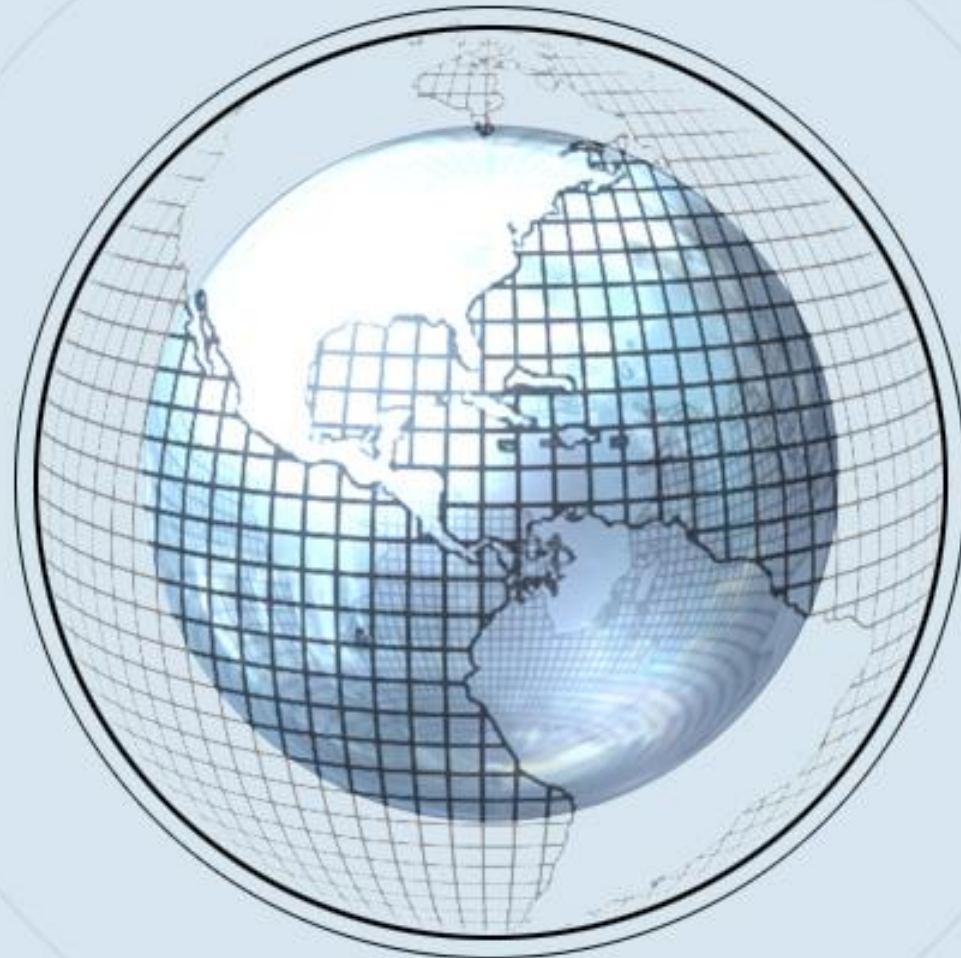


**Coast Waste Management Association – Victoria, BC – Oct 2017**

# **Recovered Paper Markets and China's National Sword Program**

**Bill Moore**  
**President**  
**Moore & Associates**  
**Atlanta, GA**

**[www.MARecycle.com](http://www.MARecycle.com)**



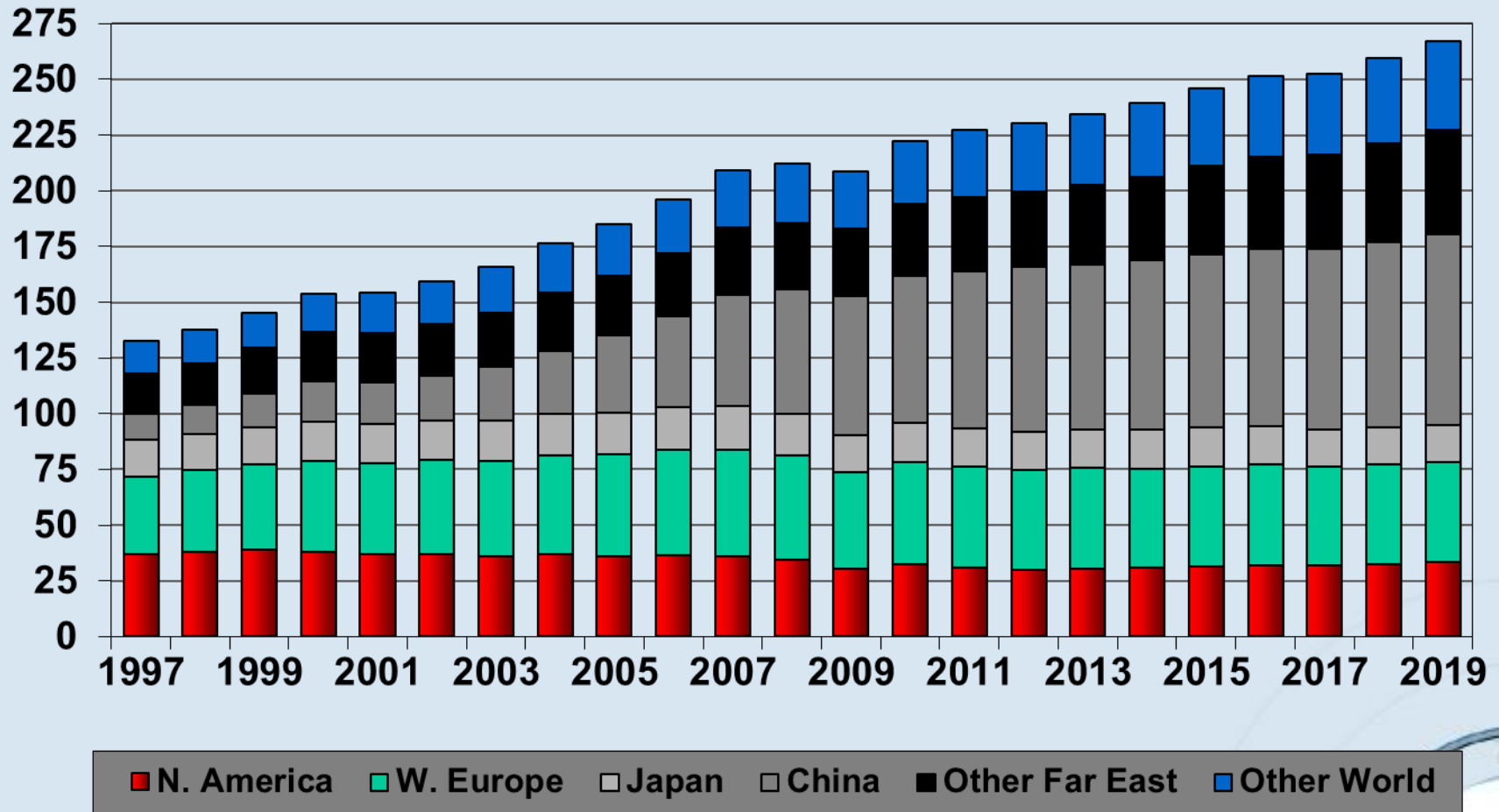
# **Moore & Associates – Paper Recycling Market Consultants**

- **Recovered Paper Market Experts**
- **Based in the US, Global Practice, significant work in Canada**
- **Market Research/Analysis**
- **Recycling Business Strategy**
- **Pricing Analysis**
- **Recovered Paper Purchasing/Selling Optimization Assistance**
- **Innovative Supply Sourcing and Development**



# Recovered Paper Demand by Major World Region

Million Tonnes

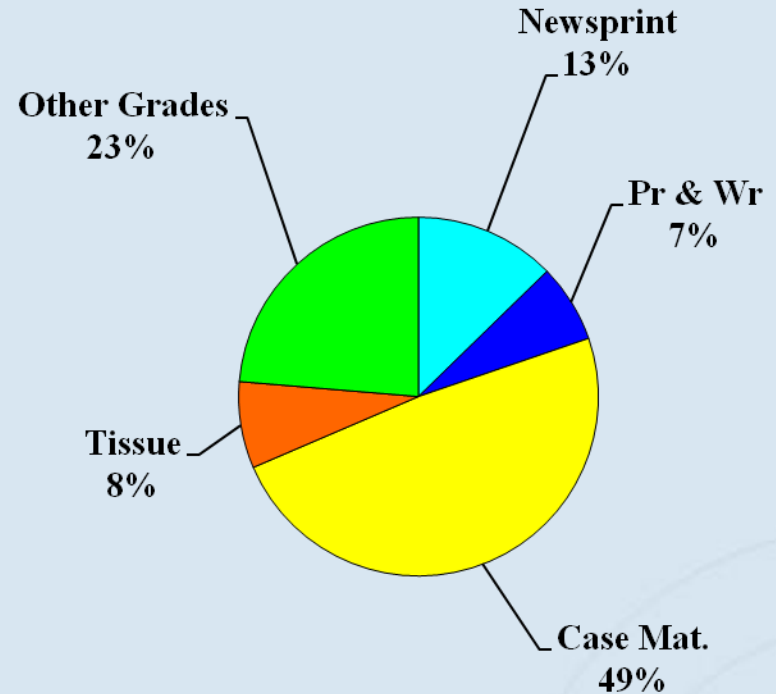
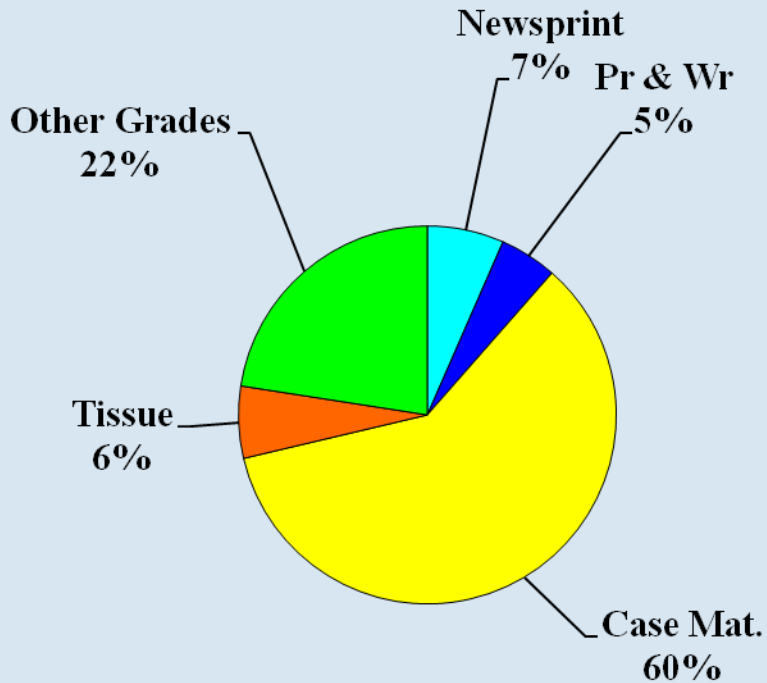


# Global RCP Usage by Product Grade

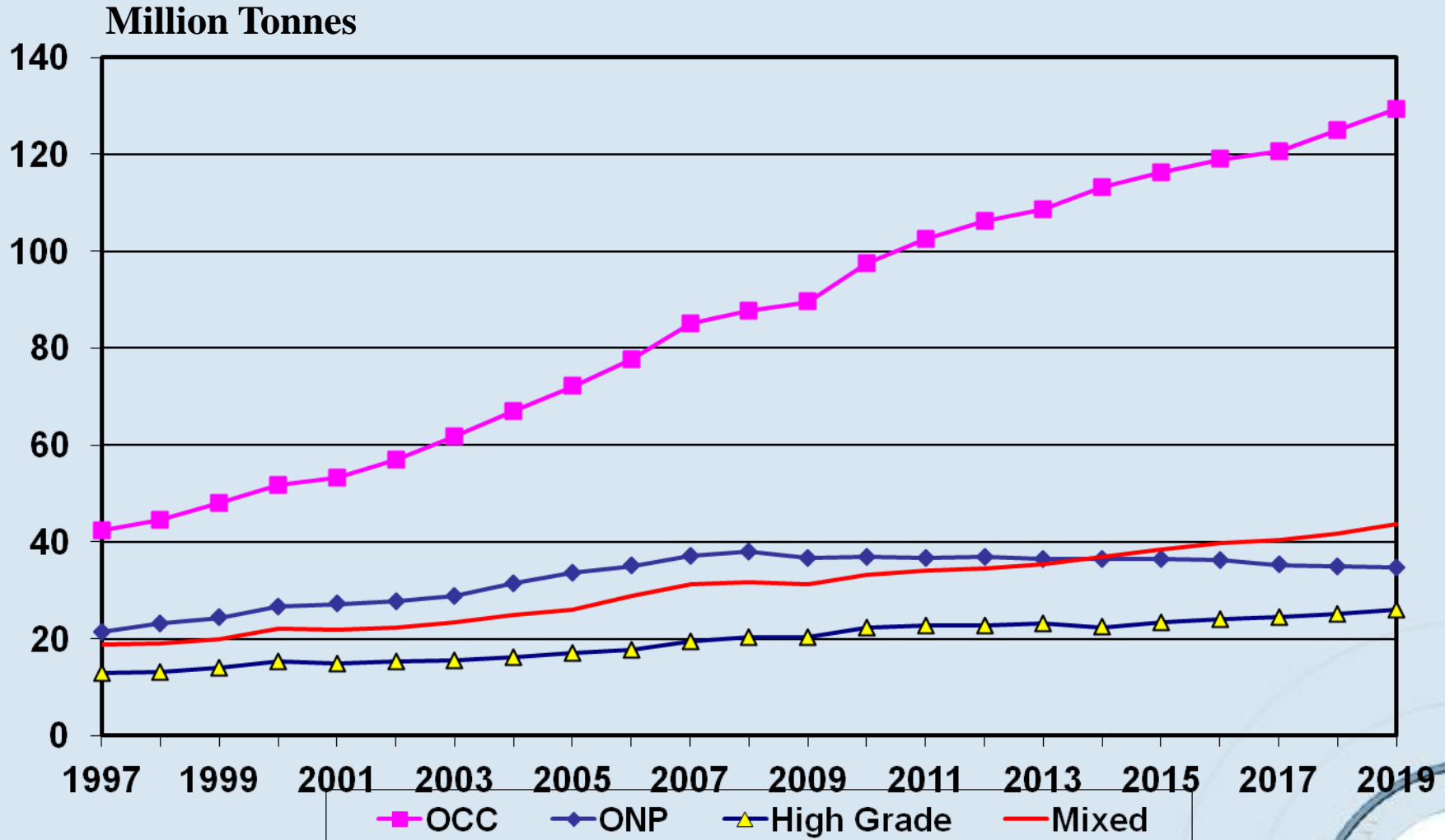
55% of the World's Paper and Board Production is Based on Recycled Fiber

2016 – 244 million tonnes

2008 – 208 million tonnes



# World Recovered Paper Demand by Major Grade

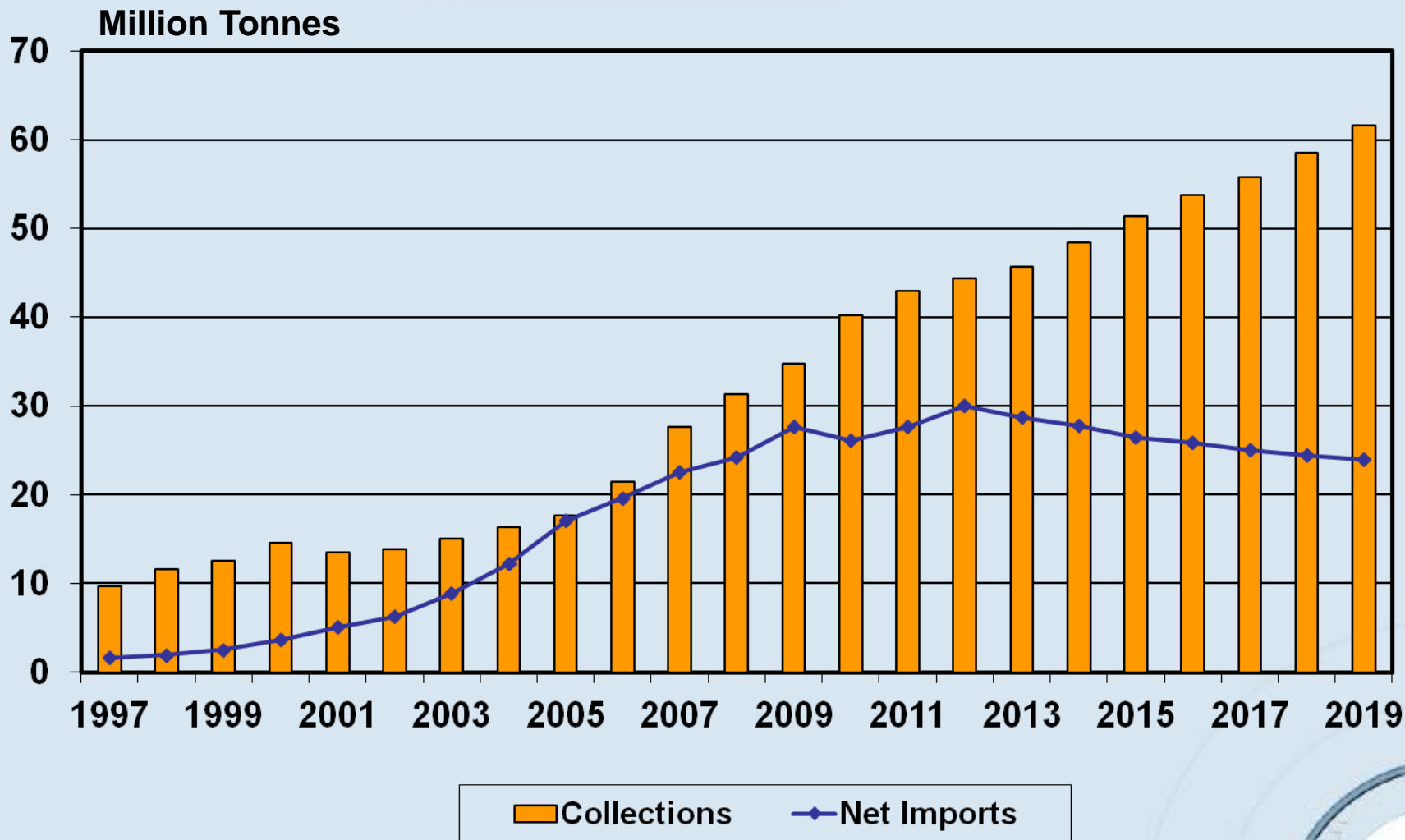


# Producing Paper & Board Using Recycled Fibers

- For the last several decades, recycled fiber has had a distinct cost advantage over virgin fibers for the production of newsprint, away from home tissue products, containerboard, and recycle paperboard. But not for printing/writing grades and high end packaging.
- Increasing recovered paper costs over the next ten years may change the cost advantage dynamic:
  - Higher commodity cycle costs
  - Lower quality recovered paper, shorter fibers and non-fiber contaminants - lower yields, higher processing costs
- Moderate cost of virgin pulps, especially short fiber bleached hardwood – primarily effects tissue and printing/writing papers
- OCC based paperboards have the best economics



# Chinese Domestic Collections and Net Imports of Recovered Paper



# China National Sword Program 2017 and Now the Threat of Mixed Paper Bans

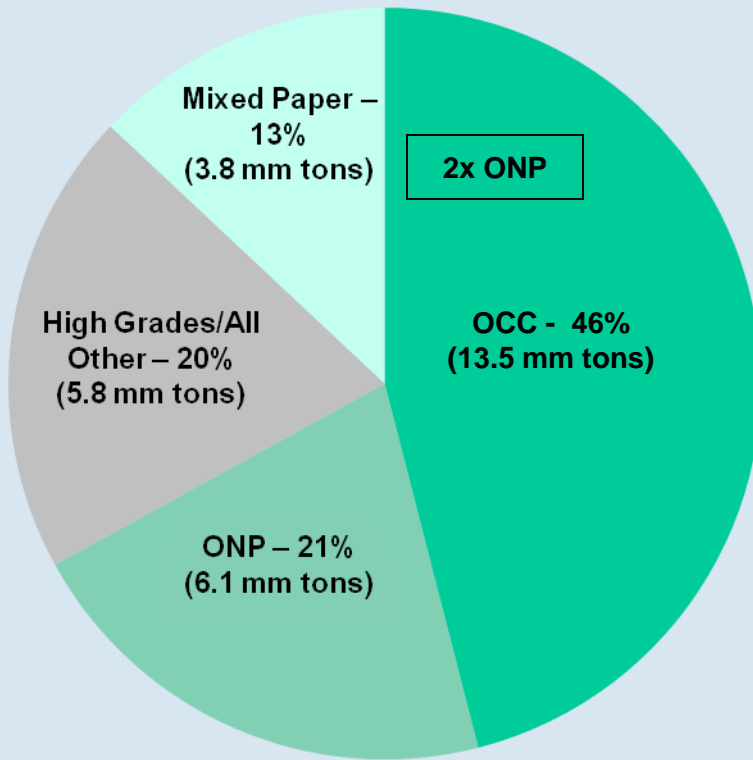
- **Stricter quality control on imported recyclables. March 1 – Nov. 30, 2017. A continuation/tightening of Green Fence**
- **Imported Mixed Paper and all RCP grades now under heavy scrutiny. Ban on imported Mixed Paper – scheduled to take place at the end of 2017. Definition of unsorted Mixed Paper is a key. Prohibitives level – 0.3% - unattainable?**
- **Potential to cause upheaval in China Paper industry and global recycling business. Over two and a half million tonnes/year of Mixed Paper are exported from the North America to China**
- **Current market chaos being caused by no renewals of RCP import licenses. Current price of domestic OCC in China over \$500/tonne**
- **China Customs Authorities using X-ray technology to inspect**
- **Chinese mills adopting automatic sophisticated RCP quality measuring systems – for OCC**
- **Why is China doing this?**





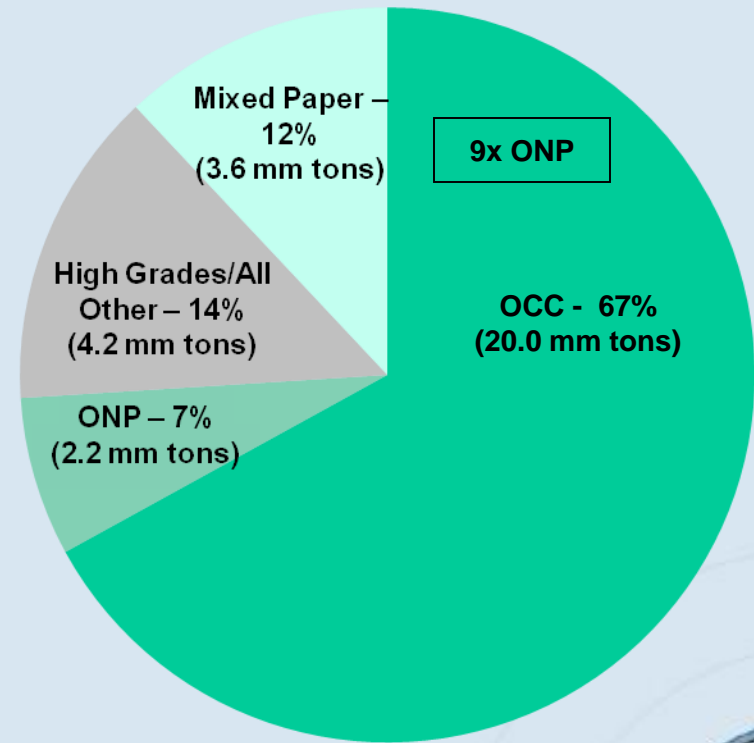
# The Change in North American RCP Consumption Over Time

1993



29.2 mm tons

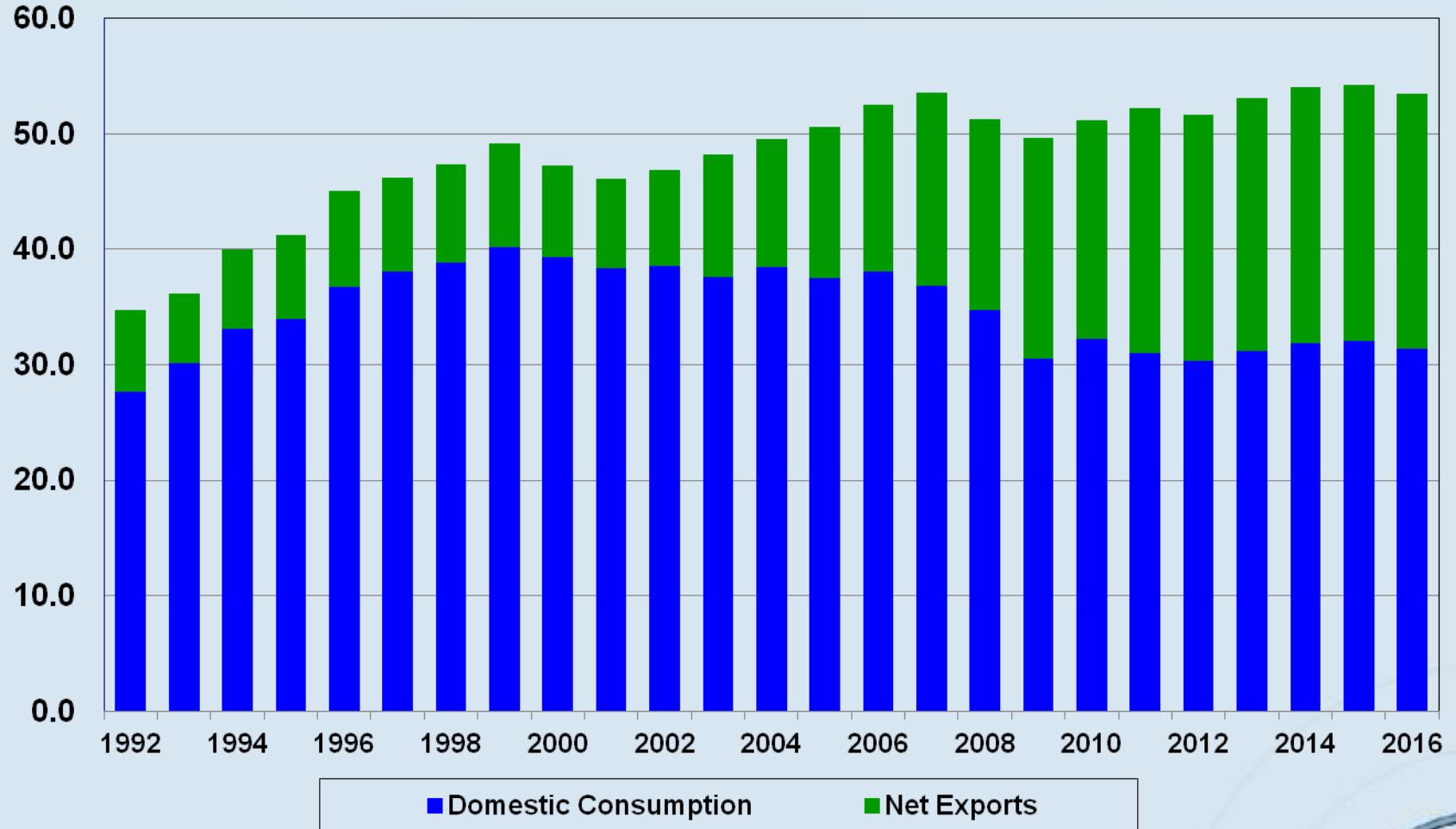
2016



30.0 mm tons



# North American Recovered Paper Collections (Million Tonnes)

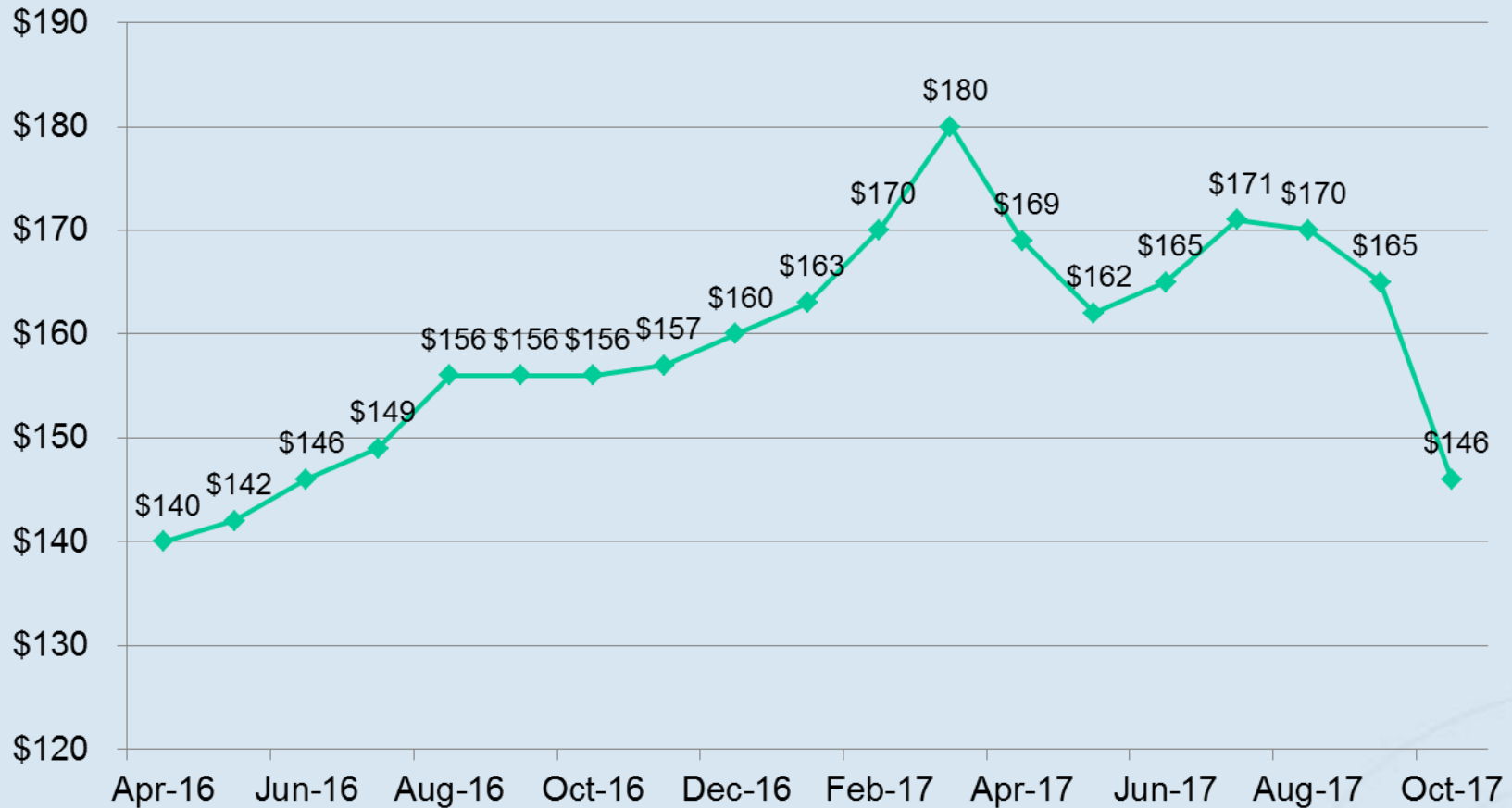


Export share: 1990: 24%, 2000: 26%, 2010: 39%, 2016: 32%



# Recovered Paper Price Ticker

(Courtesy of RISI, \$/Ton FOB seller's dock)

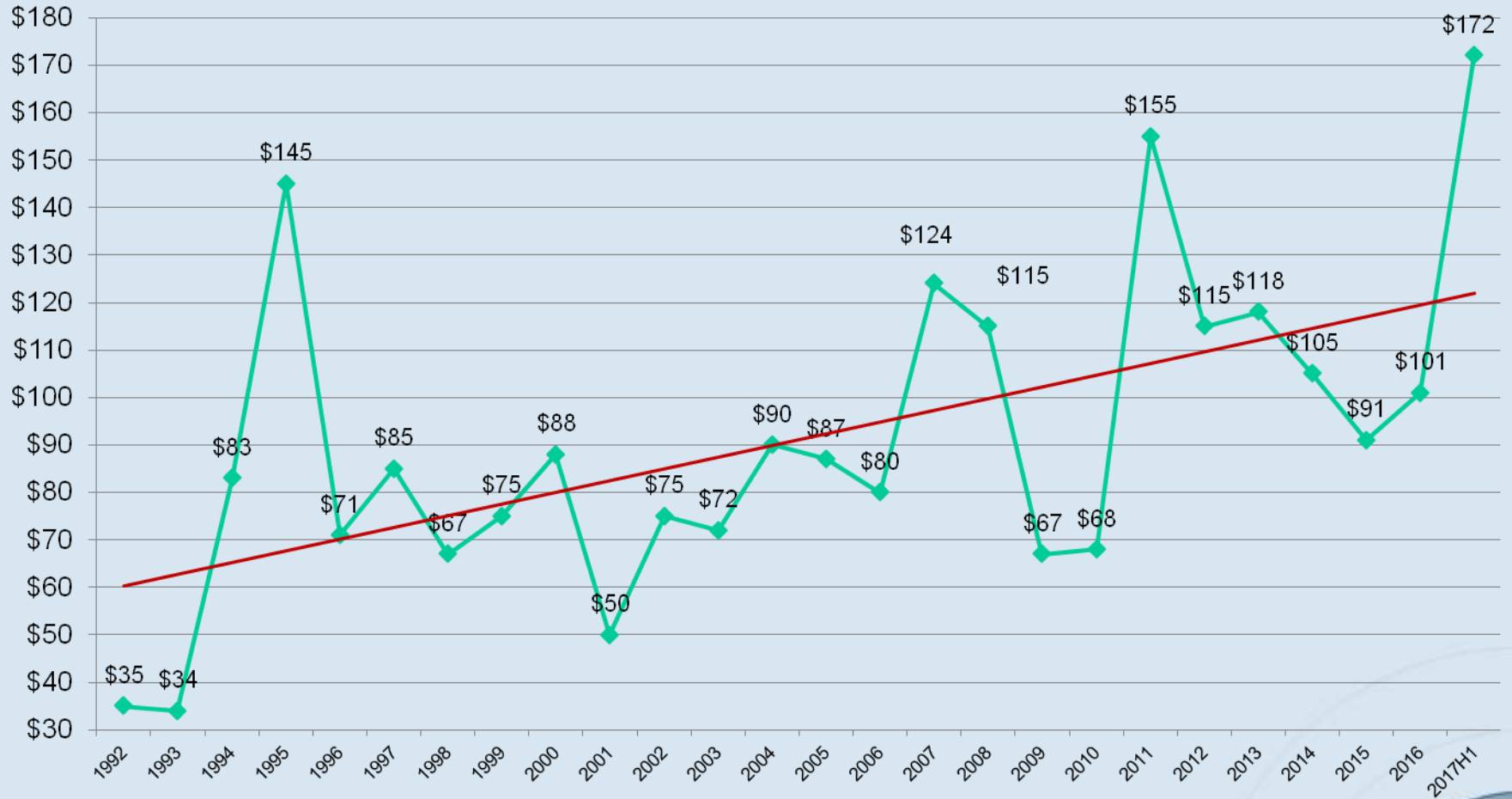


The RISI Ticker is the average from the combined average domestic mill prices for Mixed Paper, #8 ONP/SRPN, OCC, Hard White Env. Cuttings, SOP, and SWL



# Average Annual North American OCC Price

*(\$/Ton, Baled, FOB Generator's Dock)*



# Rising E-Commerce and Its Effect on Recycling & the OCC Market

- **Direct to home box shipments increasing dramatically**
- **Less OCC at distribution centers/retail physical store locations – very high recovery**
- **Shifting OCC to the residential recyclables stream**
- **More OCC coming into resi MRFs – sortation issues?**
- **Lower recovery from residences**
- **OCC in residential stream going into Mixed Paper**
- **Some early data suggests the OCC volumes in the residential paper stream are different in Canada versus the US**



# E-Commerce Directional View



## **Retail DC volume**

- **Clean segregated OCC**
- **High recovery rates**



## **Residential OCC volume shift**

- **OCC from single stream MRFs - quality**
- **Lower recovery rates**



## **Massive expected E-Commerce growth**

**Packaging solutions will continue to evolve**

**Sustainable image vital to customer's business**

**Today's view will be outdated rapidly**



# Thank You for Your Attention

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