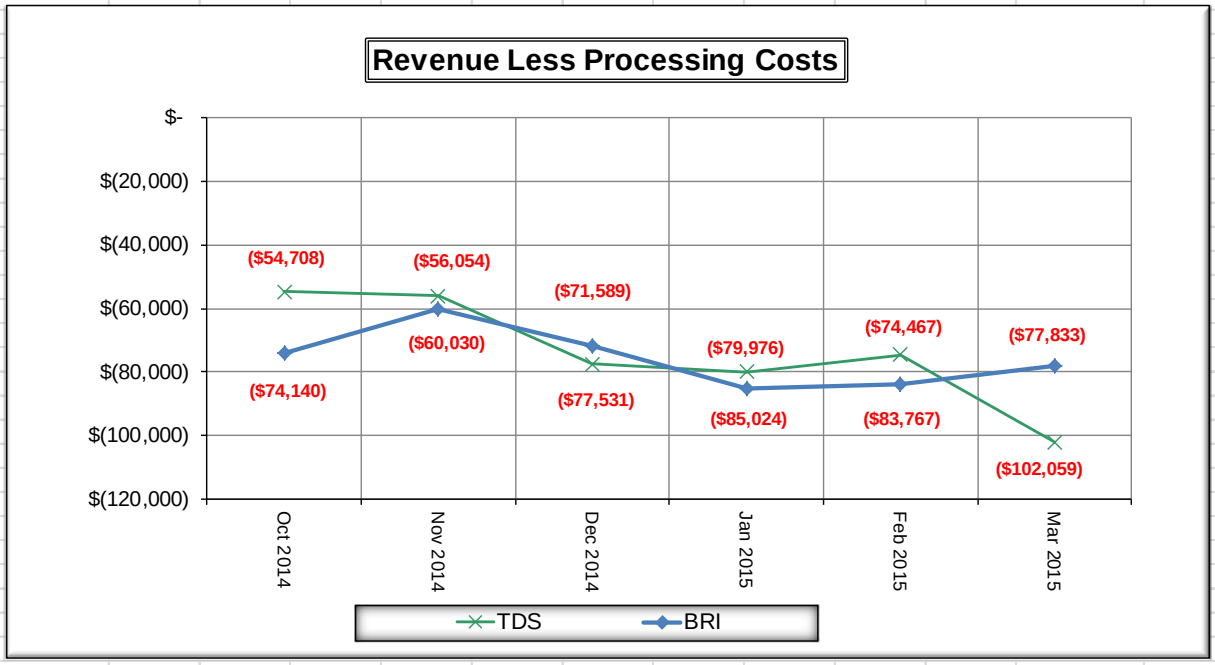
	Previous Audit		*Current Audit*	
	TDS	**BRI**	**TDS**	**BRI**
Material	***4/26/14***	***4/12/14***	***10/18/14***	***11/1/14***
ONP #8 (Old Newspaper)	15.74%	25.52%	20.71%	24.77%
OCC (Corrugated Cardboard)	15.77%	10.58%	14.64%	10.69%
Mixed Paper	12.28%	12.00%	10.40%	13.82%
Plastic Bottles - PETE	2.93%	2.27%	2.72%	2.23%
HDPE Natural	1.18%	0.88%	1.06%	0.80%
HDPE Color	1.08%	0.91%	0.95%	0.52%
Mixed Plastics 3-7	3.19%	2.02%	3.72%	2.71%
UBC (Used Beverage Cans)	1.02%	0.50%	1.19%	1.06%
Tin Cans	1.18%	1.06%	1.57%	1.60%
Scrap Metal	0.74%	0.82%	0.83%	0.71%
Glass	27.21%	27.51%	28.12%	28.70%
Residual - trash	17.69%	15.93%	14.08%	12.39%
Total	100.00%	100.00%	100.00%	100.00%

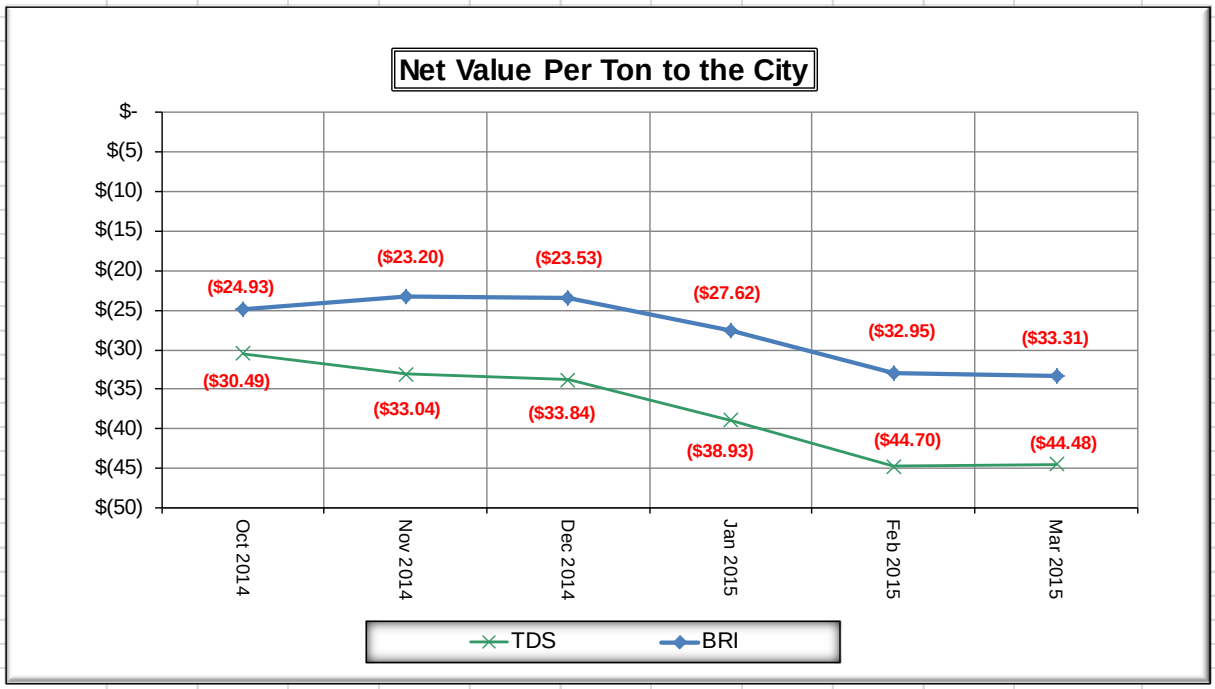
Zero Waste Advisory Commission - May 13, 2015

Single Stream Recycling Statistical Report

FY 2014-15: October, 2014 - March, 2015

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





Zero Waste Advisory Commission

Single Stream Recycling Statistical Report

FY 2013-14: October, 2013 through September, 2014

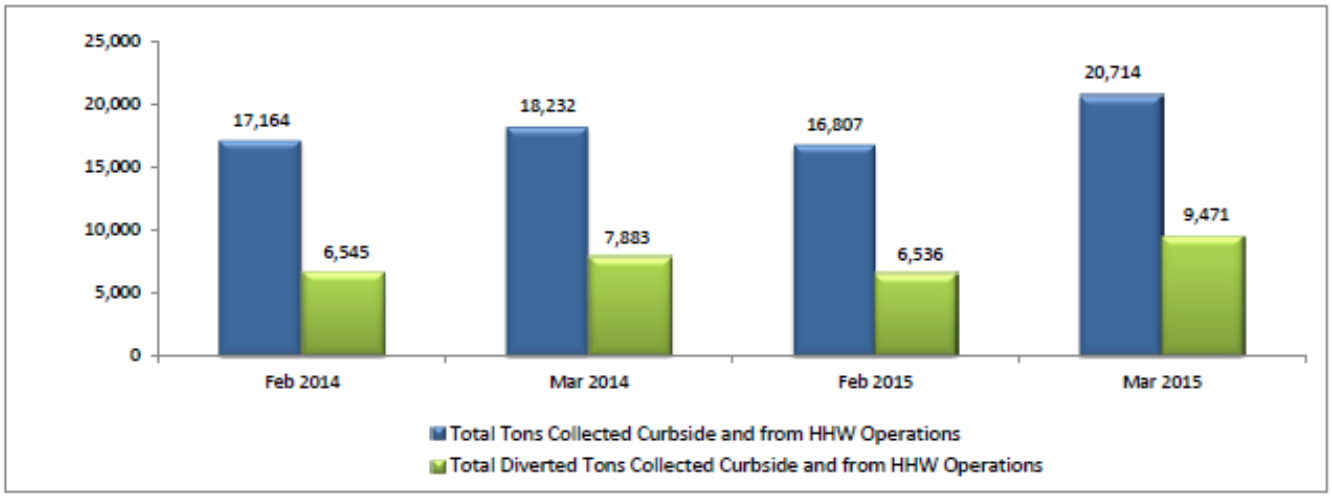
Texas Disposal Systems (TDS) and Balcones Resources, Inc. (BRI)

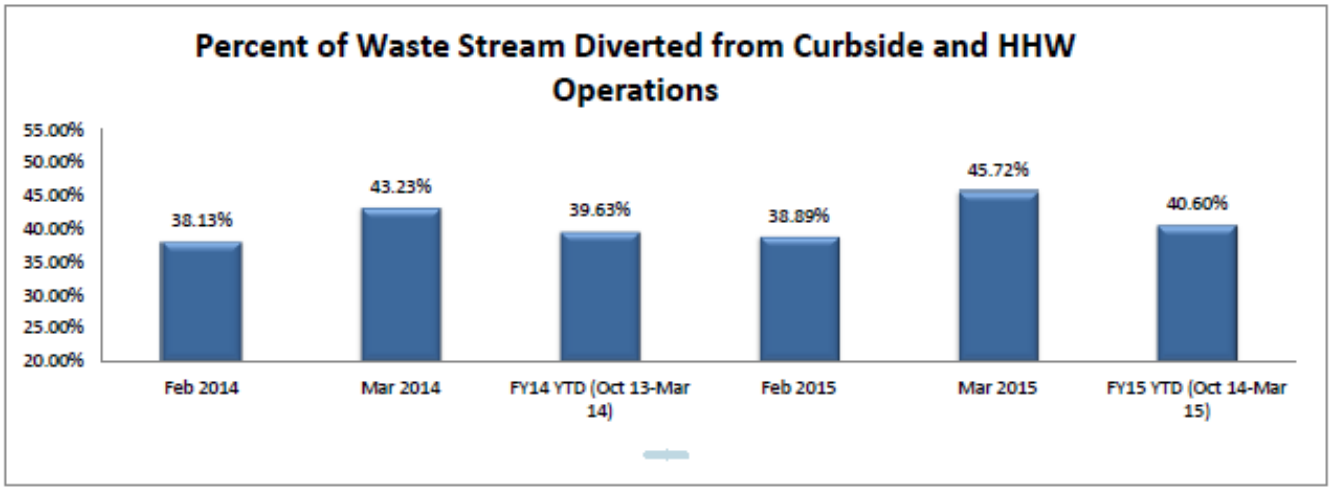
Month, Year	Contractor	Tons Delivered	Revenue	Processing Cost	Net Amount Due/(Owed)
October, 2013	TDS	1,824.24	$108,623	$168,473	($59,850)
	BRI	2,910.84	$177,974	$230,825	($52,850)
	Total	4,735.08	$286,598	$399,298	($112,701)
November, 2013	TDS	1,682.84	$99,569	$153,980	($54,411)
	BRI	2,775.04	$165,885	$220,429	($54,544)
	Total	4,457.88	$265,454	$374,409	($108,955)
December, 2013	TDS	2,237.24	$130,657	$204,707	($74,051)
	BRI	2,781.35	$167,489	$220,913	($53,423)
	Total	5,018.59	$298,146	$425,620	($127,474)
January, 2014	TDS	2,108.75	$123,783	$192,951	($69,167)
	BRI	2,963.60	$175,333	$234,864	($59,531)
	Total	5,072.35	$299,116	$427,814	($128,698)
February, 2014	TDS	1,821.99	$108,246	$166,712	($58,466)
	BRI	2,392.85	$142,235	$191,172	($48,937)
	Total	4,214.84	$250,482	$357,884	($107,403)
March, 2014	TDS	1,875.52	$115,807	$171,610	($55,803)
	BRI	2,470.59	$152,032	$197,124	($45,092)
	Total	4,346.11	$267,839	$368,733	($100,894)
April, 2014	TDS	1,954.76	$119,253	$178,861	($59,608)
	BRI	2,757.04	$151,574	$219,052	($67,478)
	Total	4,711.80	$270,827	$397,912	($127,085)
May, 2014	TDS	2,179.65	$132,219	$199,438	($67,219)
	BRI	2,572.14	$140,352	$204,897	($64,545)
	Total	4,751.79	$272,571	$404,335	($131,764)
June, 2014	TDS	2,012.96	$121,013	$184,186	($63,173)
	BRI	2,618.97	$141,425	$208,482	($67,057)
	Total	4,631.93	$262,438	$392,668	($130,230)
July, 2014	TDS	2,301.98	$137,844	$210,631	($72,787)
	BRI	2,485.29	$133,677	$198,249	($64,572)
	Total	4,787.27	$271,521	$408,880	($137,359)
August, 2014	TDS	2,066.90	$125,679	$189,122	($63,443)
	BRI	2,223.71	$121,132	$178,225	($57,093)
	Total	4,290.61	$246,811	$367,347	($120,536)
September, 2014	TDS	2,540.99	$154,065	$232,501	($78,435)
	BRI	2,153.26	$117,864	$172,832	($54,968)
	Total	4,694.25	$271,929	$405,333	($133,404)
FY 2013-14 Totals		**55,712.50**	**$3,263,731**	**$4,730,234**	**($1,466,503)**

Austin Resource Recovery Curbside Collection and HHW Operations

				LAST FISCAL YEAR			CURRENT FISCAL YEAR			
		FY 2014	FY 2014 Goal	Feb 2014	Mar 2014	FY14 YTD (Oct 13-Mar 14)	Feb 2015	Mar 2015	FY15 YTD (Oct 14-Mar 15)	FY 2015 Goal
Tons Disposed	Tons of curbside Garbage	127,924	123,000	9,571	10,175	61,641	9,483	11,090	63,653	123,000
	Tons of Curbside Bulk Disposed	8,892	7,000	1,025	149	3,710	757	121	3,264	8,459
	HHW Operations Tons Disposed	442	390	23	26	183	31.43	33	193	330
	Total Disposed Tons Collected Curbside and from HHW Operations	137,258	130,390	10,619	10,350	65,534	10,271	11,244	67,110	131,789
Tons Diverted	Tons of curbside recycling	55,494	64,000	4,182	4,346	27,624	4,209	4,625	28,496	60,000
	HHW Operations Tons recycled/reused	296	150	17	20	120	17.63	38	121	220
	Tons of Curbside Yard Trimmings	27,357	31,000	1,779	3,096	12,347	1,890	4,326	14,480	29,037
	Tons of Curbside Bulk Recycled	176	783	19	1	77	12	4	70	180
	Tons of Curbside Brush Collected	6,692	6,200	548	420	2,856	407	478	2,697	8,066
	Total Diverted Tons Collected Curbside and from HHW Operations	90,015	102,133	6,545	7,883	43,025	6,536	9,471	45,864	97,503
	Total Tons Collected Curbside and from HHW Operations	227,273	232,523	17,164	18,232	108,558	16,807	20,714	112,974	229,292
	Percent of Waste Stream Diverted by Curbside and HHW Operations	**39.61%**	**44%**	**38.13%**	**43.23%**	**39.63%**	**38.89%**	**45.72%**	**40.60%**	**43%**
	Pounds of Garbage collected per customer per pickup	25.96	24.64	23.48	24.77	25.17	22.91	26.71	25.60	24.64
	Number of Garbage customers	189,543	192,000	188,240	189,288	188,385	191,228	191,359	191,245	193,800
	Pounds of Recycled materials collected per customer per pickup (every other week)	22.79	25.64	20.80	21.45	22.86	20.49	22.45	23.11	25.64
	Pounds of Yard Trimmings collected per customer per week	5.62	6.21	4.42	7.64	5.11	4.60	10.50	5.87	6.21
	Number of Recycling and Yard Trimmings customers	187,286	192,000	185,733	186,779	185,873	189,754	189,876	189,742	193,800
	Number of PAYT pickups	52	52	4.33	4.34	26	4.33	4.34	26	52
	Total tons of Dead Animals Collected from COA rights-of-way and the animal shelter	61	55	5.00	5.00	34	4.00	4.00	32	58

Austin Resource Recovery Curbside Collection and HHW Operations





Austin Resource Recovery Curbside Collection and HHW Operations

Reporting Status and Diversion Results for All Categories of Waste Generation							
Category of Waste Generation	FY2009-10 actual	FY2010-11 actual	FY2011-12 actual	FY2012-13 actual	FY2013-14 actual	FY2014-15 Goal	FY2014-15 Current
Residential Waste Diversion (city serviced accounts)	37.32%	38.57%	37.86%	39.64%	39.61%	44.00%	40.60%
Commercial / Industrial Waste Diversion	information not available*						
Institutional Waste Diversion	information not available*						
	*Non-residential waste diversion to be inventoried in 2015