New Jersey WasteWise Business Network Panel

George Chen

George Chen's Autobiography

- Retired from Tzeng Long USA after 18 years mill buyer position.
- 1997 established G & T Trading Company engaged in International Trade.
- President of New Jersey Paper Recycling Association since 2002.
- President of Paper Stock Industries from 2008-2010.
- ISRI Paper Division Director since 2011.

Challenging & Interesting

- 2014 continues to be a very challenging and tough year for the Paper and Paper Recycling industry! Let us discuss the Pulp & Paper industry first. Pulp inventory is still dropping, energy costs are getting higher and higher and luckily interest rates are steady now. These factors force the Paper companies to try to increase their finished product price. I believe this condition is the same as the European and Asian markets. Pulp production is limited due to environment issues.

Recovered Paper market changed

- The first quarter has been challenging because of unstable conditions. Terrible weather really pushed the domestic and overseas mills to add more inventory and no question that the price is about to jump up for sure. But the second quarter conditions changed. More than three US Paper mills started new machines recently that will keep more Recovered Paper tonnage in the US.

Single Stream Program

- 1/ This program will continue to expand to more and more States of the USA and the quality of the recovered paper could become critical. Waste Haulers want single stream because of the cost savings on the service side but the quality cannot be maintained. Special Old News Paper contaminated with glass will be rejected from US newsprint mills.

Pier Pass Program

- 2/ So far this program is isolated to the port of Los Angeles but we need to pay more attention to this because a new Pier Pass program may happen at other ports in the USA! I believe this program has really changed many L.A. packers' operations and cost structures. Pier Pass program seems to reduce 75% of the traffic congestion in Los Angeles port area. It is higher cost for Los Angeles recyclers. So far this program has not expanded to the Northeast area yet..

CCIC New regulations.

- 3/ Each exporter for China needs to prepare three digital pictures in order to receive a CCIC Certificate. Self-inspection companies need to guarantee their shipments by posting a bond in case of rejection and the subsequent costs that happen in China! Plus CCIC requests that all the self-inspection companies need to install a Video camera at the shipping point to record the loading process. This really adds cost for the supplier.

Green Fence program In China

- The Green Fence policy in China will continue to execute after November 2013. All the suppliers need to watch their shipments carefully to avoid shipment rejection. Especially Ningbo and Huangpu area.

AQSIQ License renewal

- 4/ Every three years, China requests that all the AQSIQ license companies need to renew their China AQSIQ license. Many companies need to renew their license in 2014. If the company has a record of rejections it will be very tough to get an approval for a new license. New applicant s need an ISO or RIOS certificate to apply for a new certification.

Mixed Paper quality issue

- 5/ Neither China nor India prefers the Mixed Paper quality which comes from the single stream systems and rejections can and do result in both China and India. China is really pushing this program seriously, many exporters have experienced rejections at a high cost.

Sorted Office Paper

- 6/ This was a very popular grade until recently but it has not been properly defined by standard yet, so we must pay more attention to this grade in both the domestic and export markets. Should be one specification for this grade only.

Old News Paper (ONP)

- 7/ This is a tough grade also, volume continues to drop due to many people getting their news online. As result of increased single stream recycling, ONP quality is poor and cannot meet the old specification so that PSI must change the grade specifications to allow 10% out throw, however, many overseas mills will refuse to accept it.

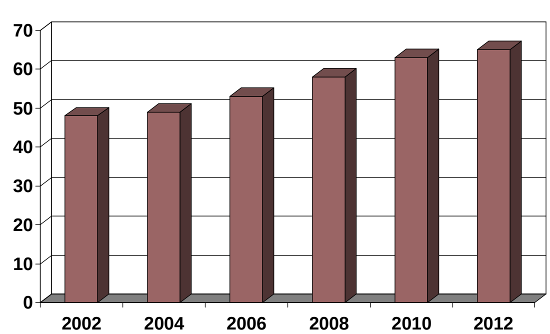
Did you know?

- Paper recovery for recycling has exceeded 60 percent each year since 2009.
- The amount of paper and paperboard recovered in the U.S. increased 76 percent between 1990 and 2012.
- Save 17 trees if we use Recovered Paper to produce one ton of newsprint .
- 87 percent of Americans have access to community curbside or drop-off paper recycling programs.
- Total paper recovery in the U.S. exceeded 51 million tons in 2012.

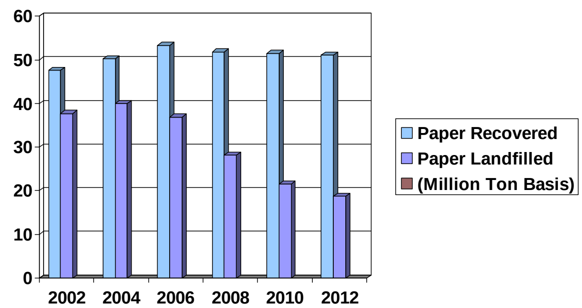
Did you know?

- By weight, more paper is recovered for recycling from municipal solid waste streams than glass, plastic, steel and aluminum combined.
- AF&PA member companies' use of recovered fiber results in avoided greenhouse gas emissions of more than 18.5 million metric tons of CO_2 equivalents each year.
- Approximately 76 percent of all U.S. papermakers use some recovered paper to make everything from paper based packaging to tissue products to office paper and newspaper.

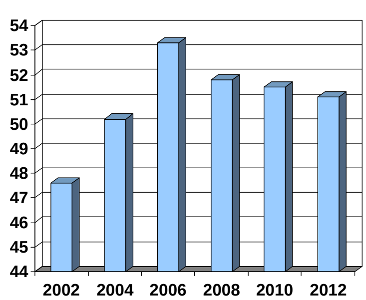
USA Recovered Paper Statistical



USA Paper Recovery Versus Landfilling

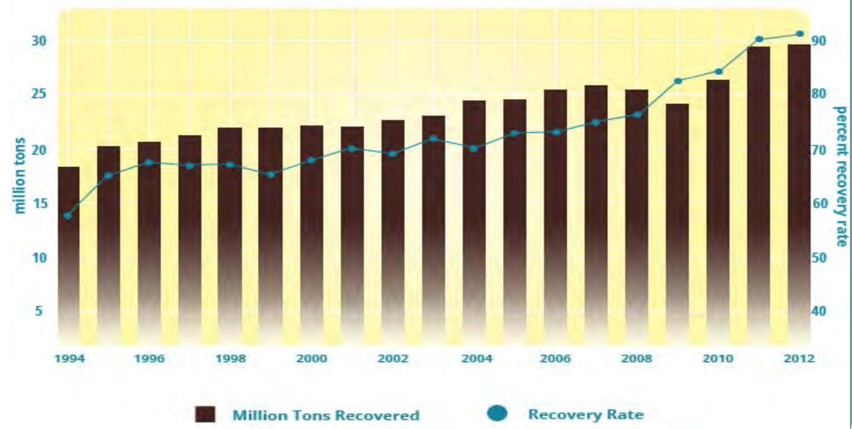


USA Recovered Paper (Million Ton)

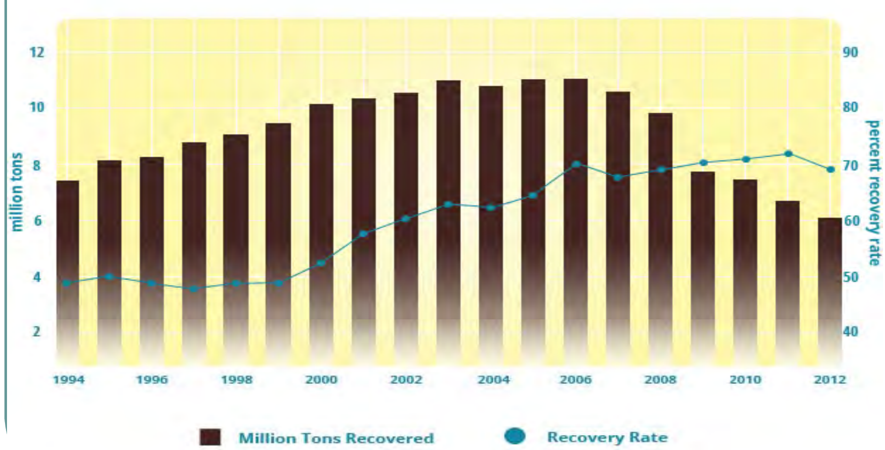


- 2002 47.6M
- 2004 50.2M
- 2006 53.3M
- 2008 51.8M
- 2010 51.5M
- 2012 51.1M

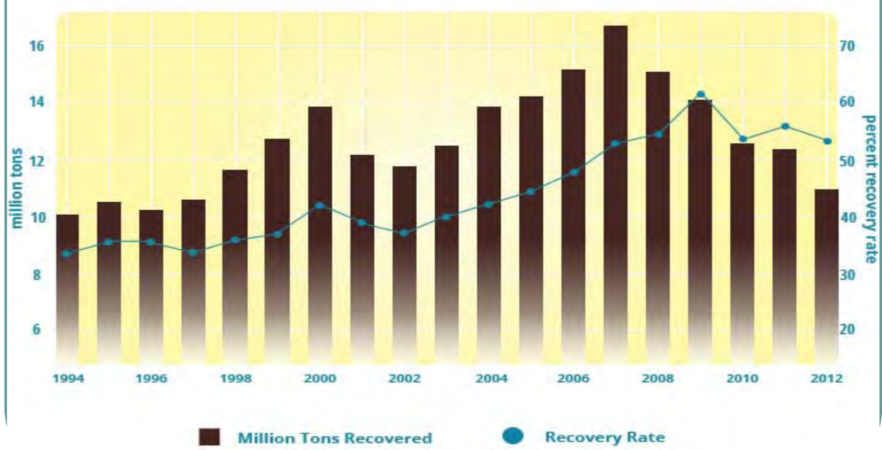
USA Old Corrugated Containers (OCC) statistical



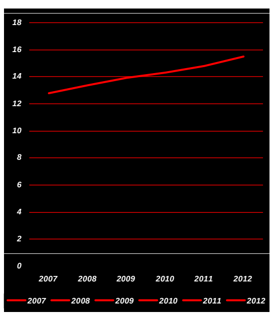
USA Old News Paper statistical



USA Recovery of Printing-Writing Papers



Mixed Paper statistical (Million ton)

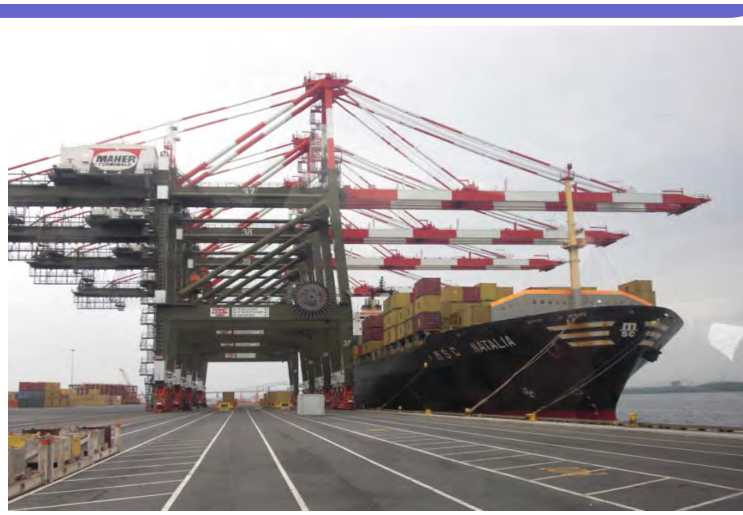


- 2007 12.8 M
- 2008 13.4 M
- 2009 13.9 M
- 2010 14.3 M
- 2011 14.8 M
- 2012 15.5 M

Annual new demand

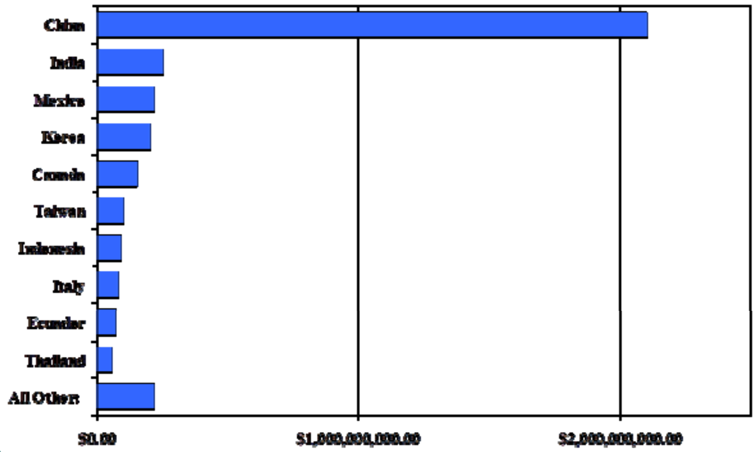
- 9.5 million tons of annual new demand for recovered paper, Major environmental benefits via additional recovery.

Export Market



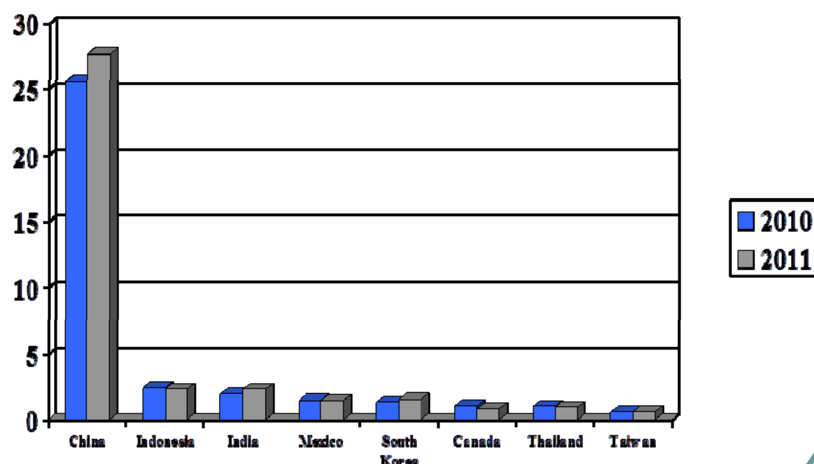
U.S. Export Sales of Recovered Paper & Fiber by Major Destination, 2012 ($)

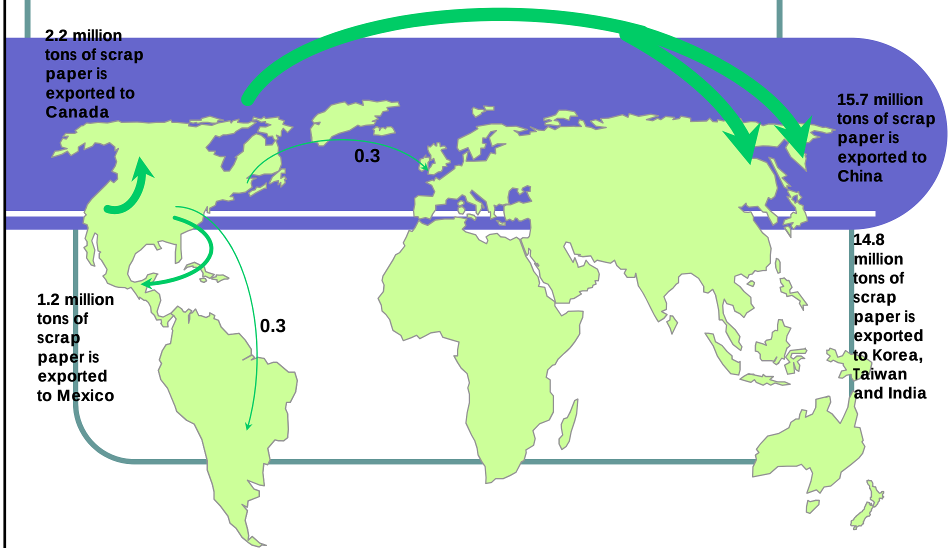
Sources: U.S. Census Bureau/U.S. International Trade Commission



Major Importers of Recovered Paper (million tons)

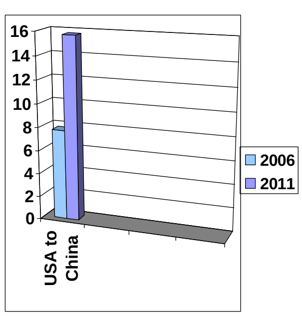
Source: Bureau of International Recycling





Figures as of 2012

USA Recovered Paper to China.



- According AF&PA report that 2012 US export recovered paper reach 22.3 million ton. Export China is 15.7 million ton. 2006 USA recovered paper export tonnage is 14.6 million ton and export to China is 7.7 million tonnage (53%). 1996 China import recovered paper only 650,000M/T only.

Export demands for the future!

Due to the recent China slow down the economic and environment al issues shall reduce the Recovered Paper demands for special ONP and Printing grades. Many small China mills have closed in 2013.

OCC demand will continue to grow!

China Top Six Paper Mills list

1/ Nine Dragons Paper (Holdings) Limited

2/ Chenming Paper.

3/ Lee & Man Paper Manufacturing Limited.

4/ Sun Paper Group.

5/ Huatai Paper.

6/ Hengan Paper.

US Domestic Market

US Domestic mill 2012-2013 project

New PMs 2012-2013
--Wausau tissue paper, Harrodsburg, KY.
--Kruger, Memphis, tissue paper
--First Quality, Anderson, SC, tissue paper
--Atlantic Packaging, Whitby, ON, containerboard conversion from newsprint
--SP Fiber Dublin, GA, conversion from newsprint to board/bag grades
--Norampac, Niagara Falls, NY, new containerboard PM
--Clearwater Paper, Shelby, NC, new tissue paper machine

2014-2015 new project

2014-2015
Pratt plans a new containerboard PM in Valparaiso, IN
Cascades plans to convert an UFS to tissue paper in St Helens OR
SP Fiber plans the conversion of a newsprint PM in Newberg, OR, to board
PCA plans conversion of DeRidder, LA, newsprint PM to containerboard

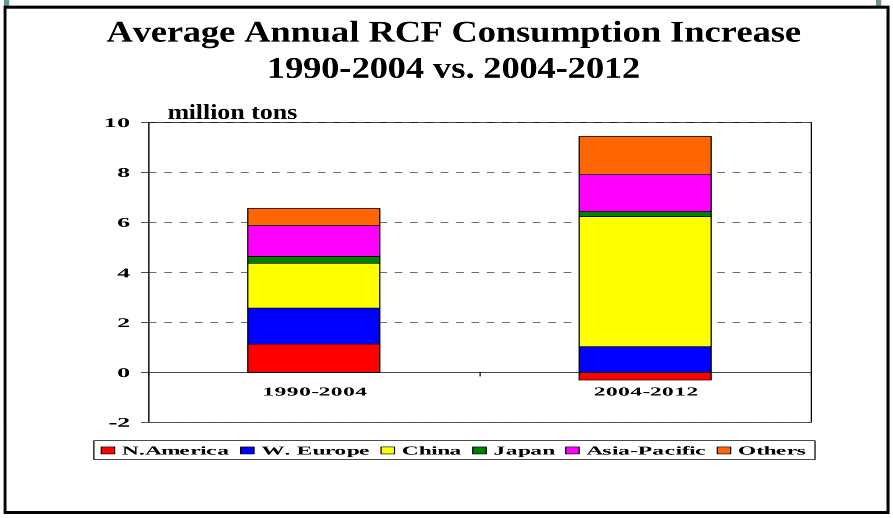
Other possible new PMs or converted PMs
Kruger, Trois Rivieres, QC
Saica, location TBA

Top Domestic Mills in US

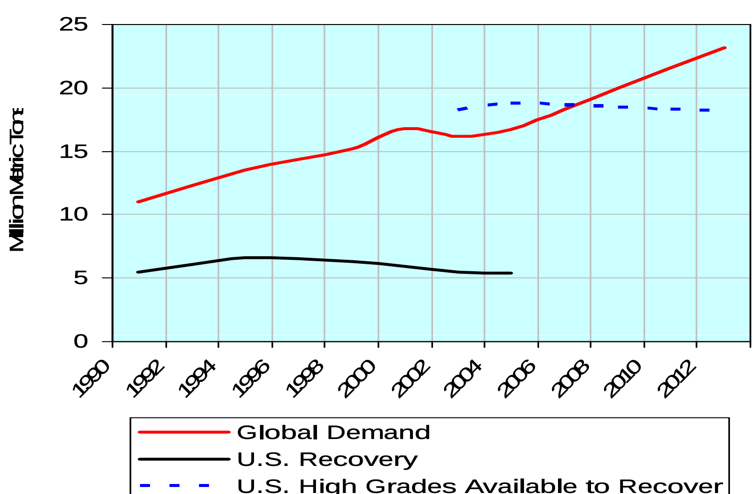
IP is the largest paper and board producer in the world based on capacity and sales, Georgia-Pacific is No. 2 in the world. APP is most likely No. 3.

In North America, RockTenn is No. 3 behind IP and G-P. Based on information on their respective web sites, IP has 15 mills in the U.S., Pratt currently has 3 mills (they will have 4 with the mill in Indiana), RockTenn has 13 mills, 7 specialty mills and 5 coated mills, GP has two mills, one in Arkansas and one in Wisconsin.

Average Annual RCF Consumption Increase



Global High grade demands v.s. U.S. Recovery



2012 Top 10 Pulp and Paper companies in the world

- 1/International Paper (USA)
- 2/Procter & Gamble (USA)
- 3/Oji Paper (Japan)
- 4/UPM (Finland)
- 5/Stora Enso (Finland)
- 6/Nippon Paper Group (Japan)
- 7/Kimberly-Clark (USA)
- 8/Smurfit Kappa Group (Ireland)
- 9/Svenska Cellulosa SCA (Sweden)
- 10/Rocktenn (USA)

Four of the ten companies are located in USA.

Suggestion

- 1/ US Government needs to educate our next generation about benefit of recycling and ask everybody to separate recycling material well.
- 2/ Equipment people need to find BEST sorting system for supplier and make sure quality is suitable for mills requirement.
- 3/ Recycling rate needs to increase in The US to help the environment and create strong market demand.
- 4/ Any package materials need to consider recycling system for sustainability.

Conclusion

- 1/ More Suppliers and Broders will consolidate/merge in the future.
- 2/ Shipping line export space will be getting tight due to Shipping Lines sharing space together.
- 3/ More US domestic mills will set up new machines so more recycling material will stay in The US.

Conclusion

- 4/ China's demand will not be as strong as before. But still the number one Recovered Paper market. It is forecast that more China domestic mills will be shut down. China will increase collection rate in the near future. Inspection process will getting tougher.
- 5/ Price will steady and flat! Small packer will difficult to survive!
- 6/ More demands will come from India and Vietnam.