

# Recycling Markets

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DONNIE DOWNER NO MORE. IT'S GREAT TO HAVE POSITIVE THINGS TO SAY ABOUT RECYCLING MARKETS.

I'LL BE GIVING AN OVERVIEW OF:

KEY TRENDS IN RECYCABLES & THEIR MARKETS  
CURRENT PRICES  
PREDICTIONS

I'M GOING TO FOCUS ON TWO MATERIALS:

- PAPER BECAUSE IT IS BY FAR OUR MOST RECYCLED MATERIAL
- PLASTIC B/C OF ITS GROWTH & CONTROVERSY

SOME OF MY SLIDES HAVE A GOOD BIT OF DATA. THE SLIDES AND MY SPEAKER NOTES WILL BE AVAILABLE AFTER THE PRESENTATION SO DON'T FEEL THE NEED TO TAKE EXTENSIVE NOTES.

WHAT WE MUST REMEMBER

## RAW MATERIALS LOOKING FOR BUYERS



*THIS IS A PICTURE OF A MODERN MINE*

RECYCLABLES ARE RAW MATERIALS LOOKING FOR BUYERS  
COMMODITIES SUBJECT TO FLUCTUATING PRICES

- *RECYCLABLES HAVE HIGHER PRICE VOLATILITY THAN MOST OTHER COMMODITIES BOUGHT, NOT SOLD*

BUYERS WANT:

- RELIABLE QUANTITY
- RELIABLE QUALITY
- AT AN ACCEPTABLE PRICE

***NEVER UNDERESTIMATE THE IMPACT OF QUALITY***

- *BUYERS WANT YOUR RAW MATERIALS NOT YOUR GARBAGE*

LET'S LOOK AT PAPER

## THE IMPORTANCE OF PAPER



2/3 OF WHAT IS COLLECTED FOR RECYCLING

- COMMERCIAL RECYCLING IS MOSTLY OLD CORRUGATED CONTAINERS (OCC)
- RESIDENTIAL RECYCLING IS 55-65% OCC/MIXED PAPER (RMP)

PAPER REVENUE CRUCIAL TO A PROGRAM'S SUCCESS

HOW HAS PAPER CHANGED IN THE LAST TWO DECADES?

## CHANGES IN PAPER USE 2000 - 2021

Overall use down 20 million tons

- Printed paper in decline
- Packaging paper now more than half of U.S. production
- Other grades steady with population growth

OVERALL GENERATION DOWN 20 MILLION TONS A YEAR FROM TWO DECADES AGO

- *MOSTLY PRINTED PAPER*
- *NEWSPAPERS, MAGAZINES, OFFICE PAPER, ETC.*
- *NOW RESIDENTIAL MIXED PAPER FOR THE MOST PART*

PACKAGING GRADES NOW MORE THAN HALF OF US PRODUCTION

OTHER GRADES STEADY WITH POPULATION GROWTH

- *TISSUE IN TURMOIL*
- *COMMERCIAL USE DOWN &*
- *ITS AN IMPORTANT USER OF RECYCLED CONTENT*
- *RESIDENTIAL UP: ITS VIRGIN PAPER*

BIGGEST IMPACT FROM THE PANDEMIC?:

## E-COMMERCE



I SUSPECT THAT ALL OF US HAVE INCREASED OUR USE OF ON-LINE SHOPPING IN THE LAST TWELVE MONTHS

- *OR MAYBE I SHOULD SIMPLY ASK IF ANYONE IN THE AUDIENCE HAS NOT BOUGHT ANYTHING ON-LINE LATELY?*

E-COMMERCE IS NOW 15.7% OF RETAIL SALES (2020 , 4<sup>th</sup> QUARTER)

- 32.1% INCREASE FROM 2019

IMPACT ON RECYCLING?

- LESS QUANTITY & QUALITY OF OCC FROM BUSINESSES
- NOT OFFSET BY THE INCREASE IN QUANTITY RESIDENTIALLY
- & NOT HELPED BY LOWER QUALITY RESIDENTIALLY

LET'S LOOK AT WHO HAS BENEFITTED FROM E-COMMERCE?

## GREEN BAY PACKAGING UP & RUNNING



*PHOTO LABEL AND NARROW WEB MARCH 19 2021*

WORKERS CELEBRATING THE FIRST REEL OF PAPER PRODUCED AT THE NEWLY OPENED GREEN BAY PACKAGING MILL IN GREEN BAY WISCONSIN

WHEN OPERATING AT FULL CAPACITY WILL MAKE MORE THAN 650,000 TONS OF CONTAINERBOARD USING BOTH OCC & RMP

- *AN INCREASE OF ABOUT 200,000 TONS+ FROM OLD MILL IT REPLACES*
- WILL TAKE TIME TO REACH THAT
- BUT ALREADY HAS A CUSTOMER BASE

ONE OF MANY INCREASES IN DOMESTIC DEMAND FOR RECYCLED PAPER

## NEW NORTH AMERICAN MARKET CAPACITY: RECYCLED CONTENT PAPER

30 North American recycling capacity conversions, expansions or new mills announced since 2017

- Most use OCC
  - At least 7 use RMP as major input
  - 5 will make recycled paper pulp
  - 1 for aseptic cartons & 1 for food contaminated paper
- 5-7 million tons new capacity (eventually)
- Not all will be built

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

### 30 CAPACITY EXPANSIONS IN NORTH AMERICAN CAPACITY TO USE RECYCLED PAPER AS A RAW MATERIAL SINCE 2017

- CONVERSIONS ARE TURNING A CLOSED PAPER MACHINE INTO A LINERBOARD MACHINE
- EXPANSIONS IS EXPANDING CAPACITY AT AN EXISTING MILL
- MOST USE OCC – OLD CORRUGATED BOXES
- SEVEN USE RESIDENTIAL MIXED PAPER
- ONE ASEPTIC CARTONS & ONE FOOD CONTAMINATED PAPER

### FOUR MAKE PULP FROM RECYCLED PAPER

- *AT LEAST ONE OTHER AMERICAN PAPER COMPANY IS SELLING RECYCLED FIBER PULP TO CHINESE MILLS*

### ALL OF THE EXPANSIONS/CONVERSIONS WILL BE COMPLETED

- NOT ALL OF THE NEW MILLS WILL BE BUILT:
- TOO MUCH POTENTIAL PRODUCTION CAPACITY

### *DATA FROM NERC STUDY*

<https://nerc.org/news-and-updates/press-releases/?article=2011>

## STATUS NEW NORTH AMERICAN MARKET CAPACITY: RECYCLED CONTENT PAPER

### **15 completed**

#### **OCC:**

- 12 OCC conversions or expansions completed

#### **RMP**

- 2 new facilities open

#### **Recycled fiber pulp**

- 3 completed

#### **Food contaminated paper**

- Opening

### **3 million new tons of capacity now?**

**15** unfinished projects include 4 conversions/expansions

- 11 new facilities

15 TOTAL

12 OCC CONVERSIONS

2 NEW PLANTS USING RMP

- PRATT IN OHIO & GREEN BAY PACKAGING IN WISCONSIN OPEN

3 RECYCLED FIBER PULP COMPLETED

- ALL AT MILLS ALSO CONVERTING OR EXPANDING CAPACITY
- RECYCLED FIBER PULP – UNBLEACHED RECYCLED PULP – URP – IS NOW BIG ENOUGH FOR ITS PRICE TO BE TRACKED BY FASTMARKETS
- ND BUILDING TWO NEW MILLS IN IN MALAYSIA TO MAKE RECYCLED FIBER PULP

GP JUNO FOOD WASTE PAPER PROJECT OPENING IN OREGON

NOTE: OPENING DOES NOT MEAN OPERATING AT FULL CAPACITY

- NEED CUSTOMERS FOR PRODUCTS

LET'S LOOK AT PLASTICS



## THE RISE OF PLASTIC



OVERALL USE UP 10 MILLION TONS SINCE 2000

PLASTIC IS THE SECOND LARGEST MATERIAL IN MSW AVAILABLE FOR RECYCLING

- *IT DISPLACED BOTH GLASS & METALS IN 1990*

60% OF PLASTIC PRODUCTION IS FOR A WIDE RANGE OF PRODUCTS INTENDED TO LAST FOR A SHORT TIME OR FOR YEARS

- THOSE PLASTICS ARE NOT GENERALLY RECYCLED

40% IS PACKAGING

- GETTING LIGHTER & MORE COMPLICATED TO RECYCLE

## 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
- Status of non-mechanical facilities particularly uncertain

Supply?

NERC Recycled Plastic Capacity Increases Jan 2020

NO CHANGE

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

STATUS OF NON-MECHANICAL FACILITIES (AKA "CHEMICAL" OR "ADVANCED") PARTICULARLY UNCERTAIN

SUPPLY FOR THESE FACILITIES UNCERTAIN

WHAT ABOUT EXPORTS?

## EXPORTS



OVER THE LAST TWO DECADES EXPORTS OF PAPER & PLASTIC RECYCLABLES EXPLODED

- THAT IS OVER

### *PAPER*

- *IN 2000 WE DIDN'T EXPORT MUCH PAPER*
- *MAYBE 10-15%*
- *EXPORTS PEAKED AT 40% - WHICH MEANS A MAJORITY STAYED HOME*

*PLASTIC EXPORTS WERE MUCH HIGHER AS A PERCENTAGE*

- *PET & HDPE BEGAN DECLINING IN 2010*

*CHINESE IMPORT RESTRICTIONS & BANS CHANGED THIS IN 2017*

LET'S LOOK AT SOME DATA

## EXPORTS: PAPER

### **2020: 15.9 million tons**

- Down 2.4 million tons from 2019
- Down 5.1 million tons from 2018
- China ban & increased domestic demand
- 1/3 of paper exported in 2020

### **BUT**

2021: January – March: 4.3 million tons

- 2021: 8% increase?
- India, Mexico & Vietnam get half of the exports

EXPORT DATA RESOURCE RECYCLING MAGAZINE MAY 25 – SOURCE US CENSUS BUREAU

[https://resource-recycling.com/recycling/2021/05/25/paper-and-plastic-exports-increase-in-the-first-quarter/?utm\\_medium=email&utm\\_source=internal&utm\\_campaign=May+25+RR](https://resource-recycling.com/recycling/2021/05/25/paper-and-plastic-exports-increase-in-the-first-quarter/?utm_medium=email&utm_source=internal&utm_campaign=May+25+RR)

### CHINA'S BAN DECREASED EXPORTS

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

### **BUT** 4.3 MILLION TONS FIRST QUARTER

- 8% INCREASE OVER FQ2020
- IF CONTINUE AT THE 2021 FIRST QUARTER PACE, 8% INCREASE IN PAPER EXPORTS 2021

### INDIA IMPORTED 1.2 MILLION TONS – 28%

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

EXPORT DATA RESOURCE RECYCLING MAGAZINE MAY 25 – SOURCE US CENSUS BUREAU

[https://resource-recycling.com/recycling/2021/05/25/paper-and-plastic-exports-increase-in-the-first-quarter/?utm\\_medium=email&utm\\_source=internal&utm\\_campaign=May+25+RR](https://resource-recycling.com/recycling/2021/05/25/paper-and-plastic-exports-increase-in-the-first-quarter/?utm_medium=email&utm_source=internal&utm_campaign=May+25+RR)

## EXPORTS: PLASTIC

### **2020: 1.37 billion pounds**

- Down 0.09 billion pounds from 2019
- Down 1.0 billion pounds from 2018
- Down 2.31 billion pounds from 2017

### **BUT**

2021 January – March: 333 million pounds

- 2021: same level of exports?
- Canada, Malaysia & Mexico get 5/8 of the exports

EXPORT DATA RESOURCE RECYCLING MAGAZINE MAY 25 – SOURCE US CENSUS BUREAU

[https://resource-recycling.com/recycling/2021/05/25/paper-and-plastic-exports-increase-in-the-first-quarter/?utm\\_medium=email&utm\\_source=internal&utm\\_campaign=May+25+RR](https://resource-recycling.com/recycling/2021/05/25/paper-and-plastic-exports-increase-in-the-first-quarter/?utm_medium=email&utm_source=internal&utm_campaign=May+25+RR)

PLASTIC EXPORTS DROPPING STEADILY SINCE 2015 (4.5 BILLION POUNDS)

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

**BUT** 333 MILLION POUNDS FIRST QUARTER 2021

- 7% INCREASE OVER FQ2020
- STAY THIS PACE 2021 EXPORTS WILL EQUAL 2020

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
- A BILLION POUNDS IS ONLY HALF A MILLION TONS
- ABOUT 685,000 TONS OR
- 4.3 PERCENT OF PAPER EXPORTS
- ALSO WORTH NOTING WE EXPORTED 18 MILLION TONS OF STEEL SCRAP LAST YEAR

## EXPORT BARRIERS



SHORTAGES IN TRUCKS TO GET BALES TO DOCKS

SHORTAGES IN SHIPPING CONTAINERS

SHORTAGES IN “SAILINGS”

HARD TO PREDICT HOW LONG THIS WILL LAST

- *SOME OF THESE PROBLEMS REFLECT ONGOING ISSUES SUCH AS THE DRIVER SHORTAGE WHICH IS ONLY LIKELY TO GET WORSE*
- NEW DOMESTIC CAPACITY WILL DIMINISH EXPORTS

LET'S LOOK AT PRICES

## PRICES: PAPER: OCC

June 8, 2021– Recycling Markets.Net

	<b>6-8-21</b>	<b>6-9-20</b>	<b>6-7-19</b>
NE:	\$115.00	\$82.50	\$32.50
US:	\$111.88	\$75.00	\$27.81

**(dollars/ton)**

OCC PRICES ARE GOOD

- NORTHEAST IS \$115
- RUNS SLIGHTLY AHEAD OF NATIONAL AVERAGE
- NOTE SWING BETWEEN 2019 – 2020 – 2021
- JUNE 2020 PRICES SPIKED DUE TO SUPPLY DEMAND IMBALANCE
- JULY DOWN TO \$57.50
- HIGHEST IN 2011 & 2017 SPIKE (\$173 & 180)
- LOWEST – DEC 2008 (\$22.19)

LET'S LOOK MORE CLOSELY AT RMP

## PRICES: PAPER: RMP

June 8, 2021 – Recycling Markets.Net

	<b>6-8-21</b>	<b>6-9-20</b>	<b>6-7-19</b>
NE:	\$52.50	\$12.50	\$-2.50
US:	\$55.31	\$11.56	\$-1.88

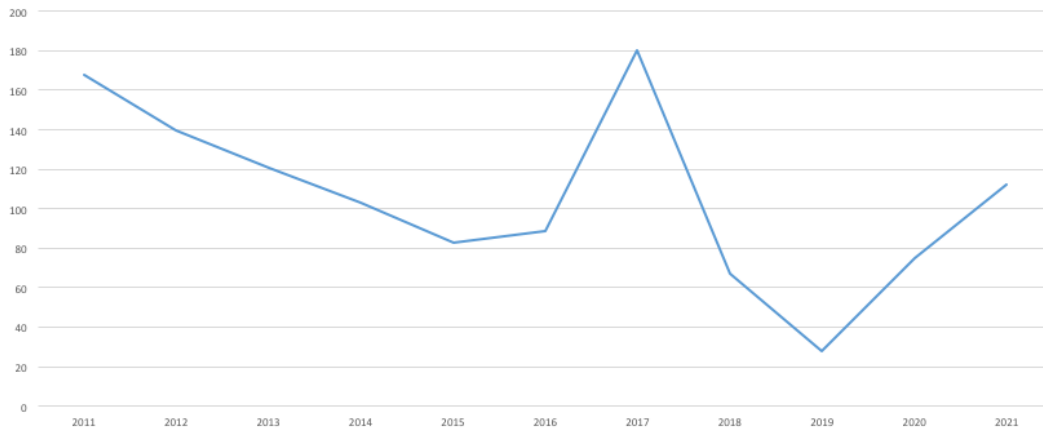
**(dollars/ton)**

RMP: IS TAGGING ALONG

- NORTHEAST IS UP \$20.00 OVER LAST MONTH
- GENERALLY RISES & FALLS AT A DISCOUNT TO OCC
- SPREAD HAS WIDENED FROM \$40 TO \$62.50 (19 vs 21)
- MILLS GETTING PLENTY OF NICE CLEAN OCC & LESS INTERESTED IN RMP?
- EXCEPT FOR MILLS RELYING ON RMP IN THE MIX (PRATT, GREEN BAY)
- HIGHEST: MARCH 2017 HOARDING – \$95.94 –
- LOWEWT – MARCH 2020 -\$4.38



## OCC JUNE 2011-2021



THIS IS A TEN YEAR SCAN FOR OCC (NATIONAL AVERAGE)

- PRICE POINT IS SAME WEEK IN JUNE FOR EACH YEAR.
- DOES NOT INCLUDE UPS & DOWNS WITHIN THE YEAR
- **BUT** SHOWS BASIC TRENDS OVER THE LAST 11 YEARS

HIGH 2011 MARKED THE HIGH TIDE OF CHINESE EXPORTS

- STEADY DECLINE AS CHINESE SLOWLY BEGAN WITHDRAWING
- 2013 – GREEN FENCE BEGAN
- 2017 – A SHARP SPIKE AS CHINESE MILLS HOARDED PAPER IN ANTICIPATION OF THE BAN ON OCC IMPORTS
- 2019 – BOTTOM
- THEN SPRING BACK AS DOMESTIC CAPACITY STARTS UP

## PRICES: PLASTIC

June 11, 2021 – RecyclingMarkets.net

	<b>6-11-21</b>	<b>6-12-20</b>	<b>6-14-19</b>
<b>PET bev:</b>			
NE:	23.50	7.75	14.88
US:	21.47	7.27	15.29
<b>Nat HDPE:</b>			
NE:	104.50	39.00	20.75
US:	100.25	36.00	20.52

(cents per pound)

### PET REBOUNDING

ALMOST TRIPLED SINCE JANUARY

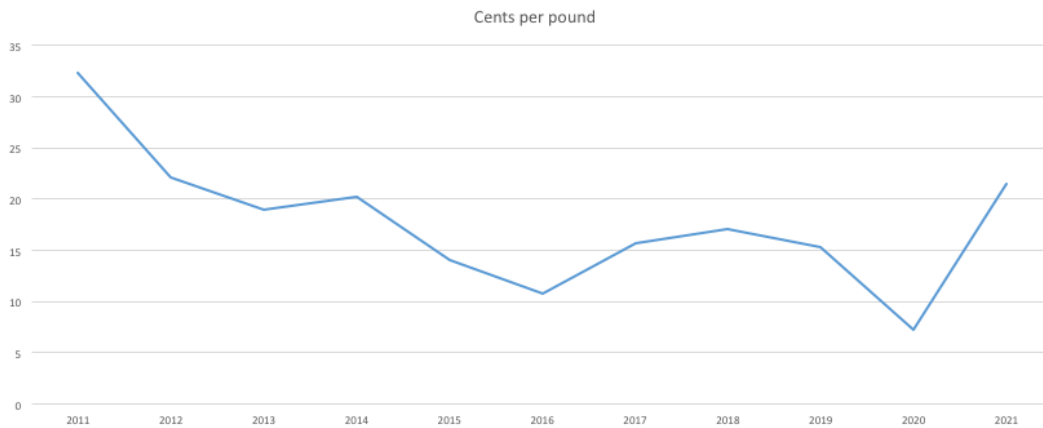
2/3 OF 37.25 HIGH (APRIL 2011)

- **BRAND DEMAND** & RISING COST OF OIL
- LOW: 4.13 DECEMBER 08

### NATURAL HDPE SOARING

- UP 10 CENTS LAST MONTH
- RECORD HIGH
- UP 34 CENTS BEGINNING OF THE YEAR
- BRAND DEMAND &
- EASE OF USE FOR NON FOOD CONTACT PACKAGING
- LOW: 11.69 DECEMBER 2008

## PET BOTTLES JUNE 2011 - 2021



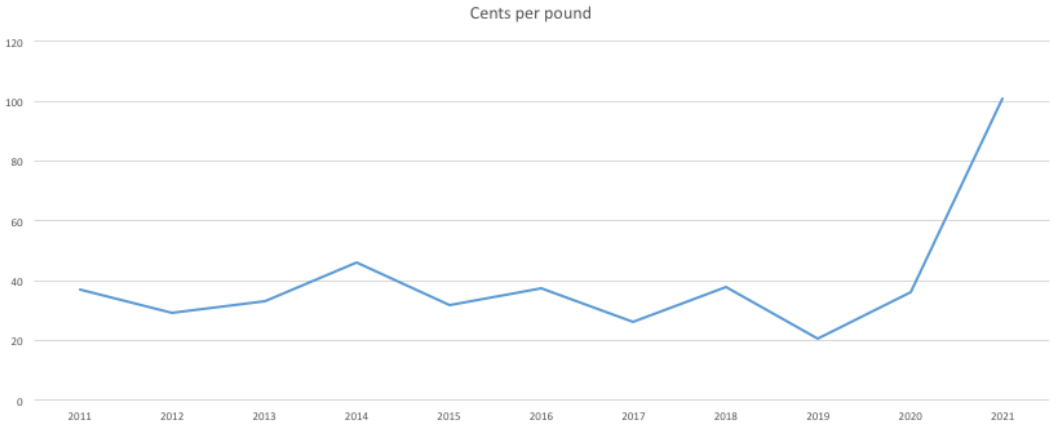
AS IN THE OCC CHART JUST MID JUNE PRICES FOR EACH OF THESE ELEVEN YEARS.

PET PEAKED IN 2011 WHEN OIL WAS ITS MOST EXPENSIVE

YOU CAN SEE HOW MUCH PET HAS SAGGED

- FLUCTUATED A LITTLE BUT STAYED DOWN
- UNTIL NOW

# NATURAL HDPE JUNE 2011 - 2021



## PRICES: PLASTIC

June 11, 2021 – RecyclingMarkets.net

	6-11-21	6-12-20	6-15-19
<b>Col HDPE:</b>			
NE:	56.50	3.50	14.50
US:	51.88	3.63	14.25
<b>PP:</b>			
NE:	40.50	4.00	13.00
US:	35.38	3.69	12.25

(cents per pound)

### COL HDPE SOARING

- UP 14.25 CENTS FROM LAST MONTH
- UP 37 SINCE BEGINNING OF THE YEAR
- HIGHEST 51.88
- LOWEST 3.53 JUNE 20

### POLYPROPYLENE SOARING

- UP 2 CENTS FROM LAST MONTH
- ALL TIME HIGH
- 3.00 ALL TIME LOW MAY 8 2020 WHEN AUTO PRODUCTION SHUT DOWN

## PRICES: METALS

JUNE 11, 2021– RecyclingMarkets.net

	<b>6-11-21</b>	<b>6-12-20</b>	<b>6-14-19</b>
<b>Aluminum:</b>			
NE:	73.00	38.50	57.50
US:	70.00	39.31	55.88
<b>Steel Cans:</b>			
NE:	\$275.00	\$71.50	\$165.00
US:	\$249.69	\$78.94	\$155.94

(Aluminum cent per pound, steel dollars per ton)

### ALUMINUM ON THE REBOUND

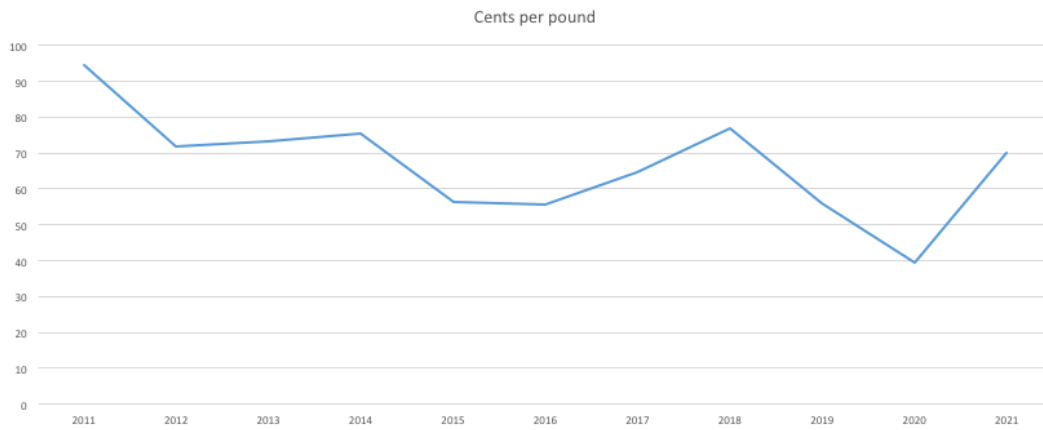
- UP 9 CENTS FROM LAST MONTH
- INCREASED DEMAND – AUTOMOTIVE & SEMICONDUCTOR CHIPS
- BEER?
- **LOW LAST MAY - 39.13**
- **HIGH: MAY 2011 – 96.31**

### STEEL

- UP \$15.00 FROM LAST MONTH
- UP \$200 BEGINNING OF YEAR
- 70% US PRODUCTION IS EAF WHICH RELIES ON SCRAP
- NE \$26 ABOVE NATIONAL AVERAGE
- CHINESE ECONOMY REBOUNDING
- SUPPLY SHORTAGE
- LOW WINTER 2015 \$15 – 29)

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

## ALUMINUM UBCs JUNE 2011 - 2021



2011 WAS ALUMINUM'S HIGH POINT

STEADY DECLINE THEN UPS AND DOWNS

## PREDICTIONS



ACTUALLY I'VE GOT SOME GOOD IDEAS

- BUT I DON'T KNOW EVERYTHING
- YOU MIGHT REMEMBER WHEN I SPOKE AT THE JANUARY 2020 CRC MEETING, I DIDN'T PREDICT THE PANDEMIC

*MY "PREDICTIONS" ARE BASED ON A BELIEF THAT WE WILL BE BACK TO "NORMALCY" BY THE FALL*

- *WE ARE A SOCIAL SPECIES & WE ARE ITCHING TO BE OUT & ABOUT AGAIN*
- *SOME PREVIOUS TRENDS SUCH AS THE DECLINE IN PRINTED PAPER & THE RISE OF PLASTIC WILL CONTINUE*
- *E-COMMERCE WILL BE A BIGGER FACTOR THAN A YEAR AGO BUT...*
- *WE REALLY DON'T KNOW HOW OTHER TRENDS – SUCH AS THE FUTURE OF RETAIL STORES & OFFICES – WILL PLAY OUT*
- *WHAT BLACK SWAN IS OUT THERE?*
- *WILL THE BRAZILIAN VARIANT CRUSH OUR PANDEMIC RELIEF HOPES?*



## MARKETS 2021: PAPER

### **Rising**

- Price of virgin pulp & recycled fiber rising
  - Linerboard companies increased prices twice
- \$30/ton increase for OCC predicted
- Spot markets stronger than (most) pricing sheets
- Waste/recycling companies noting tailwinds not headwinds

### **Questions:**

- Retail stores vs e-commerce?
- India?

### PAPER: RISING

- PRICE OF PULP RISING
- IMPACT OF RETAIL & OFFICES REOPENING
- KEY INDICATOR: CONTAINERBOARD COMPANIES RAISING PRICES \$60-70/TON
- THAT SHOWS FAITH IN THE MARKET
- PUBLICLY TRADED WASTE/RECYCLING COMPANIES SHOWING REVENUE TAILWINDS
- *CONTAINERBOARD PRODUCTION STRONG: UP 9% YOY MARCH &*
- *OP RATE AT 91 PERCENT*

### KEY QUESTION: WHEN WILL RETAIL STORES GET BACK TO NORMAL?

- E-COMMERCE DECLINED SLIGHTLY IN THE 3D QUARTER LAST YEAR WHEN RETAIL STORES REOPENED
- FIRST QUARTER DATA SHOWS DECLINE IN E-COMMERCE AS A PERCENT OF OVERALL RETAIL SALES

## MARKETS 2021: PLASTIC

?????

- Lingering impact of Texas freeze
- How high will oil prices go?
- Brand demand: real or p.r.?
- Are high prices sustainable?

PLASTIC: HARDER TO PREDICT:

- LINGERING IMPACT OF TEXAS FREEZE
- HOW HIGH WILL OIL PRICES GO:
- JUNE 14: AVERAGE US COST OF A GALLON (3.069 – UP 97 CENTS FROM A YEAR AGO)
- SO WHILE BEING UNHAPPY AT THE PUMP, BE HAPPY FOR RECYCLING MARKETS

SUPPLY?

BRAND DEMAND:

- NATURAL HDPE VERSATILE
- HELPING COLORED HDPE
- PP HOT
- WHO CARES ABOUT 2025 PROMISES
- WHAT IS HAPPENING IN 2021?
- *DOES THE CEO'S COMPENSATION INCLUDE INCREASED USE OF RECYCLED CONTENT?*
- IHS SAYS BRAND DESIRE WILL CUSHION 3D QTR DROP IN VIRGIN PRICES

## GOLDILOCKS PRICES



I'M A BIG BELIEVER IN GOLDILOCKS MARKETS

- NOT TOO HOT, NOT TOO COLD
- MARKETS THAT WORK FOR BUYERS & SELLERS
- BUT DON'T LEAD TO THEFT
- WE ARE CLOSE TO THAT FOR OCC & RMP
- BEYOND FOR HDPE & PP

LET'S NOT MAKE A MESS OF THEM

- WE NEED TO CONTINUE TO FOCUS ON WHAT HAS NOT CHANGED DUE TO THE PANDEMIC
- NOT GET GREEDY OR GIDDY AT BETTER MARKETS
- & REMEMBER THAT MARKETS COME & GO
- QUALITY IS ETERNAL

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

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

## 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/](http://nerc.org/news-and-updates/press-releases/)
- Paper: Moore & Associates: Bill Moore: [www.marecycle.com](http://www.marecycle.com)
- Paper: RISI: Hannah Zhao: [www.risiinfo.com](http://www.risiinfo.com)
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- Paper Stock Report: Ken McEntee [www.paperstockreport.com](http://www.paperstockreport.com)
- Recycling Markets.net: Christina Boulanger-Bosley: [www.recyclingmarket.net](http://www.recyclingmarket.net)
- Resource Recycling Magazine & weekly Resource Recycling & Plastic Recycling Update e-news: [resource-recycling.com/recycling/magazine/](http://resource-recycling.com/recycling/magazine/)

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