Northeast Resource Recovery Association

1-800-223-0150 info@nrra.net

A Recycling Non-Profit

Working Together to Make Recycling Strong!

Mike Durfor

Executive Director

About Us

In 1981, four New Hampshire municipalities founded the Northeast Resource Recovery Association, then called the New Hampshire Resource Recovery Association, to provide a clearinghouse for current, up-to-date information and a source of technical and marketing assistance in the general areas of waste reduction and recycling.

As amended July, 1995

Articles of Agreement
of
Northeast Resource Recovery Association
(formerly New Hampshire Resource Recovery Association)

Article 1. The name of this corporation shall be

Northeast Resource Recovery Association

Article 2. The object for which this corporation is established is

as a clearinghouse for relevant information, as a source of education in the field of solid waste management, as a cooperative agent with state, regional and local governmental agencies, as a market development service.

MOM and NRRA Workshops

MOM - Members/Operations/Marketing meetings are held monthly.

In addition. NRRA conducts workshops and facility tours several times a year that can be used for continuing education credits toward transfer facility operator certifications and renewals.

A program of Northeast Resource Recovery Association
2101 Dover Road, Epsom, NH 03234 / 1.800.223.0150 / www.nrra.net

The NRRA School CLUB

The NRRA School CLUB builds community action by directing youth,teachers, schools, and communities to a clear understanding of pertinent solid and hazardous waste issues and supporting sustainable waste reduction programs.


Radisson

May 16 and 17, 2016!

NRRA announces it 35th Anniversary Emerald ***Jubilee Conference*** …..“It’s Not Easy Being GREEN!!”. We are moving south from Manchester to Nashua, NH. The Castle is rolling out the emerald carpet for this very special, first in the nation conference and exposition. Stay tuned, as we ramp up even earlier than usual with workshop proposals and exhibit opportunities that cannot be missed. Once we go live for registration I encourage all to sign up early to take advantage of the Early …Early Bird Discounts and the Special Value Package. The line-up for next spring will include Nationally Recognized Experts in this ever changing field and as usual, NRRA will be leading the way with the most up to date and cutting edge information you can use. You won’t want to miss this historic

NRRA

Recycling yesterday - today - and tomorrow: Is it dead? Should we just give up and throw in the towel and the recycling in the trash?? What can we do to make a better product and increase revenues? What will the markets do next year ??

“The Reign of Recycling”

By JOHN TIERNEY, October 3, 2015

IF you live in the United States, you probably do some form of recycling. It’s likely that you separate paper from plastic and glass and metal. You rinse the bottles and cans, and you might put food scraps in a container destined for a composting facility. As you sort everything into the right bins, you probably assume that recycling is helping your community and protecting the environment. But is it? Are you in fact wasting your time? In 1996, I wrote a long article for The New York Times Magazine arguing that the recycling process as we carried it out was wasteful. I presented plenty of evidence that recycling was costly and ineffectual, but its defenders said that it was unfair to rush to judgment. Noting that the modern recycling movement had really just begun just a few years earlier, they predicted it would flourish as the industry matured and the public learned how to recycle properly.

So, what’s happened since then? While it’s true that the recycling message has reached more people than ever, when it comes to the bottom line, both economically and environmentally, not much has changed at all.

Despite decades of exhortations and mandates, it’s still typically more expensive for municipalities to recycle household waste than to send it to a landfill. Prices for recyclable materials have plummeted because of lower oil prices and reduced demand for them overseas. The slump has forced some recycling companies to shut plants and cancel plans for new technologies. The mood is so gloomy that one industry veteran tried to cheer up her colleagues this summer with an article in a trade journal titled, “Recycling Is Not Dead!”

WM CEO Tells CNBC: Recycling Unprofitable, So 'People Don't Invest'

By Joseph Rossell | May 28, 2015 | 2:26 PM EDT

The truth about recycling according to a waste disposal company may come as a shock. It is "unprofitable," according to Waste Management (WM) CEO David Steiner.

On May 28, Steiner told CNBC's *Squawk Box* that recycling had proved to be "unprofitable" and his company has stopped investing in recycling operations. WM revenues were down 10 percent just because of losses from recycling, according to Steiner, even though this only represented a small fraction of the company's overall business.

"And we all know what happens when it becomes unprofitable: people don't invest," Steiner said. "And, you know, we generally invest $100,000,000 to $200,000,000 a year in recycling assets. The last two years we haven't invested any."

Steiner claimed he wasn't asking the government for a "handout" or "to subsidize recycling" in general, but said subsidies made sense in "situations like you have today where, where it becomes unprofitable to recycle."

He added that a recent Environmental Protection Agency (EPA) report showed that the recycling rate in America declined from 35 percent to 33 percent and predicted an upcoming EPA report would show further decline. WM has long struggled to make the recycling process financially viable. In November 2013, Forbes reported that recycling profits had proved "elusive" for the company and Steiner told them the company had "lost money in recycling" for a year and a half.

In addition to being unprofitable, recycling "can be a net waste of the very resources that recycling was implemented to conserve," according to Duke University professor and economist Michael Munger. "Empirically, recycling is almost always substantially more expensive than disposing in the landfill."

NRRA

RECENT WSJ ARTICLE

Recycling Is Tougher Sell as Prices Drop

WSJ

The Wall Street Journal.
Georgi Kantchev 14 hrs ago

BINBROOK, England—A former World War II bomber hangar houses a monument to the recent plunge in oil prices: hundreds of bags of shredded plastic.

The hangar is used by CK Group, a recycler of bottles, pipes and sundry bits of plastic. Plastic is often derived from oil, and there used to be money in recycled scrap. Not anymore. The fall in oil prices has dragged down the price of virgin plastic, erasing the recyclers' advantage.

"Many in the recycling industry are hanging by the skin of their teeth," says Chris Collier, CK's commercial director, walking among the bales of unsold shreds. "Everybody is desperately chasing for money to stay alive."

The ramifications are being felt far and wide. In the U.S., many cities and towns pick up detergent bottles, milk jugs and other bits of household plastic and sell them to recyclers who sort, process and resell the scrap. These municipalities typically earned cash—as much as $10 a ton in parts of New Jersey—for selling recyclable materials under contracts that tie the sales price to commodities prices, with a minimum.

In recent months, some expiring contracts have been replaced with new contracts that set no such floor. That raises the possibility for some municipalities that a moneymaker could turn into a loser.

"They are definitely concerned about the possibility that they may have to pay for the materials to be removed," said Dominick D'Altilio, president of the Association of New Jersey Recyclers, a Bridgewater, N.J., group that includes recycling firms and municipalities.

At the start of this year, new polyethylene terephthalate, a type of plastic widely known as PET and used to make soft-drink and water bottles, cost 83 cents a pound, according to data compiled by industry publication Plastics News. That was 15% higher than the cost of recycled PET.

Key Note Speaker Chaz Miller at the NRRA 34th Annual Conference and Expo held in Manchester, NH on June 8 and 9, 2015 –

"It's not your father's recycling market anymore".

The markets appear to have moved away from their historic ups and downs and at least for the near term have settled into the "new normal" (see Casella item below) of relatively flat pricing. The trend has been led by Mixed Paper starting in August of 2013, which has held steady at $45 per ton for 32 month; # 8 News, OCC, and SOP (Sorted Office Paper) have also settled into this relatively flat range of pricing. The major difference with these current markets is they do not appear to give any indications of moving upward anytime soon. It should be noted that the #6 News grade has been discontinued altogether as of January of 2013.

Overview of New England Yellow Sheet

		Mix[illegible]er		#6 News		#8 News		OCC		SOP	
		L[illegible]	[illegible]	Low	High	Low	High	Low	High	Low	High
2008	January	[illegible]	[illegible]	$ 65	$ 70	$ 105	$ 115	$ 110	$ 120	$ 215	$ 225
	February	[illegible]	[illegible]	$ 75	$ 80	$ 105	$ 115	$ 110	$ 120	$ 225	$ 235
	March	[illegible]	[illegible]	$ 80	$ 85	$ 115	$ 125	$ 130	$ 140	$ 225	$ 235
	April	80	[illegible]	80	$ 85	$ 110	$ 120	$ 125	$ 135	$ 225	$ 235
	May	80	[illegible]	80	$ 85	$ 110	$ 120	[illegible]	[illegible]	$ 215	$ 225
	June	80	[illegible]	80	$ 85	$ 110	$ 120	[illegible]	[illegible]	[illegible] 205	$ 215
	July	80	[illegible]	80	$ 85	$ 125	$ 135	[illegible]	[illegible]	215	$ 225
	August	80	[illegible]	90	$ 95	$ 145	[illegible]	[illegible]	[illegible]	220	$ 230
	September	80	[illegible]	85	$ 90	$ 140	[illegible]	[illegible]	[illegible]	[illegible]	$ 235
	October	60	[illegible]	55	$ 60	$ 120	[illegible]	[illegible]	[illegible]	[illegible]	$ 215
	November	-	[illegible]	-	$ 5	$ 35	[illegible]	40	$ 45	[illegible]	$ 165
	December	-	[illegible]	-	$ 5	$ 25	[illegible]	20	$ 25	[illegible]	$ 100
2009	January	-	[illegible]	-	$ 5	$ 25	[illegible]	$ 20	$ 25	[illegible]	95
	February	10	[illegible]	-	$ 5	$ 25	[illegible]	$ 25	$ 30	[illegible]	100
	March	10	[illegible]	5	$ 10	$ 35	[illegible]	$ 30	$ 35	[illegible]	100
	April	15	[illegible]	5	$ 10	$ 45	[illegible]	$ 35	$ 40	[illegible]	100
	May	15	[illegible]	5	$ 10	$ 45	[illegible]	$ 40	$ 45	[illegible]	100
	June	25	[illegible]	5	$ 10	$ 50	[illegible]	55	$ 60	[illegible]	110
	July	30	[illegible]	25	$ 30	$ 50	[illegible]	60	$ 65	[illegible]	125
	August	[illegible]	[illegible]	$ 30	$ 35	$ 55	[illegible]	[illegible]	[illegible]	[illegible]	$ 135
	September	[illegible]	[illegible]	$ 35	$ 40	$ 70	[illegible]	[illegible]	[illegible]	[illegible]	$ 145
	October	[illegible]	[illegible]	$ 35	$ 40	$ 70	[illegible]	[illegible]	[illegible]	145	$ 155
	November	[illegible]	[illegible]	$ 35	$ 40	$ 75	$ 80	[illegible]	[illegible]	160	$ 170
	December	[illegible]	55	$ 35	$ 40	$ 80	$ 85	[illegible]	[illegible]	170	$ 180
2010	January	[illegible]	65	$ 35	$ 40	$ 80	$ 85	[illegible]	[illegible]	$ 190	$ 200
	February	$ 65	$ 70	$ 35	$ 40	$ 80	$ 85	$ 125	$ 135	$ 205	$ 215
	March	$ 85	$ 90	$ 40	$ 45	$ 80	$ 85	$ 160	[illegible] 170	$ 205	$ 215
	April	$ 85	$ 90	$ 40	$ 45	$ 80	$ 85	[illegible]	[illegible]	190	$ 200
	May	$ 75	$ 80	$ 40	$ 45	$ 85	$ 90	[illegible]	[illegible]	$ 190	$ 200
	June	$ 70	$ 75	$ 40	$ 45	$ 80	$ 85	[illegible]	[illegible]	[illegible]	$ 200
	July	$ 40	$ 45	$ 35	$ 40	$ 75	[illegible]	[illegible]	[illegible]	[illegible]	$ 200
	August	$ 40	$ 45	$ 35	$ 40	$ 70	[illegible]	[illegible]	[illegible]	[illegible]	220
	September	$ 55	$ 60	$ 35	$ 40	$ 80	[illegible]	[illegible]	$ 120	[illegible]	220
	October	$ 65	$ 70	$ 35	$ 40	$ 80	[illegible]	120	$ 130	$ [illegible]	220
	November	$ 65	$ 70	$ 45	$ 50	$ 90	[illegible]	155	$ 165	$ [illegible]	210
	December	$ 65	$ 70	$ 45	$ 50	$ 90	[illegible]	160	$ 170	$ [illegible]	210
2011	January	$ 65	$ 70	$ 45	$ 50	$ 90	[illegible]	155	$ 165	$ [illegible]	215
	February	$ 65	$ 70	$ 45	$ 50	$ 90	[illegible]	155	$ 165	$ [illegible]	230
	March	$ 65	$ 70	$ 55	$ 60	$ 130	[illegible]	155	$ 165	$ [illegible]	250
	April	$ 65	$ 70	$ 55	$ 60	$ 130	[illegible]	150	$ 160	$ [illegible]	270
	May	$ 65	$ 70	$ 55	$ 60	$ 120	[illegible]	150	$ 160	[illegible]	270
	June	$ 75	$ 80	$ 60	$ 65	$ 120	[illegible]	[illegible]	[illegible]	[illegible]	270
	July	$ 110	$ 120	$ 60	$ 65	$ 120	[illegible]	[illegible]	[illegible]	[illegible]	$ 280
	August	$ 120	$ 130	$ 65	$ 70	$ 130	$ 140	[illegible]	[illegible]	[illegible]	$ 290
	September	$ 120	$ 130	$ 65	$ 70	$ 130	$ 140	[illegible]	[illegible]	260	$ 270
	October	$ 120	$ 130	$ 65	$ 70	$ 130	$ 140	$ [illegible]	[illegible]	240	$ 250
	November	$ 85	$ 90	$ 65	$ 70	$ 90	$ 100	$ [illegible]	[illegible]	$ 150	$ 160
	December	$ 55	$ 60	$ 35	$ 40	$ 75	$ 80	$ 115	$ 125	$ 140	$ 150
2012	January	$ 65	$ 70	$ 35	$ 40	$ 75	$ 80	$ 115	$ 125	$ 140	$ 150
	February	$ 75	$ 80	$ 35	$ 40	$ 75	$ 80	$ 130	$ 140	$ 160	$ 170
	March	$ 75	$ 80	$ 35	$ 40	$ 80	$ 85	$ 130	$ 140	$ 160	$ 170
	April	$ 80	$ 85	$ 35	$ 40	$ 85	$ 90	$ 130	$ 140	$ 140	$ 150
	May	$ 75	$ 80	$ 35	$ 40	$ 80	$ 85	$ 120	$ 130	$ 140	$ 150
	June	$ 75	$ 80	$ 35	$ 40	$ 75	$ 80	$ 120	$ 130	$ 150	$ 160
	July	$ 65	$ 70	$ 35	$ 40	$ 70	$ 75	$ 115	$ 125	$ 175	$ 185
	August	$ 55	$ 60	$ 35	$ 40	$ 60	$ 65	$ 100	$ 110	$ 175	$ 185
	September	$ 40	$ 45	$ 20	$ 25	$ 45	$ 50	$ 85	$ 90	$ 165	$ 175
	October	$ 45	$ 50	$ 20	$ 25	$ 45	$ 50	$ 85	$ 90	$ 165	$ 175
	November	$ 50	$ 55	$ 20	$ 25	$ 50	$ 55	$ 90	$ 100	$ 165	$ 175
	December	$ 50	$ 55	$ 20	$ 25	$ 60	$ 65	$ 95	$ 105	$ 155	$ 165

Overview of New England Yellow Sheet

Year	Month	Mixed Paper Low	Mixed Paper High	#6 News Low	#6 News High	#8 News Low	#8 News High	OCC Low	OCC High	SOP Low	SOP High
2013	January	$ 50	$ 55	$ 20	$ 25	$ 60	$ 65	$ 95	$ 105	$ 160	$ 165
	February	$ 55	$ 60	$ 20	$ 25	$ 60	$ 65	$ 95	$ 105	$ 160	$ 165
	March	$ 60	$ 65	$ 25	$ 30	$ 70	$ 75	$ 105	$ 115	$ 160	$ 165
	April	$ 60	$ 65	$ 30	$ 35	$ 75	$ 80	$ 105	$ 115	$ 150	$ 155
	May	$ 50	$ 55	$ 25	$ 30	$ 65	$ 70	$ 100	$ 110	$ 140	$ 150
	June	$ 45	$ 50	$ 25	$ 30	$ 60	$ 65	$ 100	$ 110	$ 135	$ 145
	July	$ 45	$ 50	$ 25	$ 30	$ 60	$ 65	$ 100	$ 110	$ 135	$ 145
	August	$ 40	$ 45	$ 25	$ 30	$ 60	$ 65	$ 105	$ 115	$ 145	$ 155
	September	$ 40	$ 45	$ 25	$ 30	$ 60	$ 65	$ 110	$ 120	$ 145	$ 155
	October	$ 40	$ 45	$ 25	$ 30	$ 60	$ 65	$ 110	$ 120	$ 145	$ 155
	November	$ 40	$ 45	$ 23	$ 30	$ 60	$ 65	$ 110	$ 120	$ 145	$ 155
	December	$ 40	$ 45	$ 25	$ 30	$ 60	$ 65	$ 100	$ 110	$ 135	$ 145
2014	January	$ 40	$ 45			$ 60	$ 65	$ 100	$ 110	$ 140	$ 150
	February	$ 40	$ 45			$ 60	$ 65	$ 100	$ 110	$ 150	$ 160
	March	$ 40	$ 45			$ 60	$ 65	$ 115	$ 125	$ 155	$ 165
	April	$ 40	$ 45			$ 60	$ 65	$ 100	$ 110	$ 150	$ 160
	May	$ 40	$ 45			$ 60	$ 65	$ 100	$ 110	$ 150	$ 160
	June	$ 40	$ 45			$ 60	$ 65	$ 95	$ 105	$ 150	$ 160
	July	$ 40	$ 45			$ 60	$ 65	$ 95	$ 105	$ 150	$ 160
	August	$ 40	$ 45			$ 60	$ 65	$ 90	$ 100	$ 150	$ 160
	September	$ 40	$ 45			$ 60	$ 65	$ 90	$ 95	$ 150	$ 160
	October	$ 40	$ 45			$ 60	$ 65	$ 90	$ 95	$ 150	$ 160
	November	$ 40	$ 45			$ 60	$ 65	$ 85	$ 90	$ 150	$ 160
	December	$ 40	$ 45			$ 60	$ 65	$ 85	$ 90	$ 155	$ 165
2015	January	$ 40	$ 45			$ 60	$ 65	$ 85	$ 90	$ 155	$ 165
	February	$ 40	$ 45			$ 60	$ 65	$ 75	$ 80	$ 155	$ 165
	March	$ 40	$ 45			$ 50	$ 55	$ 75	$ 80	$ 150	$ 160
	April	$ 40	$ 45			$ 50	$ 55	$ 75	$ 80	$ 150	$ 160
	May	$ 40	$ 45			$ 50	$ 55	$ 75	$ 80	$ 150	$ 160
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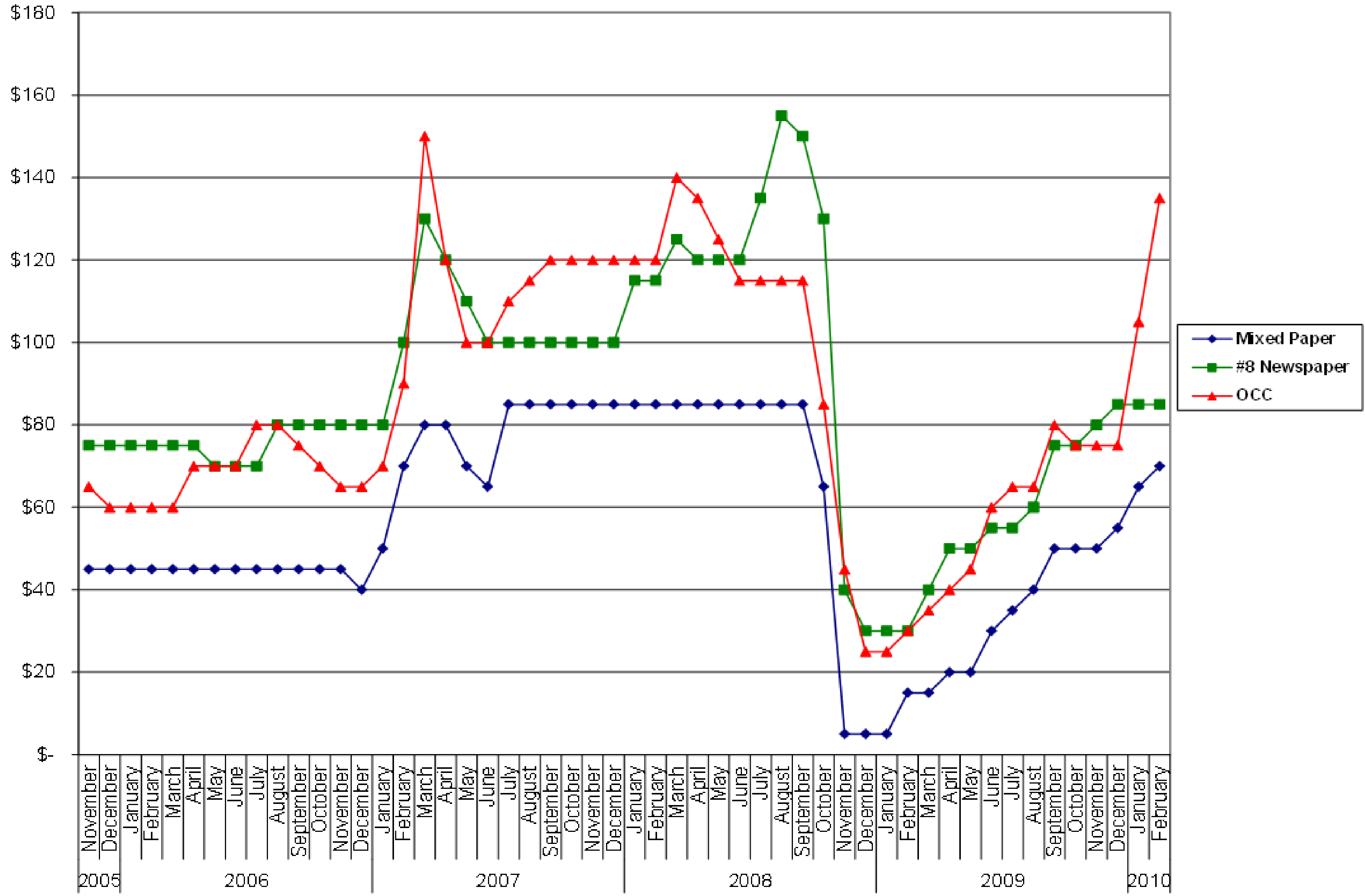

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Mixed Paper
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MARKETS

New England Commodities Pricing 2011-Present

	Material	Min	Max	Ave
Fibers	#8 Newspaper Baled (ton)	$ 45.00	$ 130.00	$ 63.45
	#9 Newspaper Baled - insulation grade (ton)	$ 25.00	$ 170.00	$ 66.63
	#8 Loose (ton)	$ -	$ 110.00	$ 34.88
	Mixed Paper Baled (ton)	$ -	$ 120.00	$ 38.72
	Mixed Loose (ton)	$ -	$ 115.00	$ 29.30
	OCC Baled (ton)	$ 50.00	$ 160.00	$ 97.09
	OCC Loose (ton)	$ 40.00	$ 125.00	$ 69.07
Plastics	PETE Baled (lb)	$ 0.07	$ 0.30	$ 0.14
	HDPE Natural Baled (lb)	$ 0.13	$ 0.44	$ 0.31
	HDPE Colors Baled (lb)	$ 0.02	$ 0.29	$ 0.19
	HDPE "Z" Mixed Baled (lb)	$ 0.10	$ 0.31	$ 0.19
	#1 - #7 (lb)	$ 0.01	$ 0.70	$ 0.09
	#3-#7 (lb)	$ 0.01	$ 0.02	$ 0.01
	Rigids (lb)	$ -	$ 0.05	$ 0.01
Mixed	Commingle - loose w/glass: (ton)	$ (50.00)	$ (45.00)	$ (45.60)
	Single Stream Loose: (ton)	$ (80.00)	$ -	$ (43.33)
Disposal	MSW	$ (95.00)	$ (78.00)	$ (90.53)
	Construction & Demolition (ton)	$ (66.50)	$ (61.00)	$ (64.08)
	C&D Source Separated Wood	$ (50.00)	$ (50.00)	$ (50.00)
	C&D White Wood	$ (42.50)	$ (42.50)	$ (42.50)
Metal	Scrap Metal - Containerized (gt)	$ 100.00	$ 245.00	$ 191.86
	Scrap Metal - bulk (Zones 1 locations) (gt)	$ 65.00	$ 205.00	$ 155.81
	Steel Cans Baled (gt)	$ 65.00	$ 215.00	$ 135.12
	Steel Cans Loose (gt)	$ 55.00	$ 210.00	$ 128.93
	Aluminum Cans Baled (UBCs only) (lb)	$ 0.47	$ 0.74	$ 0.55
	Aluminum Cans Loose (lb)	$ 0.45	$ 0.70	$ 0.54
Other	Vegetable Oil (gal)	$ 0.48	$ 1.01	$ 0.97
	Batteries (lead) (lb)	$ 0.20	$ 3.28	$ 0.34
	Freon Recovery (unit)	$ (9.00)	$ 9.00	$ (8.02)
	Glass PGA (ton)	$ (30.00)	$ (22.00)	$ (23.23)
	Glass - clear or brown (ton)	$ 15.00	$ 15.00	$ 15.00
	Flourescent Bulbs (ft)	$ (0.11)	$ 6.00	$ 0.07
	CFL's (unit)	$ (0.55)	$ (0.04)	$ (0.40)
	Electronics - CRT TVs & Monitors (lb)	$ (0.21)	$ (0.13)	$ (0.19)
	Mixed Electronics - Printers, VCRs etc. (lb)	$ (0.19)	$ (0.12)	$ (0.17)
	CPU & Laptop credits available (lb)	$ (0.10)	$ (0.01)	$ (0.04)
	Propane Tanks: (pickup) (min pickup up 25x 20#)	$ (25.00)	$ (25.00)	$ (25.00)
	20# tanks (unit)	$ 0.50	$ 1.00	$ 0.62
	Shingles (nt)	$ (48.00)	$ (4.00)	$ (46.98)
	Sheetrock (nt)	$ (48.00)	$ (48.00)	$ (48.00)
	Gaylords (unit)	$ (12.00)	$ (8.00)	$ (11.53)
	Gaylords (Plastic)	$ (134.00)	$ (134.00)	$ (134.00)
	Loose Books (ton)	$ 30.00	$ 30.00	$ 30.00
	Textiles (lb)	$ 0.05	$ 0.05	$ 0.05

Figure 32: Market Prices 2011-Present

Recycling's Vital Signs

Activity	2015		Percent change, year over year
Recovered paper producer price index through April	293.6	(1982=100)	-13.4
Recovered paper exports through March	45.74	million metric tons	-6.2
Recovered paper exports average price through March	$160	per metric ton	-8.7
North American primary aluminum rate of production through April	4.51	million metric tons	-3.6
Aluminum beverage can shipments through March	21,427.9	million cans	-0.9
UBC exports through March	18	million pounds	+12.1
UBC exports average price through March	80	cents per pound	-7.6
Aluminum scrap exports through March	725.34	million pounds	-18.3
Aluminum scrap exports average price through March	74	cents per pound	-4.6
Steel production through April	26.3	million metric tons	-8.5
Ferrous scrap exports through March	32.56	million metric tons	-5.0
Ferrous scrap exports average price through March	$334	per metric ton	-17.1
Glass scrap exports through March	7,335.55	tons	+38.7
Glass scrap exports average price through March(1)	$612	per ton	-9.3
Scrap plastics exports through March	9,978.41	million pounds	-9.4
Scrap plastics exports average price through March	18.61	cents per pound	-4.5

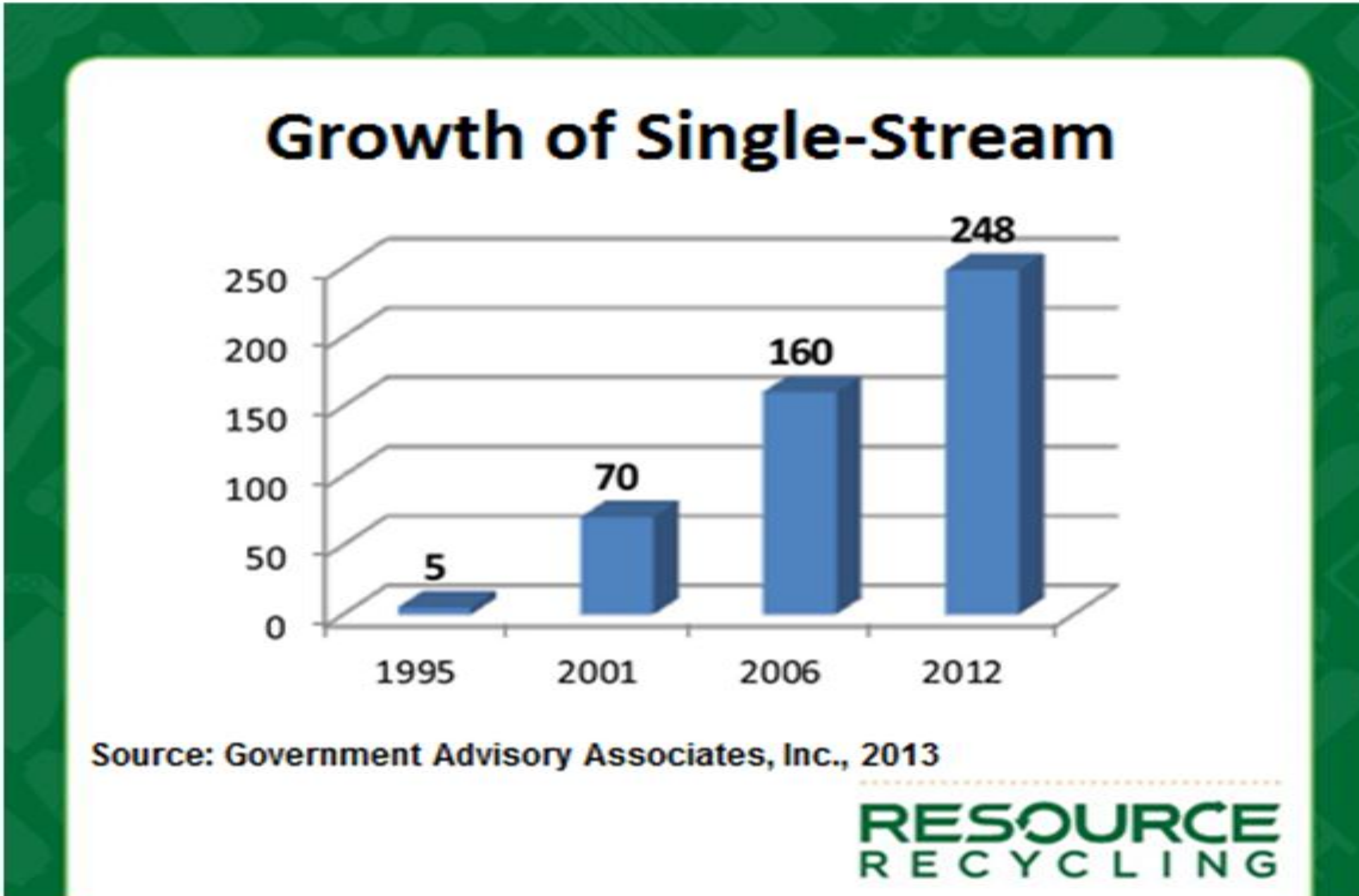
(1) Includes cullet and other scrap glass, including glass in mass

Sources: U.S. Department of Commerce; U.S. Department of Labor – Bureau of Labor Statistics; Aluminum Association; Can Manufacturers Institute; International Iron and Steel Institute; Resource Recycling, 2015.

Green Fence

Earth Goddess

GROWTH OF SINGLE STREAM PLANTS NATIONWIDE



Single Stream – Zero Sort


ZERO-SORT®
RECYCLING
a casella service

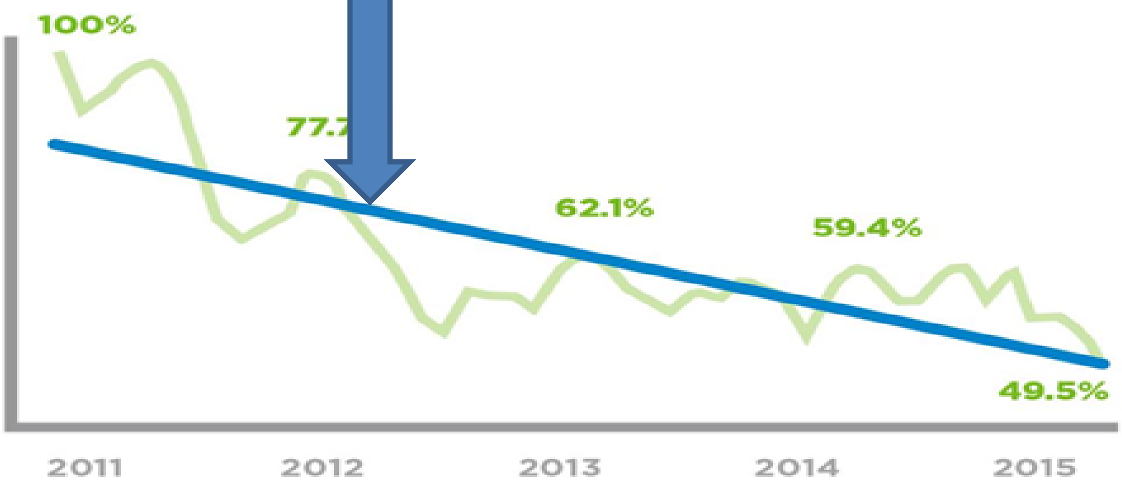
Sustainability/Recycling Adjustment

Resource Sustainability is Not Free

Across the country, thousands of municipalities, businesses, institutions and households are working to increase their recycling, reduce their waste and promote a more sustainable existence. They understand how wasting less and recycling more can help conserve resources, protect the environment, support jobs and create value. To make this work effectively, investments in infrastructure are required to deliver the value-added services that our customers demand.

The Decline in Value of Recyclable Materials

In the past, some of the infrastructure was subsidized by the market value of the materials being recycled. Unfortunately, today, this is no longer the case. Commodities like plastic, paper and cardboard are worth far less than they were just 2-4 years ago. It appears that this era of low commodity values has become the new normal.



Decline in Commodity Values Since 2011

State Regulations Support Resource Sustainability

Public policy has long supported sustainability while fostering its growth. At Casella, we have an obligation to meet the regulatory requirements and the needs of our customers to ensure the environmental and economic benefits of resource sustainability for generations to come.

Here are four things to know about Casella's latest financial results and corporate moves.

1. **Net income climbed 112.6 percent** to $2.3 million, up $1.2 million from the same period in 2014. Operating income advanced 19.5 percent.

2. **Revenue increased 3 percent** to $146.2 million, a hike of $4.3 million.

3. ***The assessment of Chairman and CEO John Casella**: "During our third quarter, **we continued to execute well against our key strategies** of increasing landfill returns, improving collection route profitability, creating incremental value through resource solutions, reducing financial and operational risks, and improving our balance sheet."* He said the company reduced leverage and accelerated free cash flow generation by retiring its highest cost debt.

4. ***Solid waste pricing rose 2.9 percent**, and the company's operating efficiency improved with success in implementing its Sustainability Recycling Adjustment fee to offset lower recycling commodity prices.*

“The reality is … that people need the material to go away whether it is in the trash bin or the recycling bin,” Durfor says. “To Casella’s credit, they want to stay in the recycling business. The nomenclature won’t make a difference. Whether you call it a ***<u>sustainability fee or a cost of doing business</u>***, the cost of all of this is going up.”

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RESOURCE RECYCLING

Negotiating the Single-Stream

The materials recovery facility is the backbone of the recycling industry – if MRFs can't make it, then robust recycling can't exist. In this first part in an ongoing series looking at the challenges MRFs face in a changing recycling landscape, our author does a deep dive into the choppy waters of recovered materials markets.

BY MICHAEL TIMPANE

Processing recyclables is a tough business and single-stream materials recovery facilities (MRFs) are again under pressures to maintain acceptable output, product quality and profit margins. Over the last two years, experts have cited multiple causes for the strong uptick of difficulty in this part of the municipal recycling value stream, focusing on two causes in particular: the quality of inbound single-stream collected materials and more voluminous tons resulting from lighter packaging. But there are other variables as well, and each conspires against complacency or restful sleep for MRF managers.

The heavy news of lightweighting

Locally reported recycling program tonnages in sites with no change in collection technology has generally remained flat, or is only slightly declining, in North American curbside programs. However, due to more plastics and other lighter feedstock taking the place of denser printed materials and consumer packaging, the physical characteristics of inbound MRF volumes have pushed MRF operators to run at slower volume throughput in MRF operating systems. What is happening?

There have been precipitous declines in printed newspaper, office paper and magazines in the last five years in the curbside materials stream. The modern design of almost all single-stream processing facilities has, at its core, the separation of newspaper over screens designed especially for its capture. This is because this material made up over 50 percent of the inbound flow of materials when these plants were conceived. Now, loose compacted paper (200-500 pounds per cubic yard and making up over half of the incoming stream) has been replaced by compacted plastic containers (50-75 pounds per cubic yard, flattened), and other newer types of consumer products (e.g. juice boxes and multi-laminated film products, both around 75 pounds per cubic yard, flattened).

In fact, estimates from the U.S. Environmental Protection Agency show a decline in total paper in the waste stream by over 20 percent in recent years, while plastic waste generation has increased over 15 percent. Industry sources confirm that from 2009 to 2013, the total supply of newsprint in the U.S. shrunk from 10.8 million tons to 8.3 million tons, due to a combination of lightweighting and the digital replacement of printed materials – a 23 percent drop. The sharp downward plunge was similar in other printed paper supply categories.

Importantly, flexible film packaging and individual, custom single-use containers are also increasingly replacing previously recyclable larger and bulk packaging. "One serving per package" is now more the rule than ever and making more units more efficiently has become important for product manufacturers. Naturally, this accelerates as manufacturers seek to use less energy and material for greater savings along the production and distribution chains. The customization process unfortunately has made their products initially more expensive to handle in a MRF and potentially less recyclable.

One example is single-serve PET container usage, which has increased from 5 to 7 percent per year in usage over the last five years. NAPCOR, among others, reported that the weight of the containers themselves have gone down over 20 percent in a sim-

GILFORD — Selectmen will ask voters at next year's Town Meeting to authorize spending $50,000 for a conceptual study of establishing a solid waste transfer station at the current recycling facility on Kimball Road. Solid waste has long been hauled to Laconia for disposal.
The action came at last night's meeting of selectmen following a report from Selectman Richard Grenier of the Solid Waste Committee on the committee's recommendations.

Grenier said that single stream recycling was not working and the town is paying $148 per ton for single stream recycling compared to $90 a ton for household trash.

The Evolution of Packaging/ The Evolving Ton

- Light-weighting
- Increasing recycled content
- Projected increase in flex film packaging
- Flexible packaging expected to grow 3.5% annually in the next few years

The Evolution of Packaging

Glass bottle, metal cap to **HDPE bottle, PP cap**

HDPE Bottle, PP Cap to **multi-layer, flexible film pouch**

The Evolution of Packaging

Glass bottle, metal cap
to
PET bottle, PP cap

Glass jars, metal cap to
PET jar, PP cap

The Evolution of Packaging

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Environmental Drivers Fueling the Shift

Flexible Film Pouches & Packaging

Flexible Packaging
Creates Less Footprint

Energy consumption and environmental impact during transportation is greatly reduced.

Truckloads needed to transport packaging for equal amounts of product

26 truckloads of unfilled glass jars

1 truckload of unfilled flexible pouches

Flexible Packaging
Uses Less Resources

Examples of packaging needed to package 60 pounds of beverage

50 pounds of glass

6 pounds of Rigid PET

3 pounds of aluminum

1.5 pounds of flexible plastic

Flexible Packaging Association www.flexpack.org

RESOURCE RECYCLING

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clean-tech-video-2006.wmv

- Given the challenges ahead, the choices are difficult and there are no guarantees. The best recommendation is to prepare for the future by recognizing the long term essential need for and value of recycling infrastructure. The only question left is whether your town owns its own and controls its destiny or if the private sector steps up and charges market rates for the commodities movement.
- The following are examples of public and private facility investments that are now paying dividends.

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Wellesley Recycling
and Disposal Facility


Lee Transfer Station


Imagery Date: 9/18/2014 42°58'40.62" N


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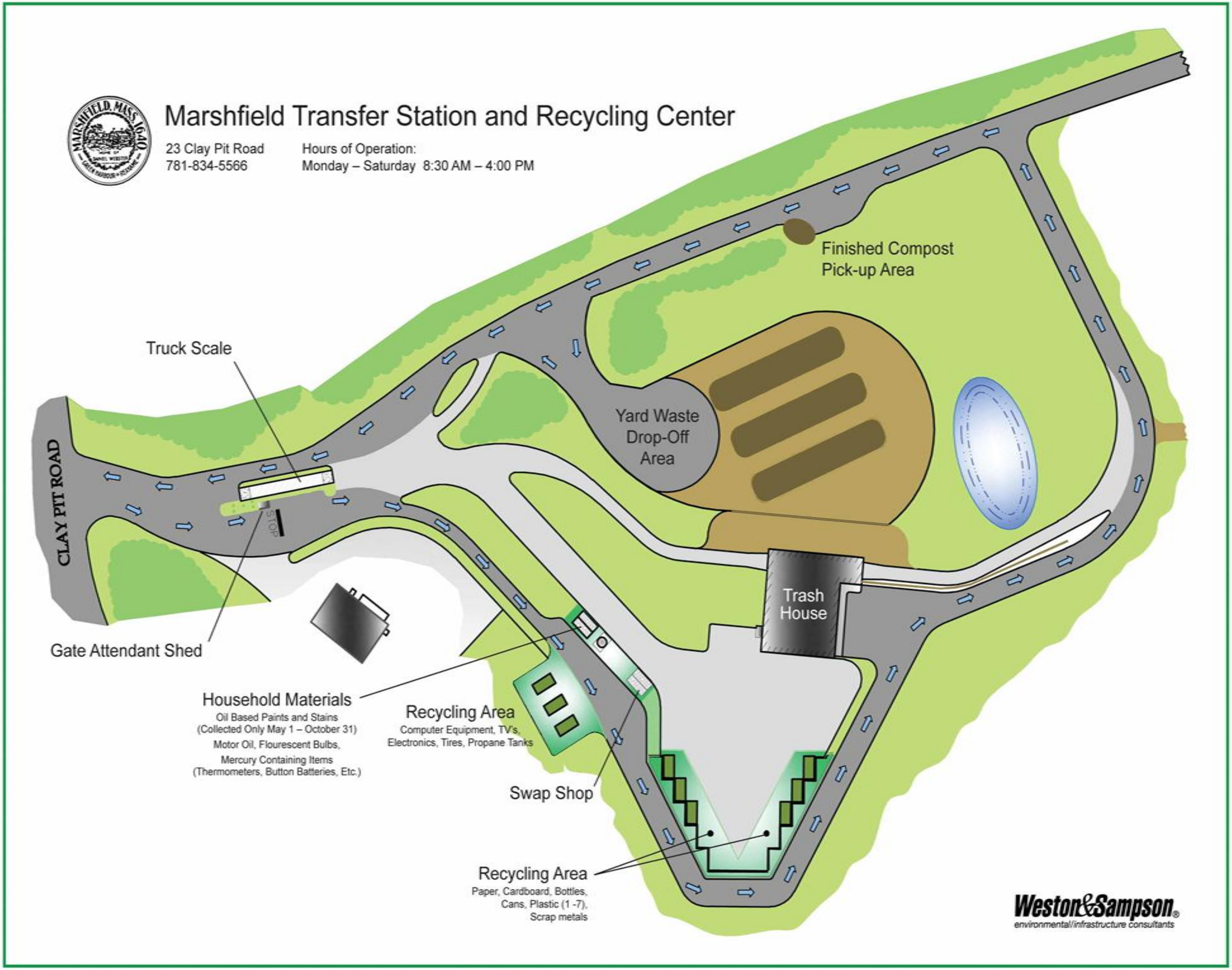
A
BCEP Solid Waste District


Waste Management Distribution
Google earth

NRRA


Northwest Vermont Solid Waste


A
Addison County Solid Waste


Marshfield Transfer Station and Recycling Center
23 Clay Pit Road
781-834-5566
Hours of Operation:
Monday – Saturday 8:30 AM – 4:00 PM
Finished Compost Pick-up Area
Truck Scale
Yard Waste Drop-Off Area
CLAY PIT ROAD
STOP
Trash House
Gate Attendant Shed
Household Materials
Oil Based Paints and Stains
(Collected Only May 1 – October 31)
Motor Oil, Flourescent Bulbs,
Mercury Containing Items
(Thermometers, Button Batteries, Etc.)
Recycling Area
Computer Equipment, TV's,
Electronics, Tires, Propane Tanks
Swap Shop
Recycling Area
Paper, Cardboard, Bottles,
Cans, Plastic (1 -7),
Scrap metals
Weston&Sampson
environmental/infrastructure consultants

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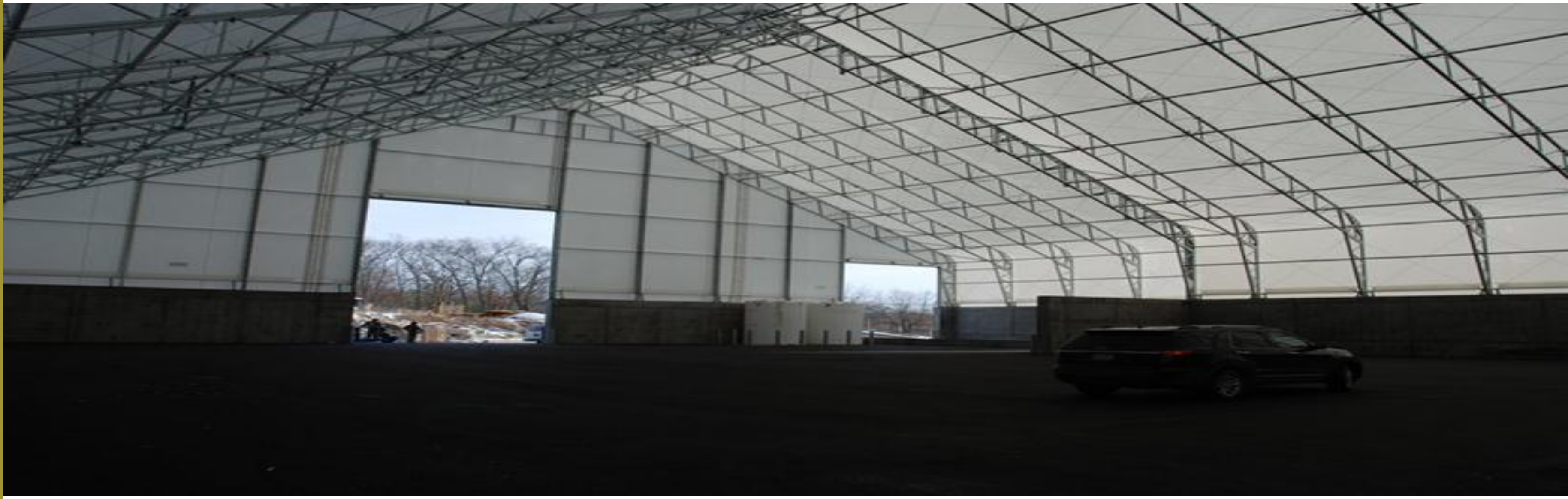
COMMUNITY
RECYCLING
TRAILER
CANMORE


CARDBOARD
1 & 2 PLASTIC
NEWSPAPERS
WITH INSERTS
ALUMINUM
&
STEEL CANS
1 & 2 PLASTIC


Cans
Bottles
Plastic
Modesto Recycles
Cardboard
MODESTO



NRRA

1. Market Predictions

The future markets are more likely than not to remain fairly flat, well within the range they have steadily been operating for some time. Very modest growth, or no growth at all, is most likely the scenario that will play out at least for the next two years. Beyond that, and even during that time, major unforeseen events could overturn that opinion, but based on the history of these markets and their current status, the likelihood is that they will perform as they are now for some time.

New England Commodities Pricing: Current/Baseline

	Material	Current
Fibers	#8 Newspaper Baled (ton)	$ 50.00
	#9 Newspaper Baled - insulation grade (ton)	n/a
	#8 Loose (ton)	$ 20.00
	Mixed Paper Baled (ton)	$ 20.00
	Mixed Loose (ton)	$ 20.00
	OCC Baled (ton)	$ 70.00
	OCC Loose (ton)	$ 40.00
Plastics	PETE Baled (lb)	$ 0.07
	HDPE Natural Baled (lb)	$ 0.20
	HDPE Colors Baled (lb)	$ 0.22
	HDPE "Z" Mixed Baled (lb)	$ 0.22
	#1 - #7 (lb)	$ 0.04
	#3-#7 (lb)	$ 0.01
	Rigids (lb)	$ 0.01
Mixed	Commingle - loose w/glass: (ton)	$ (45.00)
	Single Stream Loose: (ton)	$ (80.00)
Disposal	MSW	$ (95.00)
	Construction & Demolition (ton)	$ (65.50)
	C&D Source Separated Wood	$ (50.00)
	C&D White Wood	$ (42.50)
Metal	Scrap Metal - Containerized (gt)	$ 115.00
	Scrap Metal - bulk (Zones 1 locations) (gt)	$ 80.00
	Steel Cans Baled (gt)	$ 65.00
	Steel Cans Loose (gt)	$ 55.00
	Aluminum Cans Baled (UBCs only) (lb)	$ 0.56
	Aluminum Cans Loose (lb)	$ 0.56
Other	Vegetable Oil (gal)	$ 1.01
	Batteries (lead) (lb)	$ 0.22
	Freon Recovery (unit)	$ (9.00)
	Glass PGA (ton)	$ (30.00)
	Glass - clear or brown (ton)	$ 15.00
	Flourescent Bulbs (ft)	$ (0.11)
	CFL's (unit)	$ (0.55)
	Electronics - CRT TVs & Monitors (lb)	$ (0.21)
	Mixed Electronics - Printers, VCRs etc. (lb)	$ (0.18)
	CPU & Laptop credits available (lb)	$ (0.02)
	Propane Tanks: (pickup) (min pickup up 25x 20#)	$ (25.00)
	20# tanks (unit)	$ 1.00
	Shingles (nt)	$ (48.00)
	Sheetrock (nt)	$ (48.00)
	Gaylords (unit)	$ (12.00)
	Gaylords (Plastic)	$ (134.00)
	Loose Books (ton)	$ 30.00
	Textiles (lb)	$ 0.05

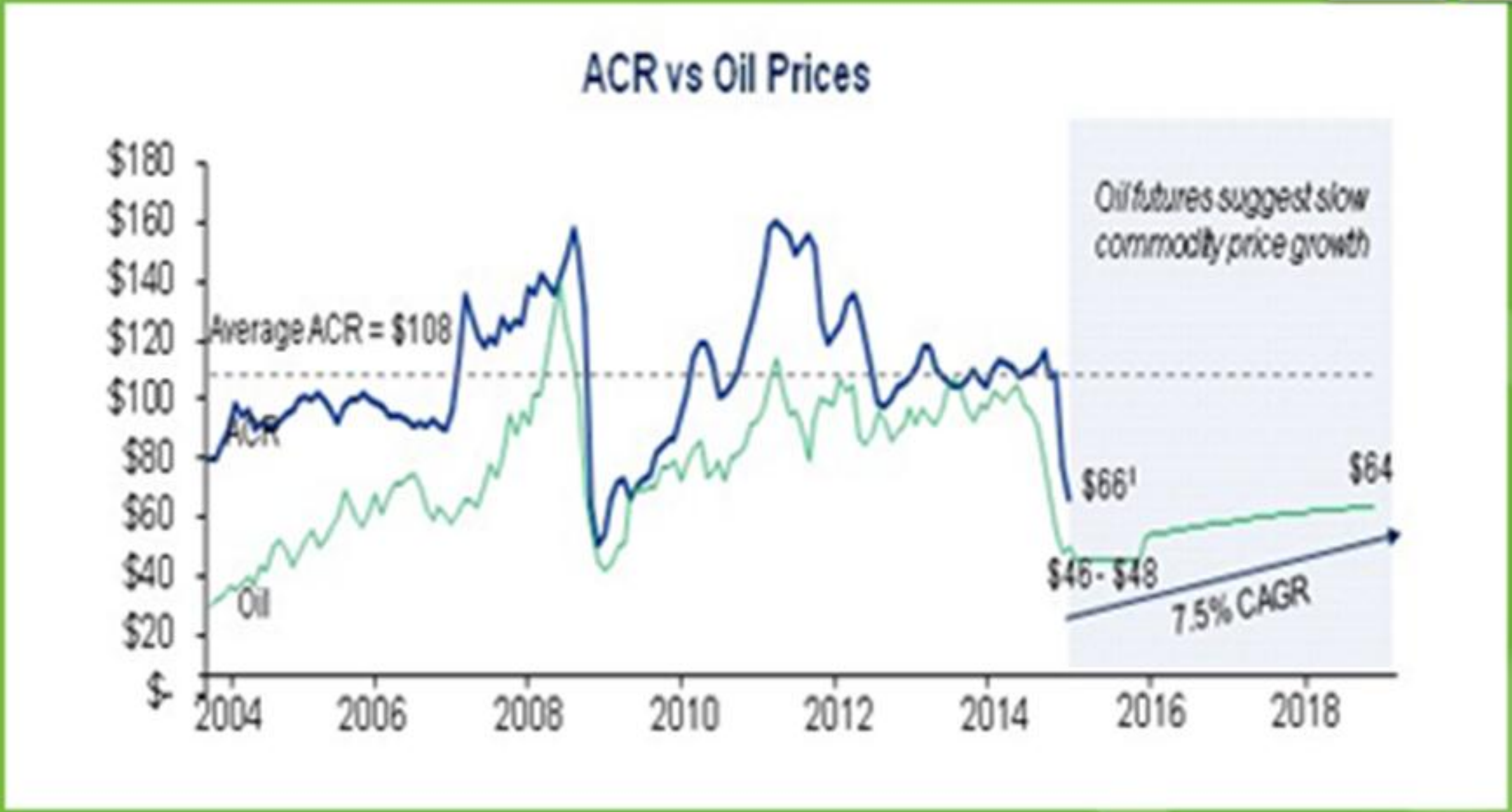
Oil Drives Recycling

This next slide shows the relationship between the cost of oil and the value of recyclables. As you see here, the drop in recyclables value from over $100 per ton to $66 or less is devastating to a recycling processor with operating costs of $75 per ton or more.

Once there is lost revenue on each ton being processed the processor has to decide how many of those tons does it really want and for how long can it sustain significant losses before it is forced to shut down facilities like Waste Management outlined earlier.

The value of the recyclable material being processed depends in large part upon the cost of comparable virgin material like oil. When it can be purchased less expensively than can the recycled product and with a surer guarantee of quality and specifications due to its lack of possible contamination, the value of the recyclable material drops drastically.

OIL PRICES & RECYCLABLES: RECOMMUNITY



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DOUBLE DOWN ON INFRASTRUCTURE

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Northeast Resource Recovery Association

1-800-223-0150 info@nrra.net

A Recycling Non-Profit

Working Together to Make Recycling Strong!