

RECOVERED PAPER MARKET 2016


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TOPICS

- ▶ Market update of US and export, Southeast
- ▶ OCC + review US supply/demand, capacity
 - ▶ China's demand + outlook
- ▶ MRFs, specifications, processors



RECOVERED PAPER FAST FACTS

- ▶ **\$7.5 billion/yr** US market: 58% domestic + 42% export
- ▶ **52.04 million tons** US 2015 demand. 31 million for US mills + 21 million exported, with **69% to China**
- ▶ **2015 US mill consumption was highest since 2010**, even as US paper/board output fell 4% the last 4 years
 - ▶ 20-30% from curbside collection
- ▶ Single-stream MRF system for 290 million Americans




OCC, MIXED PAPER IN FIRST-HALF JUMP UP

- ▶ **Export, FAS, Los Angeles ports**

		July 2016	Jan. 2016	July 2015
▶ OCC	+19	\$158	\$139	\$166
▶ Mixed paper	+38	\$125	\$87	\$118
▶ ONP	+41	\$132	\$91	\$128
- ▶ **Southeast, domestic mills, FOB**


▶ OCC	+20	\$100	\$80	\$95
▶ Mixed paper	+30	\$75	\$45	\$50
▶ SOP	+25	\$140	\$115	\$145

▶ Source: *PPI Pulp & Paper Week*/OBM.




SUPPLY/DEMAND FACTORS SO FAR IN 2016

- ▶ **US generation down.** Waste Management shut MRFs. May generation declined vs April, and June was flat to down. Exports up 2.1%, domestic down 0.4%. Exports to China down 5.2% through May.
- ▶ More than **two million tons/yr of new, converted, or restarted containerboard capacity** in the US and Canada.
- ▶ **China's ONP, then mixed, then OCC demand has increased.** (1) Flooding reduced generation of OCC so boxboard/ctb mills chased mixed/ONP. (2) Mills hard running expecting shuts before early Sept. summit.



OCC FORECAST

- ▶ **OCC is forecast to increase this year** at US mills, by \$5 on average, vs the 2015 average, and imported OCC into China is to decline, by \$10, on average for 2016 vs 2015, based on RISI's July 15 forecast. If true, this could be a first.
- ▶ **New US mill capacity** should pressure domestic prices at times, especially when China actively buys. More additional capacity planned in 2017.
- ▶ China's OCC imports should dip 2% in 2016, RISI forecasts.
- ▶ **Bottom line:** Stronger US demand, lighter to China but the key is when China goes on a buying flurry.



GROWING NEED FOR OCC

▶ US mill consumption (000 short tons)

	2010		2015	
▶ OCC	61%	19,085	68.5%	21,084
▶ MP	14%	4,390	12.1%	3,713
▶ HGD	8%	2,498	10.9%	3,377
▶ ONP	12.8%	3,989	5.1%	1,563
▶ Pulp subs	4.2%	1,301	3.4%	1,049

▶ Notes: OCC was a 31-million-ton market in the US in 2015, with 21.0 million domestic -- which is an increase of 2.37 million from 2012 -- and 10 million export. 49.3% of 2015 US exports were OCC vs 39% in 2010.

MIDWEST SURPRISE: NEW CAPACITY

▶ **Two machines started in the last year and third planned -- The first new ones in years in Midwest**

▶ 1. **Pratt Industries: Valparaiso, IN**, 355,000 tons/yr, 65% mixed paper, 35% OCC. Started up at end of September.

▶ 2. **Corrugated Supplies: Alsip, IL**, corrugating medium, 220,000 tons/yr, OCC mostly/completely. Feb. 2016 startup.

▶ **575,000 tons of demand from the two**

▶ **Offset: WestRock shuts three medium mills with 675,000 tons in late 2015/early 2016**

CAPACITY ADDITIONS 2016-2017

▶ **2015**

- ▶ Orchids, Pryor, OK – Mar 2015 – Tissue (20)
- ▶ IP, Valliant, OK – May 2015 -- Restarted Corr Medium PM (355)
 - ▶ Double Tree, Gila Bend, AZ – 2015 – Tissue (40)
- ▶ Pratt, Valparaiso, IN – Sept/Oct 2015 – Containerboard (360)

▶ **2016**

- ▶ Corrugated Supplies, Alsip, IL – Jan 2016 – Corr Medium (220)
 - ▶ von Drehe, Natchez, MS – 1Q 2016 – Tissue (40)
- ▶ UP Paper, Manistique, MI – June 2016 – Board, pkg paper

▶ **2017**

- ▶ Orchids, Barnwell, SC – 1Q 2017 – Tissue (30) unclear if all virgin or mix
- ▶ Kruger, Trois Rivières, QC – 2Q 2017 – Containerboard (360)
- ▶ Corrugated Supplies, Milwaukee, WI – 2H 2017 – Containerboard* (350)

2015 MILL CONSUMPTION HIGHEST SINCE 2010

▶ **US mill consumption (000 short tons)**

▶ 2008	32,655
▶ 2009	28,748
▶ 2010	31,552
▶ 2011	30,009
▶ 2012	29,913
▶ 2013	29,975
▶ 2014	29,992
▶ 2015	30,786

▶ Source: American Forest & Paper Association.

ONGOING BUY-SIDE CONSOLIDATION

▶ Largest consumers in NA	000 tons	Mkt. Share
▶ 1. International Paper	6,813	20.1%
▶ 2. WestRock*	4,900	14.5%
▶ 3. Georgia-Pacific	2,888	8.5%
▶ 4. Cascades+	1,850	5.2%
▶ 5. Pratt+	1,533	4.5%
▶ 6. Sonoco	1,360	4.0%
▶ 7. Graphic Packaging*	1,281	3.8%
▶ 8. Carastar*	1,049	3.1%
▶ 9. SCA Tissue NA*	883	2.6%
▶ 10. PCA (Boise) *+	853	2.5%

▶ **Total for NA market 33,838,000**
 ▶ **Top 10 Market Share 68.8%**

*=Acquisitions since 2013. += New, converted PMs since 2013.

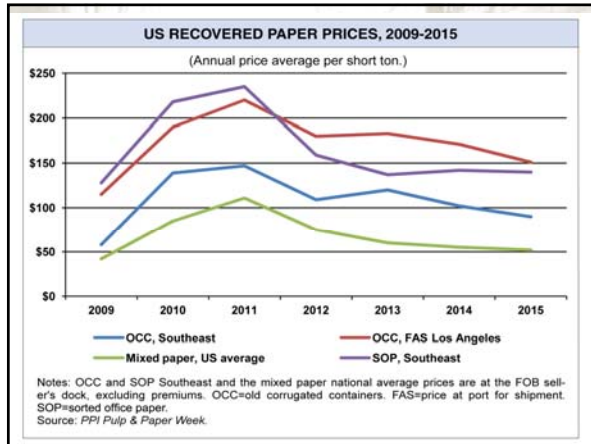
CHINA'S IMPACT

▶ **China's buy of US recovered paper down 6% from 2011 peak = 916,000-ton drop. 2015 buying increased by 4.2%.**

▶ Through May 2016, US exports to China were down 5.2%. Will there be a second-half pickup?

▶ **Demand, economic uncertainty.** Renminbi devalued and two near-stock market crashes in the last year.

▶ **Leadership changes** at two largest US export firms ACN and Ralison. The two sell 40% of US exports.



EXPORTS TO CHINA

(000 short tons)

Exports	To China	China share	TOTAL
2009	14,132	67.2%	21,017
2010	12,872	62.2%	20,692
2011	15,776	68.1%	23,179
2012	15,647	70.5%	22,188
2013	14,596	70.2%	20,794
2014	14,273	67.8%	21,059
2015	14,860	69.3%	21,435

Note: US exports down 5.2% through May 2016 to China.
Source: US Dept of Commerce, Bureau of Census.

- ### COLLECTION AND THE MRF
- Higher-cost collection without consistently higher raw material pricing causes financial struggle for MRFs.
 - Waste Management plant shuts cut roughly 20% of its 2015 processed volume.
 - How will the MRF of tomorrow be different? New technology, better contracts?
 - "Dirty" MRF plans appear: Houston, Indianapolis, WV, Vancouver, Baltimore. Montgomery idled in October, due to market prices. Calif. MWP "Dirty" MRF recovery rate at 19%.
 - EPR programs in British Columbia, Ontario, Quebec.

- ### SPECS, PROCESSORS, SHIPPING, GDP
- Specification changes. SRP replaces ONP 8. SCN added, is high quality like ONP 9. Mixed paper added. Two mixed paper grades and three ONP grades (Nos 6-8) eliminated.
 - Minimal processor consolidation – Fastest-growing processor is a paper company Pratt. WestRock, Sonoco, Cascades, IP, Pratt, Carastar are among 10 largest processors. WM is #1, Republic #2, ReCommunity #7.
 - Trade changes? Panama Canal Third Set Locks project completed, doubling capacity, allowing for larger ships to E.
 - 1Q US GDP at 2.9% (e); 2015 total = 2.4%. 5-yr. = 2.42%.

- ### RISI USA PRICE REPORTS
- PPW/OBM's extensive US monthly recovered paper price coverage is for 17 materials sold to domestic mills in nine regions, and for seven export grades for mainly China, and Asia, as well as for India and Mexico.
 - At RISI, we also report weekly bulk grade export prices and publish Bench\$mart's pricing report, and publish a monthly economist forecast report on recovered paper along with special reports on recovered paper related to OCC and global trade.
 - For the PPW/OBM, I survey 70-80 contacts from the 1st to the 4th: 40% processors, 40% mills, 20% brokers (export).

- ### THANKS
- BEST OF LUCK WITH YOUR BUSINESS
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