



**To:** Zero Waste Advisory Commission

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

**Date:** July 13, 2016

**Subject:** **Director's Monthly Report to the Zero Waste Advisory Commission**

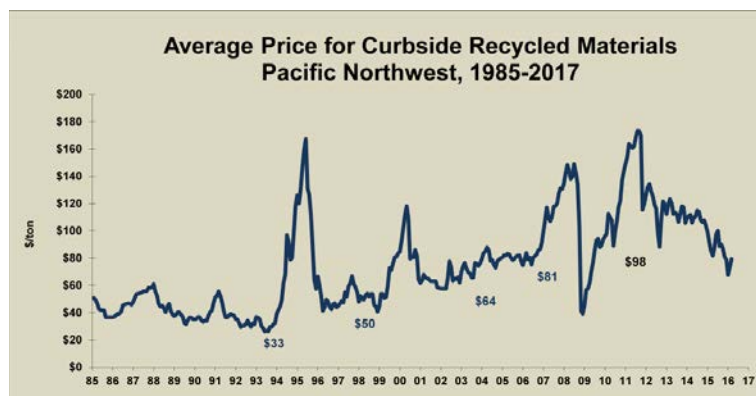
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### **Notes About Recycling Markets**

Price volatility in recycling markets is a given. Managing revenue fluctuations can make or break a recycling program. Negotiating long-term contracts that feature price floors or other revenue/risk sharing agreements, and broadening markets by developing local manufacturing demand for recycled feedstocks can moderate revenue peaks and valleys.

Prices for all recycled materials tend to follow expansions and contractions in overall demand for manufactured goods. At the same time, specific trends in each industry — be it paper/paperboard, glass, steel, aluminum, or plastics — can push prices for different recycled materials in opposite directions. As a result, recycling programs that collect many different materials may experience less revenue volatility over the course of an economic cycle. However, even curbside recycling programs that collect a wide variety of materials, such as residential mixed paper, newspapers, cardboard, glass, metals, and plastic bottles, experience pronounced revenue swings. This is evident on the graph below, which gives the weighted average market price (large quantities packed for shipment to end-use manufacturers, F.O.B. processing facility) for materials collected by curbside programs in Washington State's Puget Sound region.

### **Average Price Curbside Recyclables**



Underlying causes of some of the price movements shown on the graph include:

- Supply increases from new curbside recycling programs (late eighties – early nineties)
- General economic slowdown (late eighties – early nineties)
- Manufacturing feedstock inventory buildup in anticipation of shipping container shortages during the 1991 Persian Gulf War.
- Increases in recycled-content manufacturing capacity and demand especially in the paper industry (early to mid-nineties)
- Manufacturing feedstock inventory buildup in anticipation of continued price increases or supply shortages (1994-1995)
- Recession in Asian Economies (late nineties)
- Unanticipated inventory shortages at domestic and foreign paper mills – especially in China, Mexico, and Indonesia; Y2K fears; and substantial recovery for sales of many grades of paper and paperboard (1999 and early 2000)
- Generalized exuberance, dare we say “irrational”, in asset and commodity markets (mid-2006 through mid-2008)
- Financial markets crash in late 2008
- Gradual recovery back to normal trends beginning early-2009 through 2011
- Price decreases after 2011 due to contamination issues for curbside recyclables as collection programs continued switch to single stream, sharply increased scrutiny of quality by end users (especially China’s imposition of a “green fence” to reject poor quality materials produced by material recovery facilities in the US), and sharp decreases in oil and gas prices.

The five prices under the graph’s trend line show average values during the down sides of price cycles. Prices during cyclical bottoms trended up from the early 1990s until the 2008 financial markets meltdown, and then seemed to continue that up trend during the economic recovery immediately after the crash. This trend suggested that the downside price risk to recyclers was falling.

Unfortunately quality issues and falling energy prices over the past few years have reversed the up trend of the previous 20 years. Both factors affect the ability of recycled materials to compete with virgin raw materials. The typically much lower energy requirement for manufacturing new products out of recycled materials offers less advantage for a manufacturer’s bottom line when energy is cheap, especially when the quality of recycled materials has decreased.

Source: <http://zerowaste.com/recycling-markets/>

### **How the recycling industry is fighting the whims of commodities' markets**

By Waste Dive - Arlene Karidis | January 4, 2016

From 2009 to 2012, most recycling markets were rocking — but as consumer trends come and go, so do profits. Conversely, other companies are pumping more money into the industry while commodities are cheap, hoping for a turnaround.

### **Long supply; short demand**

For the past three years, devalued materials and higher operation costs have driven plant shut downs and, at the very least, decreased investments from some companies.

Other trends are rising from rocky times, like exploration into new markets, or new business models and partnerships to share the impact of negative revenue. The goal is to preserve an industry that, in and of itself, is about preservation. An industry that, through ups and downs, has generated billions in revenue, employs tens of thousands, and reduces carbon footprints.

"What we have today, due to recycling legislation in most states, is a supply that never stops, regardless of demand," said Chaz Miller, director of policy/advocacy for the National Waste and Recycling Association (NWRA).

Paper is a prime example. The commodity hit an all-time peak in 2010, but if you look back since 2002, use of what was once the mother's milk for municipal recycling has dropped by 20 million tons.

"That had an incredible impact on recycling processing plants, which were built to handle this commodity," said Miller, attributing the downward spiral to two factors: the Internet explosion, which made "paperwork" near obsolete, and China's smoldering manufacturing industry, which ended their mega volume investment in paper to feed mills and for packaging.

### **Allocating risk**

More than 2,000 municipalities pay to dispose of their recyclables by some reports, and businesses of all sizes are looking for ways to absorb the financial shock. Texas-based Waste Management's recycling division lost nearly \$16 million in the first quarter of 2015, and by last June had shut down nearly one in 10 of its biggest recycling facilities. Smaller companies typically feel the loss even more.

In some cases, municipalities and private haulers with no processing facilities share revenues, as well as risk. Vermont-based Casella Waste Systems has a recycling fee, which floats as a percentage of their customers' bills, based on the markets. Other companies charge flat fees, assuming all risk but charging more per ton than with other fee models.

To help ease some of the burdens on recyclers, a group of the world's largest manufacturers and retailers launched the Closed Loop Fund, providing zero interest loans to cities and below market loans to companies to pump the recycling infrastructure. With the Closed Loop Fund, cities have access to capital, and recycling companies can take risks that banks won't finance.

### **Looking for new markets**

Some commodities spaces are opening up.

With single stream-recycling, more unrecyclables are getting tossed, therefore companies must manually pull and clean what's salvageable. They pay to landfill remaining contaminants, and pay for what has gummed up their equipment.

Companies and municipalities that have the cash are investing in high-tech scanners and sorters, which Miller believes saves money in the end. In late 2015, Republic Services opened a \$35 million recycling center in Las Vegas with all the bells and whistles to combat contamination. In 2016, Dallas will build a \$20 million materials recovery facility.

Polyethylene terephthalate (PET) use recently hit a short-term record high in the U.S., increasing from 1.513 billion pounds in 2013 to 1.564 billion pounds in 2014. Still, its value is low, with prices hitting 3 cents to 5 cents

Still, said Miller, "It's a good time to invest in plastic because supply will continue to increase as the use of plastics increases."

"Plan for ups and downs; it's part of business." - Chaz Miller, NWRA

QRS of Maryland is counting on this trend. In 2015 the company opened a \$15 million recycling facility in Dundalk to separate post-consumer plastics by resin type. Additionally, the **city of Austin, TX** plans to create a brand new market—or a marketplace. The city is investing \$7.5 million in a **[re]Manufacturing Hub**, inviting recycling and reuse manufacturers to make new products from the city's recyclables.

Ohio-based Rumpke is working to cash in on what many consider one of the industry's worst nightmares: glass. The company has invested over \$5 million in a new glass recycling plant since its launch in 2003, putting money toward high-dollar technology like screening equipment for glass processing. Steve Sargent, Rumpke's director of recycling, says the market looks promising, especially in fiberglass.

### **Educating customers is key**

Post-consumer HDPE prices have been steady or climbing, especially colored HDPE. But processing plastics can be a high-maintenance job. The material must be sorted; bottle caps commonly fall through cracks in machinery; and some waste is hard to work with as it is composed of multiple layers of plastics.

Consumers generally toss what they assume is recyclable, without realizing this is not the last step in the process, and this needs to change, said Miller. NWRA, Keep America Beautiful, the Solid Waste Association of North America (SWANA), and the Environmental Protection Agency (EPA) are partnering to educate the public on what can go into the stream. And these groups say municipalities and haulers should remind people, recycling is not free.

"Plan for ups and downs; it's part of business," said Miller. "What we are dealing with now, and it is not a new phenomenon for municipal recycling, is the issue of figuring out how to share the risk of negative revenue."

Source: <http://www.wastedive.com/news/how-the-recycling-industry-is-fighting-the-whims-of-commodities-markets/411396/>

## **Notes From the NRC: Skepticism of dirty MRFs proving to be well-founded**

Resource Recycling Magazine - April 11, 2016

By John Frederick and the National Recycling Coalition Policy Committee

In a time of diminishing natural resources and increasing demand for goods, an economy based on repair, reuse and recycling makes sense from both an environmental and economic perspective. Recovery and reuse are much preferable to wanton consumption and subsequent disposal.

The National Recycling Coalition (NRC) has developed a total of 41 policies since its incorporation in 1978, with the ultimate goal of transforming a throw-away society into a circular one. While a handful of those policies have tumbled into obsolescence as the recycling landscape has evolved, many of those "old" positions have remained surprisingly relevant and become the foundation on which recently established policies have been built.

For example, early NRC policies advocated for:

- \* A national waste reduction goal
- \* Technical and financial support for local and state governments recycling infrastructure
- \* Yard waste disposal bans
- \* Uniform labeling guidelines for products
- \* Standardized measurement criteria for waste production and recovery
- \* Manufacturers evaluating the environmental liabilities or costs of their products
- \* Cost effective recycling operations and facilities

### **Seeds of the hierarchy**

Though all the concepts listed above continue to play important roles in our industry, perhaps the most resonant of NRC's early position statements, at least among recycling and zero waste advocates, is the "Hierarchy of Waste Management Preferences." The policy still serves as a basis for challenging issues confronting the industry here in 2016.

"The National Recycling Coalition endorses and supports a hierarchy of waste management preferences that gives first priority to source reduction, reuse, recycling, and composting to minimize the amount of waste to be otherwise managed," the organization's policy document reads.

It is this relatively simple and straightforward statement that provides the fundamental premise for the group's recently adopted positions on waste-to-energy (WTE) and so-called "dirty MRFs," materials recovery facilities that aim to separate recyclable materials from household trash.

In the midst of attacks and challenges from several fronts, NRC's policies on mixed-waste processing systems and WTE have reinforced and substantiated the fundamental principles of recycling so eloquently described a number of years ago.

Recycling success comes down to quality and value. Be it PET plastic bottles, newspaper or leaves, processors need uncontaminated materials that can be transformed into affordable, high quality packaging or products that do the things they are expected to do. When it comes to recycling, as the old saying goes, you can't make chicken salad out of chicken manure (though both might make good compost).

As new technologies emerge, we sometimes forget (or at least underestimate) that quality and value are also closely tied to process. When that process is complicated, made more expensive in the long run or results in inferior products, recycling fails and disposal suddenly seems like a good idea again. And while convenience is certainly an important factor in any recycling equation, it should not be the only one.

### **Aiming at weak systems**

It is noteworthy that mixed-waste advocates picked their battles carefully, looking for the Achilles' heel of recycling – communities that had struggled to implement successful recycling programs. Such systems were not proposed for Boulder, Colo. or Seattle. Instead, they came before decision-makers in places that had dreadful participation rates and systemic fatal flaws in their existing recycling programs.

Mixed-waste processing and waste-to-energy technologies initially fell into disfavor in some circles because of environmental concerns. Yet it has been the economic struggles of these technologies that have helped push recycling back to its rightful place as the most environmentally and economically sustainable way to handle our discards.

NRC ultimately came to support the Recycling Industries Coalition's (RIC) stance on mixed-waste processing late last year. "Instead of relying on dirty MRFs, NRC urges communities to implement best practices for the separate collection of recyclables," the organization wrote in an official statement. Firm stances by NRC, RIC, the Institute of Scrap Recycling Industries, the Glass Packaging Institute and the American Forest & Paper Association lent additional credibility to the outcries of protest from affected state recycling associations and other recycling advocates.

The closure of a dirty MRF in Montgomery, Ala. and the recent rejections of dirty MRFs in Indianapolis and Houston would seem to reinforce the contention that such facilities remain questionable investments and ineffective material recovery systems.

The irony of it all has to make you smile: Traditional recycling, framed as something that makes environmental sense, ends up making just as much sense economically.

Source: <http://resource-recycling.com/node/7295>

### **City of Austin Annual Performance Report**

Austin's Performance Management System: Since 1999, the City of Austin has been using a business planning and performance monitoring model called Managing for Results, which links people, dollars, and resources to the results that customers and citizens expect from City services.

Performance measures are a key tool in the City's ability to demonstrate if and how the City is achieving its goals, provide leadership with the ability to make data-driven decisions as it allocates scarce resources, and give the information necessary to tell the organization's story. One of the components of the City's performance management program is the [Annual Performance Report](#).

In order to make good business decisions, citizens and City government need the highest quality performance information available. The use of performance measures makes it possible to: Identify the results departments intend to achieve, Monitor performance and provide feedback, Make good business decisions based on reliable, understandable and consistent data, Shift organizational focus from “what we do” to “what customers get, Produce better results for customers, and Know when success has been achieved. This City of Austin Annual Performance Report includes 128 measures that were identified by City departments as “key” or “most important” in determining the success or improvement of direct city services. Depending upon data availability, these measures are reviewed on either a monthly, quarterly or annual basis by department staff. This report shows final year-end performance for Fiscal Year 2014-15 as well as up to five years of historical information, if available. The goals or targets that are set for these measures are also included in the report. Having the additional time-trend information and targets can provide valuable insight in determining progress or achievement within these key indicators.

The report also provides updated data for the [City of Austin Dashboard](#); a quick-look view at how well the City is performing in 21 of our most critical service areas.

### City Wide Chart

Service Category	Number of Key Measures	Met or Exceeded 2014-15 Targets**		Met, Exceeded, or within 3% of 2014-15 Target**		Improved or Maintained 2013-14 to 2014-15***		General Trend Improved or Maintained***	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Overall*	128	76	59%	98	77%	62	50%	90	73%
City of Austin Dashboard*	21	11	52%	16	76%	13	62%	15	71%
Public Safety	30	18	60%	25	83%	9	32%	20	71%
Community Services	36	20	57%	24	69%	20	56%	24	67%
Development Services	11	8	73%	9	82%	8	73%	8	73%
Mobility and Infrastructure	22	11	50%	15	68%	9	45%	12	60%
Utilities and Major Business	28	18	64%	24	86%	15	54%	25	89%

\* The Overall category includes the measure “City of Austin’s Bond Ratings,” which is a Dashboard measure only. The other 20 Dashboard measures are also included within the service categories.

\*\* One measure, percent of homeless clients residing in shelters that receive case management services, did not have an established target for FY 2014-15. This measure has been excluded from the base in the Overall and Community Services sections for calculating the percent of measures that met or exceeded their targets.

\*\*\* There are 4 measures that were not tracked prior to FY 2014-15, and they have been removed from the base for calculating percent improvement for the Overall, Public Safety (2), and Mobility and Infrastructure (2) sections. Also, this includes progress from either FY 2010-11 or the earliest year of which data is available.

### ARR Specific Chart

MEASURE NAME	FY 2011 ACTUAL	FY 2012 ACTUAL	FY 2013 ACTUAL	FY 2014 ACTUAL	FY 2015 ACTUAL	FY 2015 TARGET	GOAL MET?	TREND
Average pounds of recycled materials collected per customer account per week	11.10	11.36	11.13	11.40	11.65	11.90	✗	▲
Average pounds of trash per customer account per week	26.70	27.06	25.53	25.96	26.25	24.41	✗	—
Average pounds of yard trimmings/organics collected per customer account per week	5.27	4.56	5.37	5.62	5.69	5.76	✗	▲
Customer satisfaction with the quality of residential curbside trash collection in the City of Austin Citizen Survey	85%	83%	85%	85%	87%	87%	✓	—
Lost Time Injury Rate Per the Equivalent of 100 Employees (8+ day lost time)	Not Tracked	Not Tracked	Not Tracked	1	1	2	✓	—
Percent of waste stream diverted by ARR curbside, reuse, and HHW operations	38.6%	37.9%	39.6%	39.6%	40.0%	42.5%	✗	▲

Annual Goals: Met: ✓ Did Not Meet: ✗ Overall Performance Trends: Improving: ▲ Declining: ▼ Maintaining: —



Zero Waste Advisory Commission - July 13, 2016								
Single Stream Recycling Statistical Report								
FY 2015-16: October, 2015 - May, 2016								
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 2015	TDS	1,700.01	\$78,859	\$155,559	(\$76,701)	(\$45.12)	\$21.36	\$36,312
	BRI	3,021.57	\$136,882	\$239,301	(\$102,419)	(\$33.90)	\$21.36	\$64,541
	Total	4,721.58	\$215,741	\$394,861	(\$179,120)			\$100,853
November 2015	TDS	2,119.75	\$97,578	\$193,957	(\$96,379)	(\$45.47)	\$21.36	\$45,278
	BRI	2,762.91	\$122,874	\$219,501	(\$96,626)	(\$34.97)	\$21.36	\$59,016
	Total	4,882.66	\$220,452	\$413,458	(\$193,006)			\$104,294
December 2015	TDS	2,151.52	\$96,666	\$196,864	(\$100,198)	(\$46.57)	\$21.36	\$45,956
	BRI	3,399.88	\$149,062	\$268,261	(\$119,199)	(\$35.06)	\$21.36	\$72,621
	Total	5,551.40	\$245,728	\$465,125	(\$219,397)			\$118,578
January 2016	TDS	1,975.70	\$83,546	\$180,777	(\$97,231)	(\$49.21)	\$21.36	\$42,201
	BRI	3,092.82	\$127,619	\$244,756	(\$117,137)	(\$37.87)	\$21.36	\$66,063
	Total	5,068.52	\$211,165	\$425,533	(\$214,368)			\$108,264
February 2016	TDS	1,985.04	\$81,838	\$181,631	(\$99,793)	(\$50.27)	\$21.36	\$42,400
	BRI	2,568.78	\$103,675	\$204,640	(\$100,965)	(\$39.30)	\$21.36	\$54,869
	Total	4,553.82	\$185,513	\$386,271	(\$200,758)			\$97,270
March 2016	TDS	1,928.56	\$81,894	\$176,463	(\$94,570)	(\$49.04)	\$21.36	\$41,194
	BRI	3,138.57	\$124,313	\$248,257	(\$123,945)	(\$39.49)	\$21.36	\$67,040
	Total	5,067.13	\$206,206	\$424,721	(\$218,514)			\$108,234
April 2016	TDS	1,749.32	\$75,926	\$160,063	(\$84,136)	(\$48.10)	\$21.36	\$37,365
	BRI	2,966.68	\$129,412	\$235,099	(\$105,687)	(\$35.62)	\$21.36	\$63,368
	Total	4,716.00	\$205,339	\$395,162	(\$189,823)			\$100,734
May 2016	TDS	2,216.75	\$101,622	\$200,616	(\$98,994)	(\$44.66)	\$21.36	\$47,350
	BRI	2,782.93	\$75,251	\$204,193	(\$128,942)	(\$46.33)	\$21.36	\$59,443
	Total	4,999.68	\$176,873	\$404,809	(\$227,936)			\$106,793
FY 2015-16 Totals		39,560.79	\$1,667,017	\$3,309,939	(\$1,642,922)			\$845,018

## Austin Resource Recovery Curbside Collection and HHW Operations

Description of Services	LAST FISCAL YEAR					CURRENT FISCAL YEAR				
	FY 2014	FY 2015	Apr 2015	May 2015	FY15 YTD (Oct 14-May 15)	Apr 2016	May 2016	FY16 YTD (Oct 15-May 16)	FY 2016 Goal	
<b>Tons Disposed</b>										
Tons of curbside Trash	127,824	130,784	11,898	11,180	88,531	10,877	11,511	85,012	125,000	
Tons of Curbside Bulk Disposed	8,892	8,525	587	1,051	4,882	701	1,406	7,401	10,201	
HHW Operations Tons Disposed	442	432	48	31	272	43	35	288	380	
<b>Total Disposed Tons Collected Curbside and from HHW Operations</b>	<b>137,258</b>	<b>140,741</b>	<b>12,313</b>	<b>12,262</b>	<b>91,685</b>	<b>11,621</b>	<b>12,952</b>	<b>92,712</b>	<b>135,561</b>	
<b>Tons Diverted</b>										
Tons of curbside recycling	55,494	57,324	4,858	4,811	38,185	4,717	5,008	39,605	60,000	
HHW Operations Tons recycled/reused	286	311	34	29	194	34	35	270	270	
Tons of Curbside Yard Trimmings	27,957	28,036	5,387	2,587	22,434	3,512	2,589	24,675	35,000	
Tons of Curbside Bulk Recycled	178	171	10	24	104	12	28	104	142	
Tons of Curbside Brush Collected	6,882	7,776	587	702	3,886	731	1,140	5,395	8,000	
<b>Total Diverted Tons Collected Curbside and from HHW Operations</b>	<b>90,015</b>	<b>93,618</b>	<b>10,856</b>	<b>8,133</b>	<b>64,853</b>	<b>9,006</b>	<b>8,800</b>	<b>70,049</b>	<b>103,412</b>	
<b>Total Tons Collected Curbside and from HHW Operations</b>	<b>227,273</b>	<b>234,359</b>	<b>23,169</b>	<b>20,395</b>	<b>156,538</b>	<b>20,627</b>	<b>21,753</b>	<b>162,761</b>	<b>238,973</b>	
<b>Percent of Waste Stream Diverted by Curbside and HHW Operations</b>	<b>39.61%</b>	<b>39.95%</b>	<b>46.86%</b>	<b>39.88%</b>	<b>41.43%</b>	<b>43.66%</b>	<b>40.46%</b>	<b>43.04%</b>	<b>43.27%</b>	
<b>Pounds of Trash collected per customer per pickup</b>	<b>25.96</b>	<b>25.96</b>	<b>28.19</b>	<b>26.94</b>	<b>26.09</b>	<b>26.13</b>	<b>27.53</b>	<b>25.53</b>	<b>24.49</b>	
Number of Trash customers	189,543	191,580	191,684	191,649	191,348	192,304	192,438	192,138	198,300	
Pounds of Recycled materials collected per customer per pickup (every other week)	22.79	23.20	23.60	23.38	23.20	22.82	24.22	23.97	23.51	
Pounds of Yard Trimmings collected per customer per week	5.62	5.67	13.09	6.24	6.82	8.50	6.26	7.47	6.21	
Number of Recycling and Yard Trimmings customers	187,456	190,088	190,128	190,116	189,837	190,842	191,013	190,697	198,300	
Number of PAYT pickups	52	52	4.33	4.33	34.66	4.33	4.33	34.66	52	
<b>Total tons of Dead Animals Collected from COA rights-of-way and the animal shelter</b>	<b>61</b>	<b>62</b>	<b>5</b>	<b>6</b>	<b>43</b>	<b>3</b>	<b>3</b>	<b>28</b>	<b>67</b>	

## Austin Resource Recovery Curbside Collection and HHW Operations

