

Recycling Markets in 2021

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FOR THE LAST THREE YEARS I HAVE BEEN DONNIE DOWNER WHEN SPEAKING ABOUT RECYCLING MARKETS

- LAST SPRING BETTER
- TODAY I GET TO BE CHEERFUL CHAZ, WHICH IS VERY NICE

I WELCOME YOUR QUESTIONS

- COPIES OF MY SLIDES & SPEAKER NOTES WILL BE AVAILABLE FROM NRRA & MYSELF

I'M GOING TO START WITH PRICES

- THEN LOOK AT WHY THEY ARE BETTER
- & WHAT WE ARE LOOKING AT IN THE NEXT 12-18 MONTHS

BUT FIRST A REMINDER?

RAW MATERIALS LOOKING FOR BUYERS



RECYCLABLES ARE RAW MATERIALS LOOKING FOR BUYERS

- COMMODITIES SUBJECT TO FLUCTUATING PRICES
- WITH A HIGHER PRICE VOLATILITY THAN MOST OTHER COMMODITIES
- *PRICE VOLATILITY IS DIFFICULT TO MANAGE FOR PUBLICLY TRADED COMPANIES & THE PUBLIC SECTOR*
- *BECAUSE SO TIED TO QUARTERLY EARNINGS & IMMEDIATE REVENUE FLOWS*

MOST IMPORTANTLY, RECYCLABLES ARE BOUGHT, NOT SOLD

BUYERS WANT:

- RELIABLE QUANTITY
- RELIABLE QUALITY
- AT AN ACCEPTABLE PRICE

IN THESE TIMES OF GOOD PRICES, WE FORGET THIS AT OUR PERIL

NEVER UNDERESTIMATE THE IMPACT OF QUALITY

- *BUYERS WANT YOUR RAW MATERIALS NOT YOUR GARBAGE*

VALUE/PRICE



I'M USING DATA FROM RECYCLING MARKETS.NET

- PUBLISHED MONTHLY IN RESOURCE RECYCLING MAGAZINE
- NEW ENGLAND, OF COURSE, IS IN THE NORTHEAST REGION

CAVEAT ON PRICING SHEETS:

- *FEWER BUYERS ON THE PAPER SIDE AS INDUSTRY HAS CONSOLIDATED*
- *HOW FRESH IS THE DATA: TIME BETWEEN COLLECTION & PUBLISHING*
- *HOW OFTEN IS THE DATA? MONTHLY*
- *GENERALLY SPEAKING, VERY GOOD FOR TRENDS*

LET'S START WITH PAPER:

- OCC OR OLD CORRUGATED CONTAINERS &
- RMP OR RESIDENTIAL MIXED PAPER

PRICES: PAPER

November 2021 – Recycling Markets.Net

Northeast Region

	11-8-21	11-6-20	11-8-19	HIGH	LOW
OCC: \$172.50	\$57.50	\$27.50	\$190.00	\$17.50	
RMP: \$97.50	\$22.50	\$-2.50	\$97.50	\$-5.00	
(dollars/ton)					

OCC PRICES REMAIN STRONG

- DOWN \$7.50 FROM OCTOBER, UP \$22.50 OVER AUGUST
- TRIPLE A YEAR AGO MORE THAN FIVE TIMES BETTER THAN 2 YEARS AGO
- \$12.20 ABOVE NATIONAL AVERAGE

HIGH – LOW PREVIOUS 20 YEARS FOR OCC

- **HIGHS IN 2011** AT HEIGHT OF CHINESE IMPORTS (NE) & 2017 WHEN CHINESE MILLS HOARDING (NAT)
- **LOWS IN DEC 2008** GREAT RECESSION & \$27.50 WINTER 2019

RMP: IS TAGGING ALONG

- NO CHANGE – NAT DOWN \$5.00
- GENERALLY RISES & FALLS AT A DISCOUNT TO OCC
- SPREAD HAS WIDENED FROM \$35 TO \$82.50 (21 vs 20)
- MILLS NOT GETTING ENOUGH CLEAN OCC

HIGH – LOW - BASED ON FIVE YEARS DUE TO NEWNESS OF THIS GRADE

- HIGH – NOW – UP \$2.50 FROM SPRING 2017 – HOARDING AFTER NATIONAL SWORD
- LOW – FEB – MAR 2020

LET'S LOOK AT PLASTICS, STARTING WITH THE TWO HDPEs

PRICES: PLASTIC

November, 2021 – RecyclingMarkets.net
Northeast Region

	11-5-21	11-6-20	11-8 -19	HIGH	LOW
Nat HDPE:	85.50	67.50	55.50	112.50	13.00
Col HDPE:	44.50	19.75	16.00	62.50	3.50
(cents per pound)					

NATURAL HDPE STILL STRONG BUT SOFTENING

- DOWN 19 CENTS SINCE LAST MONTH
- STILL UP 15 CENTS THIS YEAR
- 2 CENTS ABOVE NATIONAL PRICE
- STRONG BRAND DEMAND: NO FOOD CONTACT NEEDED
- VERSATILE POLYMER

HIGH-LOW: PRESENT TO 2005

- HIGH JULY – SEPTEMBER 2021
- LOW DECEMBER 2008

COL HDPE STILL STRONG BUT SOFTENING

- DOWN 18 CENTS FROM HIGH
- UP 21 CENTS SINCE JAN 1
- 3.5 CENTS ABOVE NATIONAL PRICE

HIGH LOW – PRESENT TO JUNE 2005

- HIGH JULY-OCT 2021 – LOW MAY 2020

COLORED HDPE IS NOT AS VERSATILE B/C OF THE COLORANTS

- BUT MANY CONSTRUCTION USES, PIPES, ETC & CONSTRUCTION MARKETS ARE STRONG

PRICES: PLASTIC

November 2021 – RecyclingMarkets.net

Northeast Region

	11-2-21	11-6-20	11-8-19	HIGH	LOW
PET bev:	20.25	6.25	8.50	37.25	4.00
PP:	27.50	6.50	7.50	44.50	2.50
(cents per pound)					

PET STRONG YEAR, SEASONAL SOFTNESS R (H/L 16 YEARS)

- UP 12.50 CENTS SINCE JANUARY
- PEAKED AT 28.50 EARLY SEPTEMBER
- DOWN 8.25 SINCE THEN
- BRAND DEMAND SOFTENS AS SALES GO INTO WEATHER SLUMP
- MIMICS 2019 ALTHOUGH NOT AS HIGH IN 2019
- HALF A CENT ABOVE NATIONAL AVERAGE

HIGH-LOW PRESENT TO 2005

- HIGH 2011: HIGH GAS PRICES &???
- DEC 2010 TO JUNE 2012 PRICES HIGHER THAN NOW
- LOW DEC 2008: GREAT RECESSION

POLYPROPYLENE STRONG YEAR, SEASONAL SOFTNESS?

- DOWN 15CENTS FROM SEPT/OCT HIGH
- UP 13.50 CENTS FROM JANUARY
- 4.25 CENTS ABOVE NATIONAL AVERAGE

HIGH-LOW – PRESENT – JUNE 13

- ALL TIME LOW MAY 8 2020
- AUTO PRODUCTION SHUT DOWN
- HIGH JULY 2021

PRICES: METALS

November 2021– RecyclingMarkets.net

Northeast Region

	11-2-21	11-6-20	11-8-19	HIGH	LOW
Aluminum:	84.50	48.00	49.50	100.00	38.50
Steel Cans:	\$275.00	\$72.50	\$97.50	\$275	\$249

(Aluminum cents per pound, steel dollars per ton)

ALUMINUM ON THE REBOUND

- FLAT SINCE SEPT – UP 32 CENTS BOY
- INCREASED DEMAND – AUTOMOTIVE & SEMICONDUCTOR CHIPS
- LOW LAST MAY 39 CENTS
- HIGH: MAY 2011
- 3.25 CENTS ABOVE NATIONAL AVERAGE

STEEL

- SAME AS LAST MONTH
- 70% US PRODUCTION IS EAF WHICH RELIES ON SCRAP
- CHINESE ECONOMY REBOUNDING
- SUPPLY SHORTAGE
- \$25 ABOVE NATIONAL AVERAGE

HIGH – LOW NOW & WINTER 2015

WSJ: INCREASE IN DEMAND FOR GOODS & IMPROVING ECONOMY HAVE TRIGGERED METALS COMMODITIES INCREASES

MRFS & HAULERS SEEING MAJOR IMPROVEMENT

MRF & HAULER RECYCLING REVENUES

NERC average value of a MRF ton report

- \$174.95 with residue cost (up 41% previous quarter)
- \$184.63 without residue cost (up 43% previous quarter)
- More than 3 times as high as a year ago

Hauler/recycling companies Q3 earnings reports:

- Recycling revenues are a tailwind not a headwind
- Republic Services average price/ton: \$230 vs \$99 a year ago

NERC REPORT ON THE AVERAGE VALUE OF A TON OF MRF RECYCLABLES

- JULY – SEPTEMBER
- \$174.95/TON W/RESIDUE DISPOSAL
- \$184.63 W/O RESIDUE DISPOSAL
- 41 & 43 PERCENT INCREASES OVER PREVIOUS QUARTER
- MORE THAN 3 TIMES INCREASE OVER PREVIOUS YEAR

HAULER QUARTERLY REPORTS ALL POSITIVE

- TAILWIND NOT HEADWIND
- REPUBLIC CITES AVERAGE PRICE/TON OF RECYCLABLES IN \$230 UP FROM 99 A YEAR AGO
- NOTE: INCLUDES COMMERCIAL & SPECIALTY GRADES

SIMS – THE AUSTRALIAN BASED INTERNATIONAL RECYCLING COMPANY THAT OWNS THE NYC & OTHER US MRFS

- ANNUAL REPORT SHOWED TREMENDOUS INCREASE IN PROFITS FROM RECYCLING OVER LAST YEAR

WHY ARE PRICES BETTER?

DEMAND

SUPPLY

IT'S VERY SIMPLE

- DEMAND IS GREATER THAN SUPPLY
- REMEMBER: RECYCLABLES ARE BOUGHT, NOT SOLD

HIGH DEMAND VS LOW SUPPLY IS A COMPLETE REVERSAL OF THE LAST THREE YEARS

- I KNOW MANY OF US WERE PREDICTING HIGHER PRICES AT THE BEGINNING OF THIS YEAR
- BUT THIS HIGH?
- & HERE IS THAT PROBLEM OF PREDICTING COMMODITY PRICES WHICH ARE OFTEN CONTINGENT ON GLOBAL ECONOMIC TRENDS, RANDOM WEATHER EVENTS OR PANDEMICS

AS AN ASIDE, IT WOULD BE NICE IF THE PRESS STARTED PRINTING STORIES ABOUT STRONG RECYCLING MARKETS

- **WHY AREN'T ENVIRONMENTAL GROUPS & NATIONAL RECYCLING GROUPS HAILING THE RETURN OF STRONG MARKETS**
- **NRRA, NERC & SWANA HAVE – WHERE IS EVERYBODY ELSE**
- **DELIGHTED TO SEE SWANA'S RECENT PUBLICATION ON MARKET REBOUND**

WHAT IS CAUSING STRONG DEMAND?

WHAT IS CAUSING STRONG DEMAND?

Paper & Plastics:

- New domestic capacity
- Exports strong
- High virgin raw material prices
- Supply shortage

Paper:

- E-commerce needs boxes

Plastics:

- Demand spurred by recycled content commitments

FOR BOTH PAPER & PLASTICS WE HAVE NEW DOMESTIC END MARKET CAPACITY

- & REBOUNDED EXPORT MARKETS
- HIGH VIRGIN RAW MATERIAL PRICES
- SUPPLY SHORTAGES

FOR PAPER, WE HAVE VERY HIGH DEMAND FOR BOXES DUE TO THE SURGE IN E-COMMERCE &

- IT'S NEED FOR MORE SMALLER BOXES
- & THE REOPENING OF RETAIL STORES

FOR PLASTICS WE ALSO HAVE RECYCLED CONTENT COMMITMENTS FROM BRANDS

LET'S START WITH A LOOK AT INCREASED DOMESTIC CAPACITY

MARKET RESPONSE: INCREASE DOMESTIC RECYCLED CONTENT PRODUCTION CAPACITY



Photo limaohio.com

THIS IS PRATT RECYCLING'S BRAND NEW MILL USING OCC & RMP AS ITS RAW MATERIALS TO MAKE NEW BOXES.

- IT OPENED IN OCTOBER OF LAST YEAR
- NOW GREEN BAY PACKAGING OPENED A BRAND NEW & MUCH LARGER MILL IN MARCH
- MORE TO FOLLOW
- ENTREPRENEURS SEEING OPPORTUNITY

LET'S TAKE A CLOSER LOOK AT HOW DOMESTIC CAPACITY FOR RECYCLED PAPER & PLASTIC HAS INCREASED

STATUS NEW NORTH AMERICAN MARKET CAPACITY: RECYCLED CONTENT PAPER

32 announced

15 completed

OCC & RMP

- 12 OCC expansions or conversions completed
- 2 new facilities relying heavily on RMP opened

Recycled fiber pulp:

- 3 completed (OCC)

Food contaminated paper

- Opened

3 - 6 million new tons of capacity?

Not all will be built

NERC Summary of Announced Increased Capacity to Use Recycled Paper May, 2021

32 EXPANDED/CHANGED TO PACKAGING OR NEW FACILITIES ANNOUNCED

- 12 OCC FINISHED
- 2 NEW OCC/RMP OPENED

OCC INCLUDES 3 MAKING UNBLEACHED RECYCLED PULP FOR EXPORT TO CHINA

- NINE DRAGONS BIRON, RUMFORD, FAIRMOUNT & SONOCO OPEN

NOT ALL NEW CAPACITY WILL OPEN

- OCC EXPANSIONS YES
- NEW: NOT ALL 14 B/C TOO MUCH CAPACITY
- ONE ANNOUNCED CONVERSION WAS CANCELLED
- **WHEN ALL BUILT ABOUT 5-6 MILLION TONS**

LET'S LOOK AT PLASTICS

STATUS NORTH AMERICAN MARKETS CAPACITY: RECYCLED CONTENT PLASTIC

30+ new processing facilities announced

- 10+ open
- Most make resin
- Some make end products such as plastic lumber
- No guarantees all will be built

(data being updated)

Supply?

NERC Recycled Plastic Capacity Increases Jan 2020

WE'RE SEEING THE SAME MARKET REACTION FOR RECYCLED PLASTICS

- <https://nerc.org/news-and-updates/press-releases/?article=177425>

30+ NEW FACILITIES OR EXPANSIONS ANNOUNCED

- 10+ OPEN
- THESE FACILITIES MAKE RESIN OR PELLETS & IN SOME CASES FINAL PRODUCTS SUCH AS PLASTIC LUMBER

NO GUARANTEES THAT ALL WILL BE BUILT

SUPPLY A BIG ISSUE:

- ESPECIALLY FOR NON-MECHANICAL FACILITIES
- EVEN IF THE PROCESSES WORK, WHERE WILL THEY GET THEIR RAW MATERIAL?
- CAL PET PROCESSOR: "THE RECYCLING INDUSTRY HAS A HARD LIMIT OF AVAILABLE FEEDSTOCK BASED ON HOW MUCH PEOPLE RECYCLE"

PLASTIC FACILITIES HARDER TO TRACK

- *FAR LESS EXPENSIVE THAN PAPER MILLS & LESS LIKELY TO BE SELLING BONDS*
- *NEWER INDUSTRY WITH MORE ACTORS*
- *SOME ARE MORE LEGITIMATE THAN OTHERS*

WHAT ABOUT EXPORTS?

EXPORTS



(Photo The Guardian)

EXPORTS SEEM TO BE IN TROUBLE:

- **NRRA'S RECENT WARNING ON BOSTON PORT PROBLEMS**
- SHORTAGES IN TRUCKS TO GET BALES TO DOCKS
- SHORTAGES IN SHIPPING CONTAINERS
- SHORTAGES IN "SAILINGS"
- NORTHEAST PORTS – EXCEPT BOSTON? – HURT LESS THAN WEST COAST
- SERIOUS PROBLEMS THAT WILL NOT CLEAR UP FOR 6-12 MONTHS

BUT THE REALITY IS THAT WHILE WE EXPORT LESS TONS THAN PREVIOUSLY

- WE ARE STILL EXPORTING RECYCLABLES
- & THE COMPETITION FROM THOSE MARKETS IS KEEPING PRICES STRONG

LET'S START WITH PAPER

EXPORTS: PAPER

2020: 15.9 million tons

- Down 5.1 million tons from 2018
- 1/3 of recycled paper exported?

BUT

2021: January – June: 9 million tons

- 2021: 21% increase over first half 2020
- India, Mexico & Vietnam major importers

EXPORT DATA RESOURCE RECYCLING MAGAZINE AUGUST 10 – SOURCE US CENSUS BUREAU

CHINA'S RMP BAN DECREASED EXPORTS

- CHINA NOW OUT
- EXPORTS DOWN TO 33% FROM 40%

BUT 9.0 MILLION TONS FIRST HALF

- 21 INCREASE OVER FIRST HALF, 2020
- NOT SURE HOW KEEPING UP W/THAT PACE DUE TO PORT PROBLEMS
- & QUALITY ISSUES FOR RMP

INDIA IMPORTED 2.4 MILLION TONS – 28%

- W/MEXICO, VIETNAM MORE THAN 50%
- WITH THAILAND MORE THAN 60%

EXPORT DATA RESOURCE RECYCLING MAGAZINE AUGUST 10 – SOURCE US CENSUS BUREAU

EXPORTS: PLASTIC

2020: 1.37 billion pounds

- Down 2.31 billion pounds from 2017

BUT

2021 January – June: same level as 2020

- Canada, Malaysia & Mexico primary recipients

Why do we measure plastic exports by pounds & paper and metals by tons?

EXPORT DATA RESOURCE RECYCLING MAGAZINE AUGUST 10 – SOURCE US CENSUS BUREAU

PLASTIC EXPORTS DROPPING STEADILY SINCE 2015 (4.5 BILLION POUNDS)

- CHINA BAN &
- INCREASED DOMESTIC MARKETS FOR PET & HDPE

BUT UP BY ONE MILLION KILOGRAMS FIRST SIX MONTHS:
ESSENTIALLY FLAT

CANADA & MEXICO GET 43% OF EXPORTS

- ADD MALAYSIA & 62% OF EXPORTS

IT'S WORTH NOTING THAT PLASTIC EXPORTS ARE SHOWN IN BILLIONS OF POUNDS

- PAPER & METALS IN MILLIONS OF TONS
- COMPARING RAISINS & WATERMELONS
- A BILLION POUNDS IS ONLY HALF A MILLION TONS
- 685,000 TONS = 4.3 PERCENT OF PAPER EXPORTS
- ALSO WORTH NOTING WE EXPORTED 18 MILLION TONS OF STEEL SCRAP LAST YEAR

LET'S LOOK AT THE IMPACT OF RECYCLED CONTENT

RECYCLED CONTENT COMMITMENTS: PAPER



Photo Accurate Waste

PAPER

- ALREADY ROUTINE
- 55% RAW MATERIAL INPUT GLOBALLY (BILL MOORE)
- PRICE STILL FLUCTUATES BASED ON DEMAND & SUPPLY

HISTORY OF RECYCLED CONTENT FOR PAPER:

- 14+ STATES WITH RECYCLED CONTENT NEWSPRINT REQUIREMENTS
- ENACTED MID-90'S
- DIDN'T HAVE A SUPPLY PROBLEM
- CUSTOMERS (PUBLISHERS) KNEW THEIR SUBSCRIBERS WANTED RECYCLED CONTENT
- TECHNOLOGICAL IMPROVEMENTS PROBABLY MORE IMPORTANT THAN CONTENT REQUIREMENTS
- DID NOT PROTECT THE VALUE OF ONP FROM COMMODITY PRICE SWINGS
- OR DECOUPLE PRICE FROM VIRGIN PULP PRICE
- DID NOT PROTECT NEWSPAPERS FROM ONLINE MEDIA

I MENTION THAT B/C PAPER & PLASTIC ARE DIFFERENT AS ARE THEIR RECYCLING MARKETS

- EXPERIENCE W/ONP GIVES SOME HINTS BUT...

RECYCLED CONTENT COMMITMENTS: PLASTIC

Many brands have committed to using more plastic recycled content

- Usually 2025 & 2030 goals
- Natural HDPE has benefitted tremendously
- PET lagging:
- Value of fiber vs bottles & seasonality

How serious are the commitments?

- 2025 goals: how about 2021?
- Does the CEO care?
- Can procurement agents pay more?

Existing recycled content laws for plastic

2025 BRAND GOALS:

- SEEMS TO BE REAL FOR NATURAL HDPE B/C OF ITS VERSATILITY
- PET LAGGING:

GOAL IS TO DECOUPLE PRICE OF RECYCLED PLASTIC FROM THAT OF VIRGIN PLASTIC

- THIS COULD HAPPEN BUT CAN'T DECOUPLE FROM GLOBAL OR LOCAL ECONOMIC FLUCTUATIONS

MAJOR ISSUES:

- WHO CARES ABOUT 2025 PROMISES?
- CEO'S COMPENSATION PACKAGE?
- CAN PROCUREMENT AGENTS PAY MORE?
- SEE HOW THIS PLAYS OUT IN EUROPE

EXISTING PLASTIC RC CONTENT LAWS

- GARBAGE BAGS IN CA
- BEVERAGE BOTTLES STARTING AT 15% IN 2022

WILL THEY WORK?

- HARD TO SAY
- GARBAGE BAG LAW NOT ENFORCED

- ODDS DON'T LOOK GOOD FOR BEVERAGE BOTTLES IN 2022
- CAL PET PROCESSOR ON HARD CEILING OF SUPPLY
- COMPETES W/FIBER WHICH CAN PAY MORE (LOWER PROCESSING COSTS & NO FOOD CONTACT)

PREDICTIONS FROM MR. WIZARD



OK, I WAS OFF BY 32 YEARS BUT I'VE GOT SOME GOOD IDEAS

GOOD MARKETS WILL HAVE STAYING POWER EVEN AS PRICES DROP A BIT

- IS CURRENT RECORD SETTING TREND SUSTAINABLE?
- NOT IN THE LONG TERM
- PRICES ARE SOFTENING NATIONALLY
- BUT SHOULD REMAIN STRONG FOR A WHILE

DEMAND WILL CONTINUE TO OUTPACE SUPPLY

- IT WILL FADE IF PRICES STAY TOO HIGH
- & THE SUPPLY OF PLASTIC RECYCLABLES IS NOT LIKELY TO INCREASE
- NEED TO BE SERIOUS IN HOW TO INCREASE SUPPLY
- TOO MUCH THEORY, NOT ENOUGH FACTS
- **SUPPLY IS NOT ALL ABOUT POLICY ITS ABOUT PEOPLE**
- WORTH NOTING THAT EUROPE IS FAILING TO MEET ITS PLASTIC RECYCLING GOALS

ON TO THE PREDICTIONS!

MARKETS 2021 - 2022: PAPER

Prices will soften

- Normal in the winter as facilities shut down machines for maintenance & due to seasonal slowdown of orders
- Usually starts in December
- In addition, mills overbought in 3Q and have plenty of inventory

Don't see major drop

- Linerboard companies increased prices twice this year
- 3Q: Linerboard companies predict flat or increasing OCC prices
- Waste/recycling companies noting tailwinds not headwinds

Questions:

- Where will e-commerce land?
- Export?

PRICES WILL SOFTEN

- USUALLY DO IN WINTER
- MILL MAINTAINANCE & SLOWER PRODUCTION ORDERS
- MILLS INVENTORIES UP 35K TONS FROM PREVIOUS QUARTER

DON'T SEE MAJOR DROP

- VIRGIN PULP TIGHT SUPPLIES
- CONTAINERBOARD PRICE INCREASES OF \$60-70/TON STUCK
- CONTAINERBOARD PRODUCTION STRONG: UP 9% YOY Q3 2020 &
- OP RATE AT 95.6% - UP 1.7% YOY
- TWO YEAR RUN?

KEY QUESTION: FUTURE E-COMMERCE

- E-COMMERCE PEAKED AS A PERCENTAGE OF RETAIL SALES IN Q3 2020 THEN DECLINED WHEN RETAIL STORES REOPENED
- STILL GROWING OVER PRE-PANDEMIC LEVELS BUT NOT AS FAST AS RETAIL SALES OVERALL
- THIRD QUARTER DATA 2021 OUT NOVEMBER 19

EXPORT:

- WELL KNOWN WEST COAST & SE PORT PROBLEMS
- CAUTIOUS BUYERS PAY AS LITTLE AS POSSIBLE FOR RMP

- QUALITY IS BECOMING A SERIOUS PROBLEM

MARKETS 2021-2022: PLASTIC

Short term softening

Long term?

- Oil price still rising
- Virgin resin prices rising
- PE production still not recovered from Texas freeze & Hurricanes Ida & Nicholas
- Brand demand: real or p.r.?
- Are high prices sustainable?

PLASTIC: HARDER TO PREDICT:

- OIL PRICES RISING: BRENT CRUDE \$82.66/BARREL NOV 5
- \$39.34 A YEAR AGO
- NATURAL GAS DOUBLED FROM A YEAR AGO BUT STILL WELL BELOW 2006 & 2008 HIGHS
- HIGH OIL PRICES KEY TO HIGH RECYCLED PLASTIC PRICES
- LINGERING IMPACT OF TEXAS FREEZE & TWO HURRICANES
- SLOWED DOWN OPENING OF NEW VIRGIN RESIN PLANTS

BRAND DEMAND:

- SEEMS TO BE REAL FOR NATURAL HDPE B/C OF ITS VERSATILITY
- HELPING COLORED HDPE & PP & PET
- BUT WHAT IS THE PRICE POINT WHERE THEY SAY NO MORE?
- HOW WILL RECYCLED CONTENT LAWS WORK OUT?

BUT, BASICALLY,

GOOD PRICES TO STAY (FOR AWHILE)



SOURCE: YOUR HEALTH MATTERS

THESE PRICES WILL STAY AROUND FOR A WHILE

- I CALL THEM GOLDBLOCKS MARKETS
- NOT TOO HOT, NOT TOO COLD
- MARKETS THAT WORK FOR BUYERS & SELLERS

LET'S NOT MAKE A MESS OF THEM

- DON'T GET GREEDY
- FOCUS ON QUALITY
- **MARKETS COME & GO BUT QUALITY REMAINS FUNDAMENTAL**

WE NEED LEARN TO PLAN FOR LONG TERM MARKET UPS & DOWNS

- **BECAUSE THAT IS THE NATURE OF RECYCLING & COMMODITY MARKETS**

I WANT TO FINISH W/SOME THOUGHTS ABOUT PAPER & PLASTIC

- BASED ON MY LATEST WASTE360 COLUMN ANSWERING A QUESTION RAISED AT A US SENATE HEARING

- WHY IS PAPER EASIER TO RECYCLE THAN PLASTIC?

PAPER & PLASTIC RECYCLING & MARKETS

PAPER:

- 62% packaging (mostly boxes)
- 24% printed paper
- 2/3 of MSW product recycling by weight
- Mostly commercial OCC (financial incentives)
- 60% +/- of residential recyclables by weight
- Residential less reliable quantity and quality
- Well established business worldwide

BOXES ARE MORE THAN 50% OF PAPER MADE IN THE US

- 57% OF PAPER GENERATED (EPA) & GROWING
- + 5% OTHER PACKAGES
- PRINTED PAPER IS 24% & DECLINING
- TOWELS, TISSUES & OTHER PRODUCTS 14%: GROW W/POPULATION & DIFFICULT TO RECYCLE

PAPER IS 2/3 OF WHAT IS COLLECTED FOR RECYCLING

- SUPPLIES THE TONNAGE

MOST RECYCLED PAPER IS OCC FROM **COMMERCIAL SOURCES**:

- FINANCIALLY SUCCESSFUL BECAUSE TURNS WASTE INTO A RESOURCE
- QUANTITY & QUALITY ARE RELIABLE

RESIDENTIAL RECYCLING IS 55-65% MIXED PAPER/OCC

- QUALITY & QUANTITY UNRELIABLE
- NO FINANCIAL INCENTIVES

PAPER EASY TO RECOGNIZE

- DON'T DISTINGUISH B/W FIBER TYPES

LONG ESTABLISHED BUSINESS

WHAT ABOUT PLASTICS?

PAPER & PLASTIC RECYCLING & MARKETS

PLASTIC:

- 41% packaging
- Wide variety of resins and package types
- 4.5% of MSW product recycling by weight
- Mostly residential (no financial incentives)
- 10% +/- of residential recyclables by weight
- Commercial recycling mostly film from pallets
- Immature business worldwide

PLASTIC IS THE SECOND LARGEST MATERIAL AVAILABLE FOR RECYCLING

- OVERALL USE UP 10 MILLION TONS SINCE 2000

PLASTIC HAS A WIDE DIVERSITY OF PRODUCTS

- 60% OF PLASTIC PRODUCTION IS FOR PRODUCTS INTENDED TO LAST FOR A SHORT TIME OR FOR YEARS
- THESE RANGE FROM UTENSILS & DIAPERS TO FURNITURE, APPLIANCES & COMPUTERS
- THOSE PLASTICS ARE NOT GENERALLY RECYCLED

40% IS PACKAGING

- WHAT MOST PEOPLE THINK OF WHEN THEY THINK OF PLASTIC

PLASTIC IS PRIMARILY GENERATED RESIDENTIALLY FOR RECYCLING

- MAJOR EXCEPTIONS THINGS SUCH AS FILM USED FOR PALLET WRAPPING (TREX NO MRF)
- LITTLE OTHER HIGH QUALITY FROM BUSINESSES

WHY DO WE EXPECT THE SAME FROM SUCH DISSIMILAR MATERIALS?

RECYCLING MARKETS?



Source Chocolate Covered Katie

THINK OF CURBSIDE RECYCLING MARKETS BEING LIKE THIS CAKE.

- PAPER IS THE BODY & PLASTIC IS THE ICING

PAPER IS THE SUBSTANCE

- 55-65% OF WHAT IS COLLECTED AT THE CURBSIDE
- SUPPLIES THE TONNAGE NEEDED TO MEET RECYCLING GOALS
- IN GOOD MARKETS, SOLID FINANCIAL SUPPORT

PLASTIC IS THE ICING

- 10-15% OF WHAT IS COLLECTED AT THE CURBSIDE
- ON A PER UNIT BASIS, MINIMAL VALUE
- ON A PER TON BASIS, ALL FOUR RESINS ARE MORE VALUABLE RECYCLABLES THAN PAPER
- BUT B[C OF THEIR WEIGHT & DIVERSITY, THEY WILL ALWAYS PLAY CATCH-UP

THIS HAS TREMENDOUS IMPLICATIONS FOR RECYCLING POLICY & MARKETS

I DON'T HAVE THE ANSWERS. BUT WE NEED TO START FIGURING THEM OUT

UNTIL THEN, ENJOY YOUR CAKE!

CONTACT

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SOURCES

- NERC Recycled Paper Demand Increases <https://nerc.org/news-and-updates/press-releases/?article=2011>
- NERC Recycled Plastic Capacity Increases: nerc.org/news-and-updates/press-releases/
- Paper: Moore & Associates: Bill Moore: www.marecycle.com
- Paper: RISI: Hannah Zhao: www.risiinfo.com
- Plastic: More Recycling: Nina Belluci Butler: www.morerecycling.com
- Paper Stock Report: Ken McEntee www.paperstockreport.com
- Recycling Markets.net: Christina Boulanger-Bosley: www.recyclingmarket.net
- Resource Recycling Magazine & weekly Resource Recycling & Plastic Recycling Update e-news: resource-recycling.com/recycling/magazine/

THESE COMPANIES & PUBLICATIONS ARE EXCELLENT SOURCES OF INFORMATION ABOUT MARKET TRENDS