



To: Zero Waste Advisory Commission

From: Bob Gedert, Director
Austin Resource Recovery Department

Date: January 8, 2014

Subject: **Director's Report**

2013 Zero Waste Audit

The Zero Waste Audit was conducted as part of the Office of the City Auditor's (OCA) Fiscal Year 2013 Strategic Audit Plan, as presented to the City Council Audit and Finance Committee on Nov 20, 2013.

Objective

The objective of the audit was to evaluate if the City's zero waste efforts are measurable, achievable, and meeting established goals.

Scope

The audit scope included a review of ARR waste diversion activities and related records from October 2010 to March 2013.

Methodology

To accomplish our audit objectives, we performed the following steps:

- researched zero waste industry practices, contracts, budgets, and relevant legislation;
- evaluated other zero waste planning and implementation efforts for comparison to Austin;
- interviewed key ARR management and staff with responsibilities related to zero waste;
- analyzed and documented the zero waste measurement process used by ARR;
- observed ARR curbside garbage and recycling collection and disposition process;
- tested a sample of daily garbage and recycling reports to determine the accuracy and completeness of the diversion reporting process; and
- evaluated risks related to information technology and fraud, waste, and abuse relevant to the audit objective.

The Department's diversion goals are based on the citywide generation of discarded materials, including materials generated by residents, commercial businesses, industries, institutions and visitors. The Zero Waste diversion goals of the City, however, involve all resource and waste streams generated from within the City boundaries, regardless of who collects and hauls the material. Thus, it is imperative that the Zero Waste goals are embraced and actions implemented throughout all sectors of the community.

Finding 1: In order to achieve the City of Austin’s zero waste goals, ARR has adopted a comprehensive plan that is aligned with the efforts of other entities pursuing zero waste goals.

In order to assess the achievability of the City’s zero waste goals, we evaluated the ARR Master Plan as well as the plans in five municipalities that also have comprehensive waste reduction or diversion strategies. We identified twenty common program components used by other municipalities to encourage or mandate waste diversion. These components are categorized as individuals, multi-family properties, commercial entities, construction and demolition, local governments, and special or public events.

We found that, at present, ARR has implemented 12 of the 20 common program components. According to the ARR Master Plan, an additional six components are planned for implementation by 2015. The two components not planned in Austin are landfill bans on the disposal of commercial recyclable or compostable items and construction and demolition waste.

Finding 1 - Director’s Response:

In Finding 1 of this audit, the ARR Master Plan meets this expectation, and the audit finds the Department well underway in the implementation stages of 12 of the planned 20 elements. It is my desire to begin the implementation of all 20 elements by 2020.

Finding 2: ARR does not have access to all citywide waste information to enable them to fully measure and report progress toward meeting established zero waste goals.

The ARR Master Plan states that the “department’s diversion goals are based on the citywide generation of discarded materials, including materials generated by residents, commercial businesses, industries, institutions, and visitors” and involves “all resource and waste streams generated from within the City boundaries, regardless of who collects and hauls the material.” Currently, the City has access to approximately 25% of citywide waste information. The City anticipates receiving access to approximately 60% of citywide information by mid-year 2015. The remaining information (approximately 15%) remains outside City control and access.

Finding 2 - Director’s Response:

Finding 2 notes the concern that “ARR does not have access to all citywide waste information to enable them to fully measure and report progress toward meeting established zero waste goals.” This issue is being addressed, however I share the concern of the Auditor’s Report. As Director, I am in Concurrence with the Finding. ARR plans to gather waste diversion information through the Hauler License tonnage reports and the Universal Recycling Ordinance data collection system. In addition, a full city-wide inventory of waste streams is planned for calendar year 2015, to determine if city-wide 50% diversion is attained.

Finding 3: ARR is currently reporting waste diversion based on residential waste information only, which presents an incomplete view of Austin’s progress toward citywide zero waste goals.

The ARR Master Plan states that annual progress updates “will allow the Department, City Manager, City Council, and residents to make informed decisions regarding how to proceed year to year based on economic conditions and available resources. Material diversion will also be calculated annually with available data. A full citywide diversion assessment will be contracted every five years, to measure progress toward the five-year benchmarks as well as the City Council adopted diversion goals.” According to ARR, the five year assessment will apply to three categories of waste generation:

Residential (City control and access), Commercial/Industrial (subject to URO/City access), and Institutional (outside City control and access).

Since FY 2010, ARR has annually reported an approximate 38% diversion rate based on the waste information available (Residential). Also, the ARR Master Plan includes a chart showing the 38% figure along with the interim goals (see Exhibit 5). However, as noted above, these figures represent only 25% of citywide waste and only one of the three waste generation categories. While each category of waste generation has the same benchmark and milestone goals, there is a risk that reporting progress for only one of the three categories may be confusing or misrepresent actual progress relative to the citywide goals. Without a mechanism to access all citywide waste information, ARR is unable to measure and report complete waste information. However, in order to provide stakeholders the information they need, the status of each category of waste generation should be reported to improve transparency. For example, Exhibit 6 presents a current progress update for all categories of waste generation to clearly communicate the entire picture related to citywide zero waste progress. The first row ("Residential") communicates the current ARR performance measure "percent of waste stream diverted by ARR curbside, reuse, and HHW operations" for the last three years. Rows two and three communicate that the information for these categories of waste is not currently available and that action is required to access and report this information.

Finding 3 - Director's Response:

Finding 3 notes the additional concern that "ARR is currently reporting waste diversion based on residential waste information only, which presents an incomplete view of Austin's progress toward citywide zero waste goals." This finding results in two issues of concern; how the information is reported to Austinites, and the added concern of Finding 2 that ARR has limited information about our city-wide measurement toward Zero Waste. I concur with this finding, and pledge to display the available data in a more accurate manner.

The sole measure toward Zero Waste that we have available data on is the Single-Family Residential diversion rate. As we work toward resolution of the collection of data for Commercial/ Industrial and Institutional waste streams, we will be better able to accurately report progress to our citizens in future years. As we progress, we will display all three categories of waste streams in our annual report.

Source: excerpts of the Austin Zero Waste Audit, November 20, 2013, Office of the City Auditor

Waste Composition Study and Citywide Diversion Assessment – Chapter 23

(Part 6 of a series describing the chapters of the ARR Master Plan)

Historically, there have been inconsistencies and significant challenges when measuring waste reduction and diversion. In addition to the challenges of implementing diversion programs, there are also significant challenges in measuring progress toward diversion goals. No single measurement tool can accurately measure achievement toward diversion.

Waste Composition Studies

While estimates of waste disposal composition have been published by the EPA, information on the composition of wastes generated from within Austin and entering landfills is more diffused and uncertain. Information on the composition of waste sent to landfills is important to monitor the effectiveness of diversion programs. Waste composition studies are used to assist in planning, policy development and infrastructure sizing decisions for various facets of a Zero Waste program.

The most widely used methods for waste characterization is the site specific sampling via sorting and weighing refuse by category. A standard method for determining waste composition by sorting has been published in ASTM D 5231-92.3 The ASTM method notes that the number of samples should be defined based on statistical criteria; load selection for sampling should be randomized and performed over a standard collection period and; the initial sample should weigh approximately four times the subsample that will be sorted.

To better understand the current waste disposal streams, the Department will contract with a consultant to perform various waste composition audits. A Zero Waste consultant (and possibly college interns) may be hired through this agreement to perform the following services:

- Audit the City of Austin trash flow of 12 market categories of materials, to determine what recyclables and compostables are “leaking” into the landfill;
- Audit the City of Austin residual trash from its Single Stream Recycling program, to assist in public education of the do’s and don’ts of recycling.

The resulting Waste Composition report will provide the Department with analysis of waste streams that can be redirected from landfills through new diversion programs.

Citywide Diversion Assessment

Researching, verifying and calculating the total amount of material diverted through recycling and composting requires standardized measurement and accurate reporting from the various haulers, processors, and generators. Data gathering and analysis can be time-consuming and expensive. Inconsistencies in reporting standards, the movement of materials in and out of the regional watershed and the lack of diversion documentation can test the accuracy of measurement results.

The primary measure the Department will utilize to calculate progress towards Zero Waste is the direct measurement of diversion activity (See Master Plan section 23.3). Through a detailed *citywide waste assessment study* every five years, the Department will determine our progress toward our Zero Waste goal. The base starting point is the Capital Area Council of Governments (CAPCOG) waste analysis detailing waste flows and diversion activities in 2009. This limited study was augmented by additional research and analysis by consultants hired by the Department. The next juncture point for a detailed waste diversion study will be in 2015 and will occur every five years thereafter.

For the purpose of measurement, disposal includes waste sent to landfills and end-of-life disposition of materials sent to incinerators, waste-to-energy facilities and other disposal facilities. Diversion includes waste prevention activities and material sent to recyclers, composting systems, reuse facilities and other secondary use options. Waste generation is defined as disposal plus diversion. In a generation-based measurement system, disposal and diversion are measured and added together to determine generation.

When measuring the diversion rate, it is important to have adequate data to document total tons of waste generated in our community. This process will be performed every five years. A full measurement of the entire waste stream, including disposal and diversion activities, involves an inventory of all points of generation. This inventory can be systemized through cooperation of haulers, recyclers and disposal facilities. When properly conducted, a proportionately-sized statistical sample of a representative cross-section of the community can provide this five-year baseline measurement. *ARR plans to contract for this 2015 Citywide Diversion Assessment in the next year, through a private consultant.*

Source: Austin Resource Recovery Master Plan, excerpts from Chapter 23

North Service Center Update

On Nov 7th 2013, City Council approved the purchase of 131 acres of land at 8001 Johnny Morris Rd.

RCA **27934** – “Authorize the negotiation and execution of all documents and instruments necessary or desirable to acquire approximately 64.85 acres of land out of the James Burleson Survey No. 19, Abstract No. 4, Travis County, Texas and approximately 66.364 acres of land out of Lot 2A... situated in Travis County, Texas... in an amount not to exceed \$4,500,000.”

“The purpose of this land acquisition is to site the planned Austin Resource Recovery (ARR) North Service Facility on approximately 131 acres of land in the northeast sector of the City. In an effort to co-locate various city departments, this facility may also support services provided by Fleet Services (FSO), Parks and Recreation Department (PARC), and the Austin Transportation Department (ATD).

Planned utilization options for the site include Household Hazardous Waste Collection Center, Reuse and Recycling Drop-off Center, ARR fleet deployment, vehicle fueling and repair facilities, equipment storage, and administrative offices. A full proposal of site plans and construction details, including a financial proforma, will be presented to Council at a later date.

An independent third party appraisal was conducted on this property. The owners have agreed to accept the City of Austin’s offer in the amount of \$4,500,000.”

Background

The City contracted in 2010 to study the real estate, facilities, workplace and logistics in order to provide the city with a Strategic Facilities and Logistics Roadmap that will guide future decisions relating to facilities. In response to facilities study recommendation for an inter-departmental consolidated facility development, four city departments have collaborated to develop a proposal for the development of the Northeast Joint Operations City Service Facility (NE Service Facility). This collaborative approach proposes to replace older outdated service centers in support of future growth patterns.

Austin Resource Recovery North Operations Service Facility

The Austin Resource Recovery Master Plan provides advanced planning for a new NE Service Facility (p. 65-67). A rent savings of \$465,000 annually would be realized through the move of administrative offices to the new facility, presumably in 2017. This savings would be applied to the bond payment, maintenance, and support of the proposed new building structure. In addition, a significant reduction in carbon footprint will be realized. Other anticipated ARR operational efficiencies involving the co-location of Fleet Services to reduce vehicle down-time for repairs.

The ARR portion of the NE City Service Facility will also include the following:

- ARR North CNG / Diesel Fueling Facility (ARR Master Plan p.58)
- Second Household Hazardous Waste Facility (ARR Master Plan p.15 & p.129)
- Administrative Offices Consolidation (ARR Master Plan p.65)

To be clear, there will not be any waste transfer or waste handling operations on this site.

Co-location of Fleet Services

FSO's plan is to establish a consolidated Fleet Service Facility to support the fleet assets located in a NE Service Facility. The Fleet Central Administration functions will consolidate within the shared administration building. This facility would replace those functions currently performed at our Administrative offices and Service Center 6 on Hargrave St., Service Center 13 at Kramer Lane, a portion of the functions performed at service center 5 co-located with APD at 8th and IH35, the functions currently handled at Bolm Road, and much of the work performed at Service Center 11. The Hargrave and Bolm Road locations would then be available for sale, or repurposed for other City needs.

Co-location of Parks and Recreation Department

PARD's plan is to relocate the Forestry, Facility Construction and the Park Maintenance group to the proposed NE Service Facility. In addition, the proposed site would be a centralized location for warehousing equipment, hosting training, storing landscaping materials and other non-critical items currently being stored at other sites. PARD's facility needs at the new location also include administrative space for its Operation Management staff which handles our 311 calls, work order system, asset management, fleet management and some aspects of our planning activities.

Co-location of Transportation Department

ATD plans to consolidate the personnel and storage functions of the Signals and Signs & Markings Divisions at the proposed NE Service Facility, relieving overcrowding at the existing sites used by Transportation Department. In addition, the proposed Northeast Service Facility would provide a single location for warehousing equipment, hosting training, storing materials and other non-critical items currently being stored at the current sites. Consolidating the personnel and storage functions of the Signals and Signs & Markings Divisions would allow us to stop paying rent for storage at the Techni Center facility and would make available the sale of the Toomey Road and Jessie Street facilities.

Consistency with City Plans

The proposed North Operations City Service Facility is consistent with and supportive of the following City planning processes:

- Imagine Austin Plan & Growth Concept Map
- Climate Protection Plan & Sustainability Plan
- Strategic Facilities Roadmap
- Austin Resource Recovery Master Plan

Facility Construction Funding Option

The proposed funding options for the NE Service Facility have centered on a design-build-finance option with a third party provider, with each department responsible for its share of construction costs. All four Departments anticipate annual operating expense reductions through this consolidation, thereby offsetting a large portion of the new construction. The four Departments commit to a sustainable financial plan to support the new service center within their respective operating budgets.

Next Steps

Additional planning on construction costs, a land-use plan, and funding options will be discussed with ZWAC before proceeding to the next stage of development.

Ecology Action Update

On November 20th, city staff met with Ecology Action co-directors to discuss the relocation of their downtown recycling public drop-off. ARR is offering Ecology Action a parcel of land located at its Todd Lane facility, with the intent to service the general public with a recycling drop-off location. The site would involve a public access drive off Business Center Drive, adjacent to the Household Hazardous Waste facility. Ecology Action staff have visited the site and have agreed to the offered location, with on-going discussions of the placement of equipment and the hookup of utilities.

Currently, Ecology Action is drafting a business plan for the relocated recycling drop-off, and city staff are developing a scope of service for a “replacement” contract with Ecology Action. We anticipate that the relocation will occur in May 2014. Details of the final agreement will be discussed with ZWAC at its February meeting.

Recent Council Actions

December 12th Council Meeting – City Council authorized execution of an interlocal agreement with Travis County to promote and implement Zero Waste goals, programs, and initiatives shared between Travis County and the City of Austin.

December 12th Council Meeting – City Council approved a resolution directing the City Manager to consider entering into discussions with Ecology Action regarding their future facility needs and possible lease of City property.

Personnel Changes in November/December 2013

New employee	Promotions	Title/ Division
Ryan Junge		Household Hazardous Waste Intern
Kendra Leger		Temporary Recycle Right
Kareem Williams		Temporary Service/Maintenance
Natacha Delusca		Administrative Specialist
Manuel Gonzalez		Environmental Program Technician
	Lee Houston	Austin Resource Recovery Crew Leader
	Jose Tejero	Austin Resource Recovery Crew Leader
	Richard Herrera	Austin Resource Recovery Crew Leader
	Richard Avila	Environmental Program Specialist Senior
	Amos Castillo	Austin Resource Recovery Supervisor
	Johnny Williams	Austin Resource Recovery Supervisor

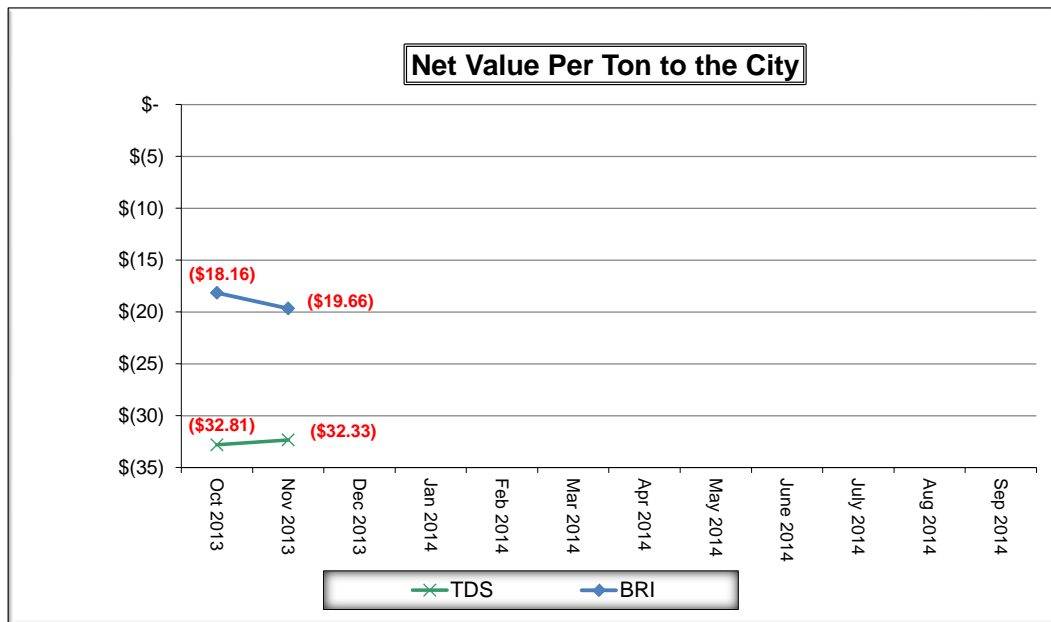
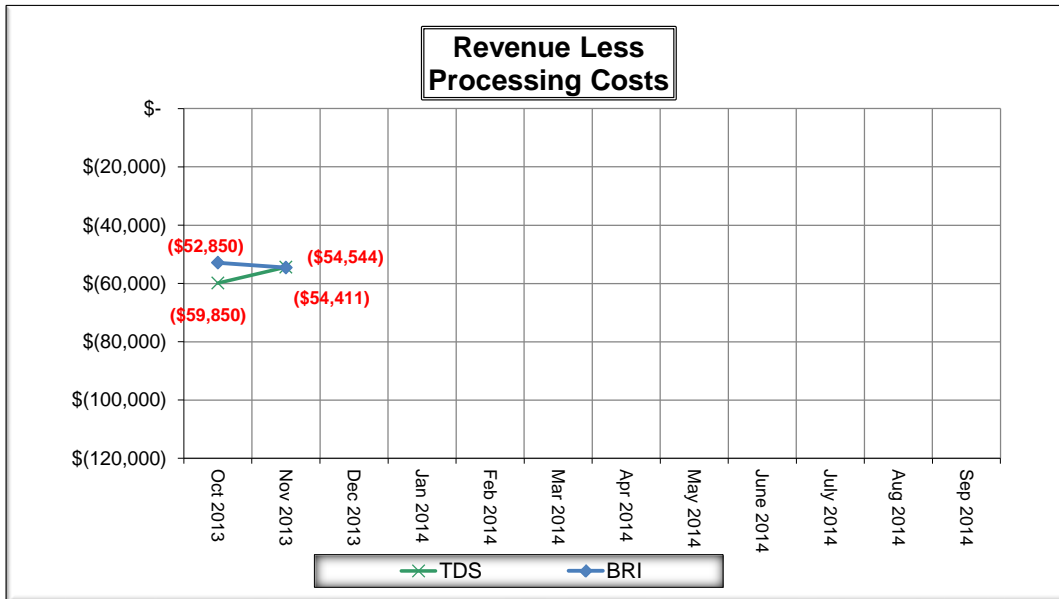
Zero Waste Advisory Commission - January 8, 2014
Single Stream Recycling Statistical Report
FY 2013-14: October - November, 2013
Texas Disposal Systems (TDS) and Balcones Resources, Inc. (BRI)

Month/ 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 2013	TDS	1,824.24	\$108,623	\$168,473	(\$59,850)	(\$32.81)	\$21.01	\$38,327
	BRI	2,910.84	\$177,974	\$230,825	(\$52,850)	(\$18.16)	\$21.01	\$61,157
	<i>Total</i>	4,735.08	\$286,598	\$399,298	(\$112,701)			\$99,484
November 2013	TDS	1,682.84	\$99,569	\$153,980	(\$54,411)	(\$32.33)	\$21.01	\$35,356
	BRI	2,775.04	\$165,885	\$220,429	(\$54,544)	(\$19.66)	\$21.01	\$58,304
	<i>Total</i>	4,457.88	\$265,454	\$374,409	(\$108,955)			\$93,660
FY 2013-14 Totals		9,193	\$552,051	\$773,707	(\$221,656)			\$193,144

Material Composition Percentages

	Previous Audit		Current Audit	
	TDS	BRI	TDS	BRI
Material	4/13/13	4/27/13	10/19/13	11/16/13
ONP #8 (Old Newspaper)	16.14%	25.97%	17.56%	23.88%
OCC (Corrugated Cardboard)	8.42%	12.14%	13.49%	10.99%
Mixed Paper	20.17%	9.73%	15.59%	13.51%
Plastic Bottles - PETE	2.71%	3.21%	3.00%	3.25%
HDPE Natural	1.00%	0.62%	1.07%	0.83%
HDPE Color	0.83%	0.75%	0.94%	0.79%
Mixed Plastics 3-7	3.73%	1.85%	3.77%	2.16%
UBC (Used Beverage Cans)	1.21%	1.33%	1.21%	1.08%
Tin Cans	1.94%	1.86%	1.63%	1.37%
Scrap Metal	0.89%	0.72%	0.87%	0.70%
Glass	27.04%	27.99%	28.76%	28.89%
Residual - trash	15.92%	13.83%	12.11%	12.55%
<i>Total</i>	100.00%	100.00%	100.00%	100.00%

Zero Waste Advisory Commission - January 8, 2014
Single Stream Recycling Statistical Report
FY 2013-14: October - November, 2013
Texas Disposal Systems (TDS) and Balcones Resources, Inc. (BRI)



Zero Waste Advisory Commission

Single Stream Recycling Statistical Report

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

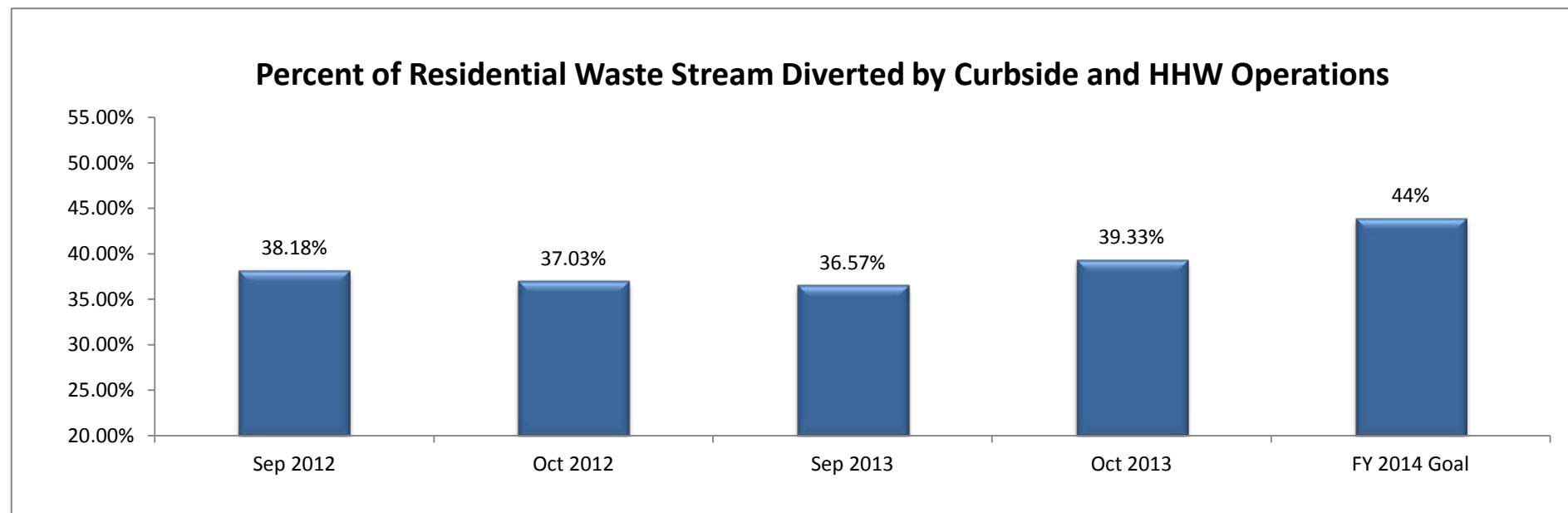
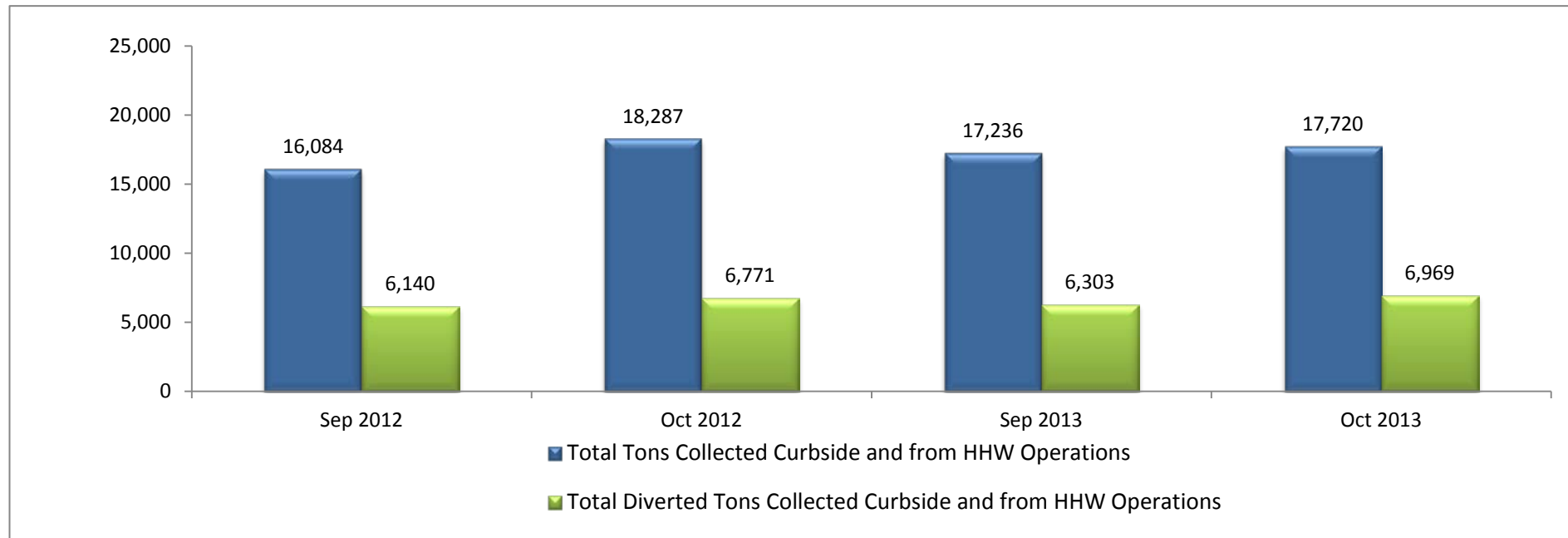
Texas Disposal Systems (TDS) and Balcones Resources, Inc. (BRI)

Month/Year	Contractor	Tons Delivered	Revenue	Processing Cost	Net Amount Due/(Owed)
October 2012	TDS	1,992.62	\$107,483	\$182,325	(\$74,842)
	BRI	2,522.20	\$156,614	\$201,074	(\$44,460)
	Total	4,514.82	\$264,097	\$383,399	(\$119,302)
November 2012	TDS	1,676.28	\$92,488	\$153,380	(\$60,891)
	BRI	2,864.82	\$188,214	\$227,301	(\$39,087)
	Total	4,541.10	\$280,702	\$380,681	(\$99,978)
December 2012	TDS	2,584.16	\$144,257	\$236,451	(\$92,194)
	BRI	2,010.51	\$135,238	\$161,904	(\$26,666)
	Total	4,594.67	\$279,495	\$398,355	(\$118,860)
January 2013	TDS	2,014.55	\$117,385	\$184,331	(\$66,946)
	BRI	3,059.87	\$201,932	\$242,233	(\$40,301)
	Total	5,074.42	\$319,317	\$426,564	(\$107,247)
February 2013	TDS	1,588.12	\$95,632	\$145,313	(\$49,681)
	BRI	2,370.66	\$159,074	\$189,474	(\$30,400)
	Total	3,958.78	\$254,706	\$334,787	(\$80,081)
March 2013	TDS	1,639.78	\$103,588	\$150,039	(\$46,451)
	BRI	2,625.14	\$185,599	\$208,953	(\$23,354)
	Total	4,264.92	\$289,187	\$358,992	(\$69,805)
April 2013	TDS	2,055.29	\$128,513	\$188,059	(\$59,546)
	BRI	2,517.46	\$172,616	\$200,712	(\$28,096)
	Total	4,572.75	\$301,129	\$388,771	(\$87,642)
May 2013	TDS	1,649.59	\$96,860	\$150,937	(\$54,077)
	BRI	3,167.84	\$205,879	\$250,498	(\$44,619)
	Total	4,817.43	\$302,739	\$401,436	(\$98,697)
June 2013	TDS	1,694.34	\$95,969	\$155,032	(\$59,063)
	BRI	2,479.78	\$155,851	\$197,827	(\$41,976)
	Total	4,174.12	\$251,820	\$352,859	(\$101,039)
July 2013	TDS	2,010.01	\$114,213	\$183,916	(\$69,703)
	BRI	2,604.04	\$163,896	\$207,339	(\$43,443)
	Total	4,614.05	\$278,110	\$391,255	(\$113,146)
August 2013	TDS	1,637.80	\$89,016	\$149,859	(\$60,843)
	BRI	2,831.40	\$173,468	\$224,744	(\$51,276)
	Total	4,469.20	\$262,483	\$374,602	(\$112,119)
September 2013	TDS	3,099.10	\$167,777	\$283,568	(\$115,791)
	BRI	1,243.76	\$75,299	\$100,185	(\$24,886)
	Total	4,342.86	\$243,076	\$383,753	(\$140,677)
FY 2012-13 Totals		53,939.12	\$3,326,861	\$4,575,453	(\$1,248,592)

Austin Resource Recovery Curbside Collection and HHW Operations

		LAST FISCAL YEAR					CURRENT FISCAL YEAR			
		FY 2013	FY 2013 Goal	Sep 2012	Oct 2012	FYTD 13 (Oct '12)	Sep 2013	Oct 2013	FYTD 14 (Oct '13)	FY 2014 Goal
Tons Disposed	Tons of curbside Trash	124,183	127,000	9,331	10,627	10,627	9,908	9,615	9,615	123,000
	Tons of Curbside Bulk Disposed	8,500	6,600	568	860	860	1,011	1,099	1,099	7,000
	HHW Operations Tons Disposed	381	400	44	29	29	14	37	37	390
	Total Disposed Tons Collected Curbside and from HHW Operations	133,064	134,000	9,943	11,516	11,516	10,933	10,751	10,751	130,390
Tons Diverted	Tons of curbside recycling	53,702	63,000	4,023	4,498	4,498	4,327	4,750	4,750	64,000
	HHW Operations Tons recycled/reused	240	150	17	19	19	13	30	30	150
	Tons of Curbside Yard Trimmings	25,898	27,000	1,122	1,384	1,384	1,201	1,339	1,339	31,000
	Tons of Curbside Bulk Recycled	181	800	16	27	27	14	28	28	783
	Tons of Curbside Brush Collected	7,359	6,400	963	843	843	748	822	822	6,200
	Total Diverted Tons Collected Curbside and from HHW Operations	87,380	97,350	6,140	6,771	6,771	6,303	6,969	6,969	102,133
Total Tons Collected Curbside and from HHW Operations		220,444	231,350	16,084	18,287	18,287	17,236	17,720	17,720	232,523
Percent of Residential Waste Stream Diverted by Curbside and HHW Operations		39.64%	42.08%	38.18%	37.03%	37.03%	36.57%	39.33%	39.33%	44%
Pounds of Trash collected per customer per pickup		25.53	26.03	23.24	26.52	n/a	24.21	23.55	n/a	24.64
Number of Trash customers		187,105	187,676	184,989	185,111	n/a	188,626	188,551	n/a	192,000
Pounds of Recycled materials collected per customer per pickup (every other week)		22.25	25.82	20.20	22.62	n/a	21.31	23.46	n/a	25.64
Pounds of Yard Trimmings collected per customer per week		5.37	5.53	2.82	3.48	n/a	2.96	3.31	n/a	6.21
Number of Recycling and Yard Trimmings customers		185,658	187,676	183,531	183,705	n/a	187,109	187,086	n/a	192,000
Total tons of Dead Animals Collected from COA rights-of- way and the animal shelter		50	85	4	5	5	5	6	6	55

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 goal	Oct 2013 current
Residential Waste Diversion (city serviced accounts)	37.32%	38.57%	37.86%	39.64%	44.00%	39.33%
Commercial / Industrial Waste Diversion	information not available*					
Institutional Waste Diversion	information not available*					
	*Non-residential waste diversion to be inventoried in 2015					

