

Current State of Paper Recovery and Recycling

GAA Environmental Workshop
Washington, D.C. – June 20, 2012



GAA Environmental Workshop
Washington, D.C. June 19-21, 2012



Agenda

- **Marketplace trends:**
 - Paper recovery
 - Sources and uses of recovered fiber
 - Consumption of recovered fiber in paper production
 - Quality and pricing of ONP
- **Impacts on North American paper mills**
- **Strategic considerations for manufacturing**
- **Conclusion**



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About Resolute Forest Products

- **Global Producer of Paper and Wood Products**
 - Revenue in 2011: \$4.76 Billion
 - Has third-party certified 100% of its managed woodlands
- **Facilities in the United States, Canada, and South Korea**
 - 21 Pulp and Paper Mills
 - 23 Wood Product Facilities
- **Product Segments**
 - Commercial Printing Papers (2.1 Million Metric Tons Annually)
 - Top Quality Newsprint (3.1 Million Metric Tons Annually)
 - Market Pulp (1.1 Million Metric Tons Annually)
 - Lumber and Other Wood Products (2.7 Billion Board Feet Annually)
- **Recycling**
 - In 2011, we collected or purchased 1.2 million metric tons of recovered paper and consumed 0.9 million metric tons in our production processes
 - We have operations in 19 cities in the U.S. and Canada
- **75% Ownership in Fibrek**
 - Operates 3 pulp mills with an annual capacity of 760,000 tons



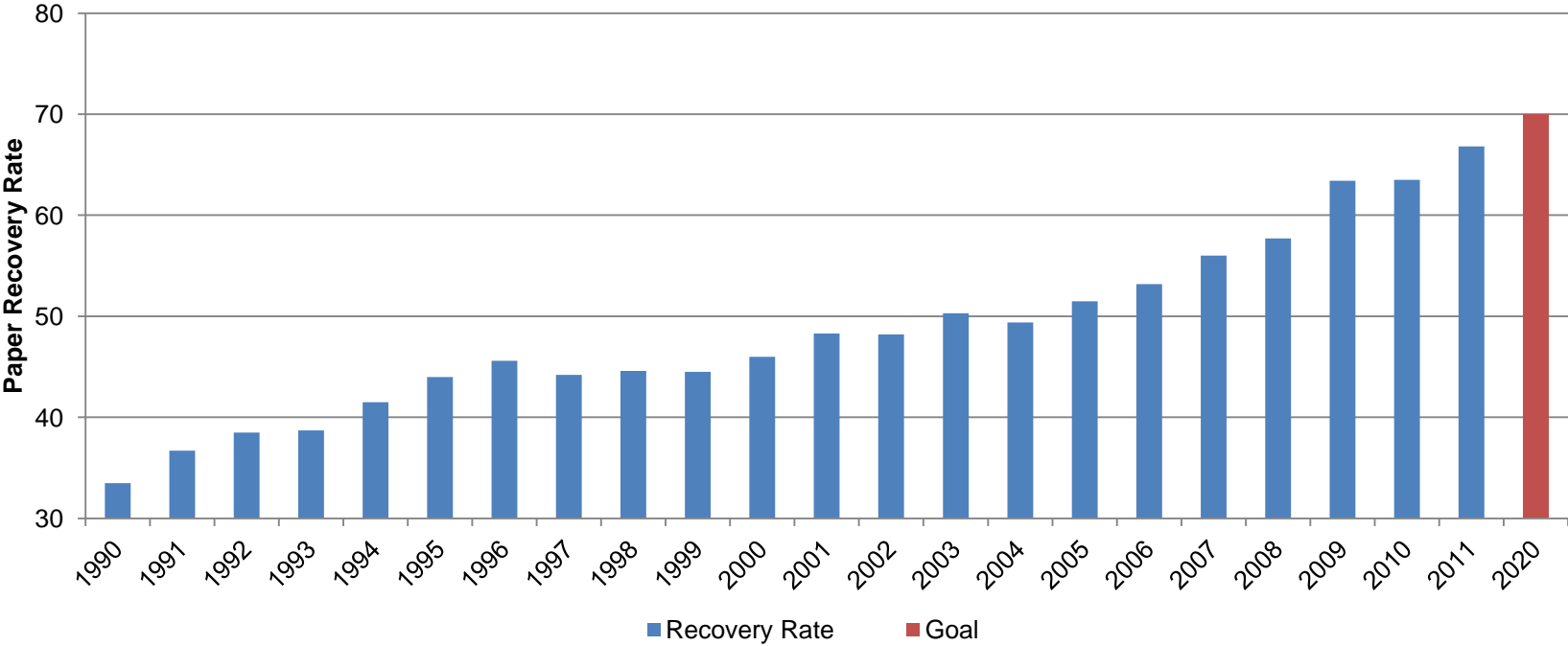
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Increase in Paper Recovered for Recycling (1990-2011)



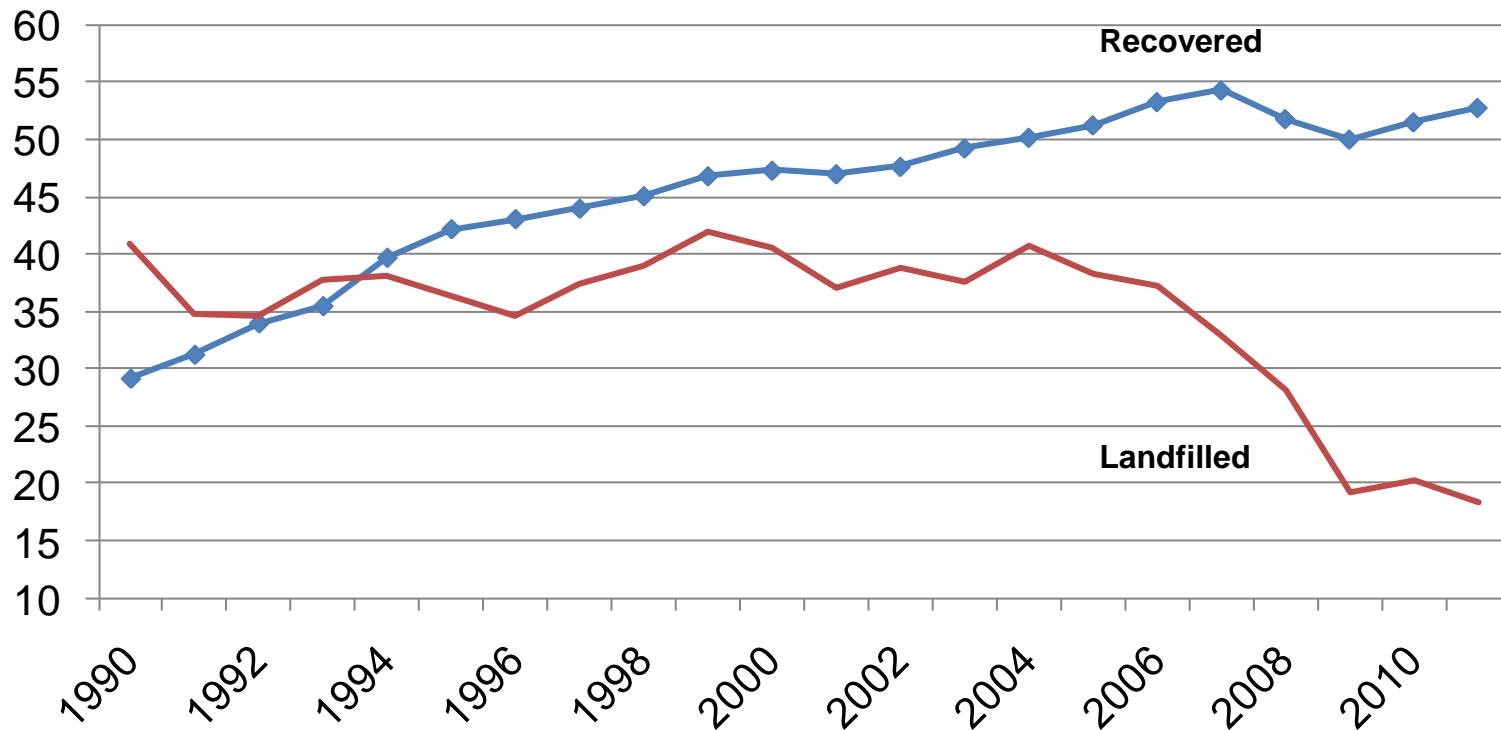
U.S. Paper Recovery Rate



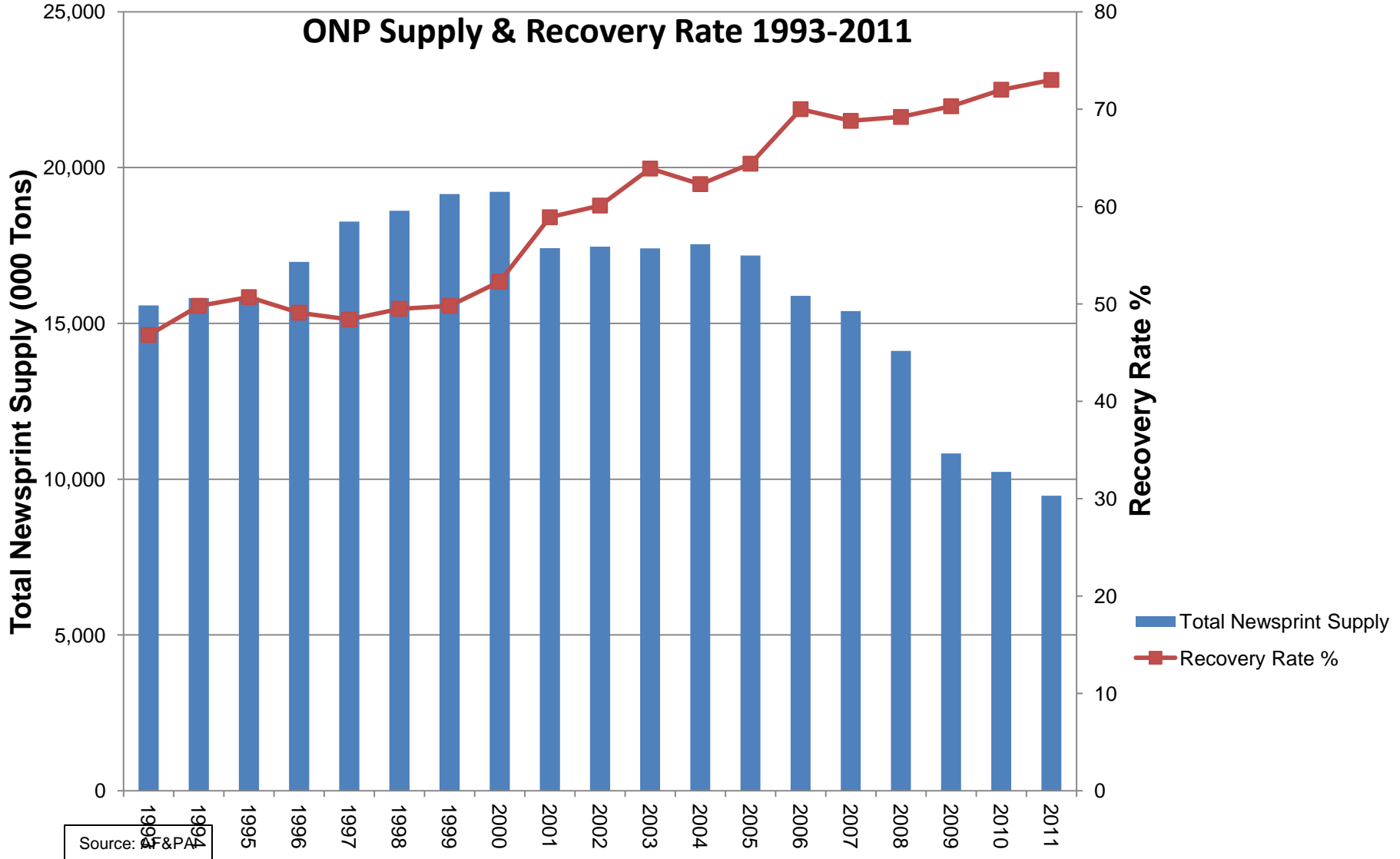
Source: AF&PA

Reduction in U.S. Paper Landfilled (1990-2011)

Million Tons

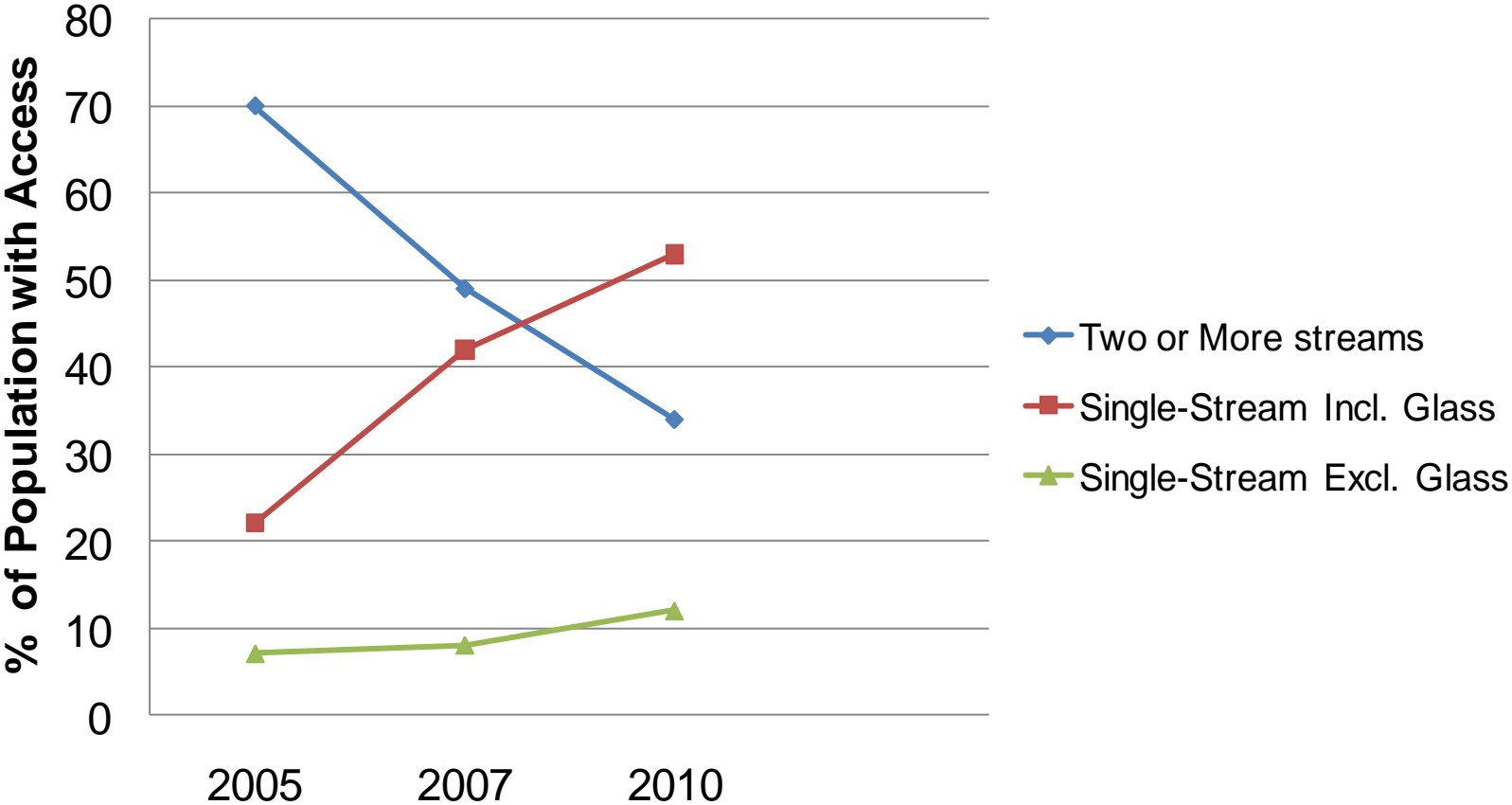


Trends in ONP Supply & Recovery Rate



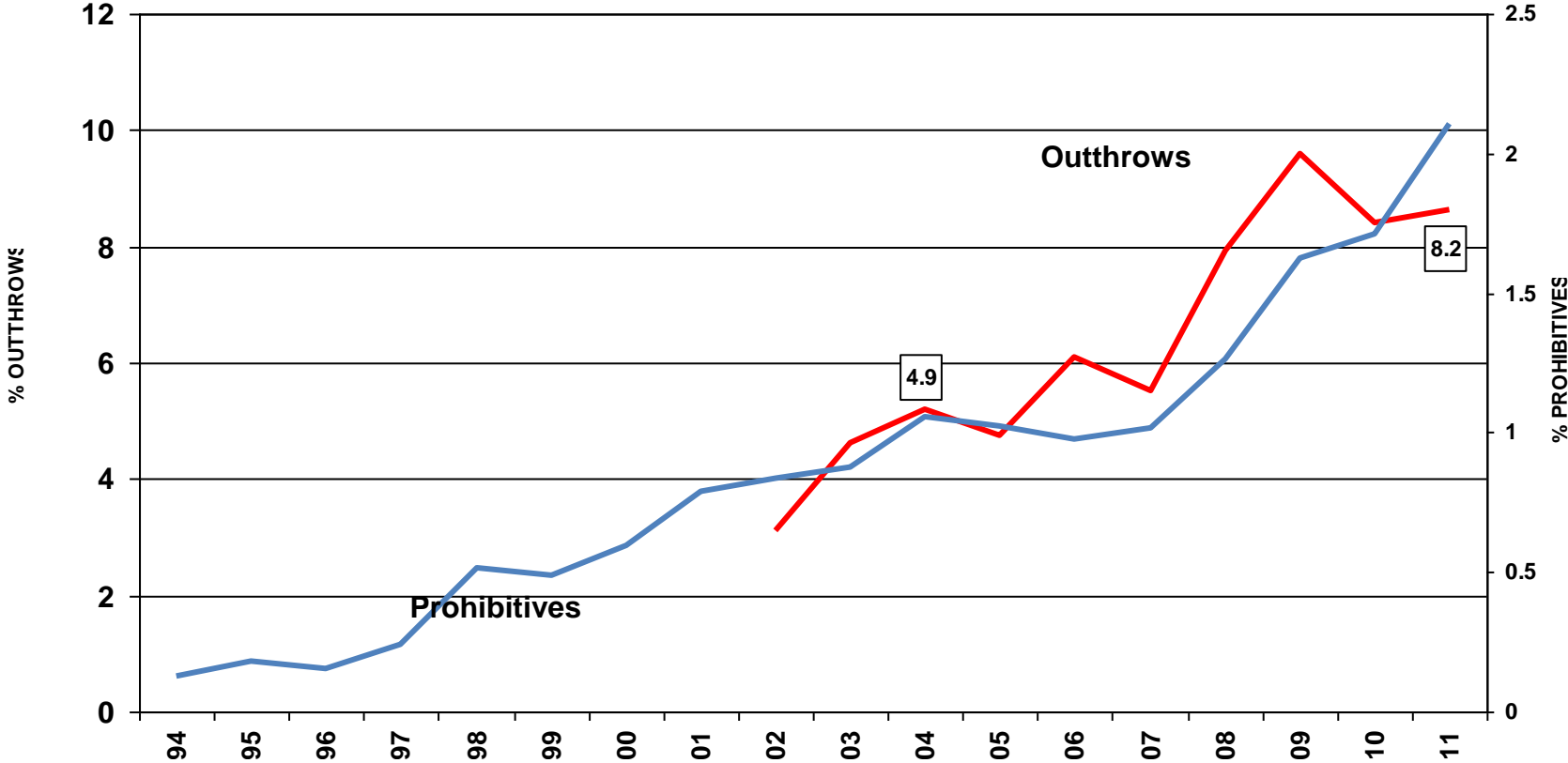
Trends in Paper Collection Techniques

Paper/Paperboard Collection Techniques (% of U.S. Population)



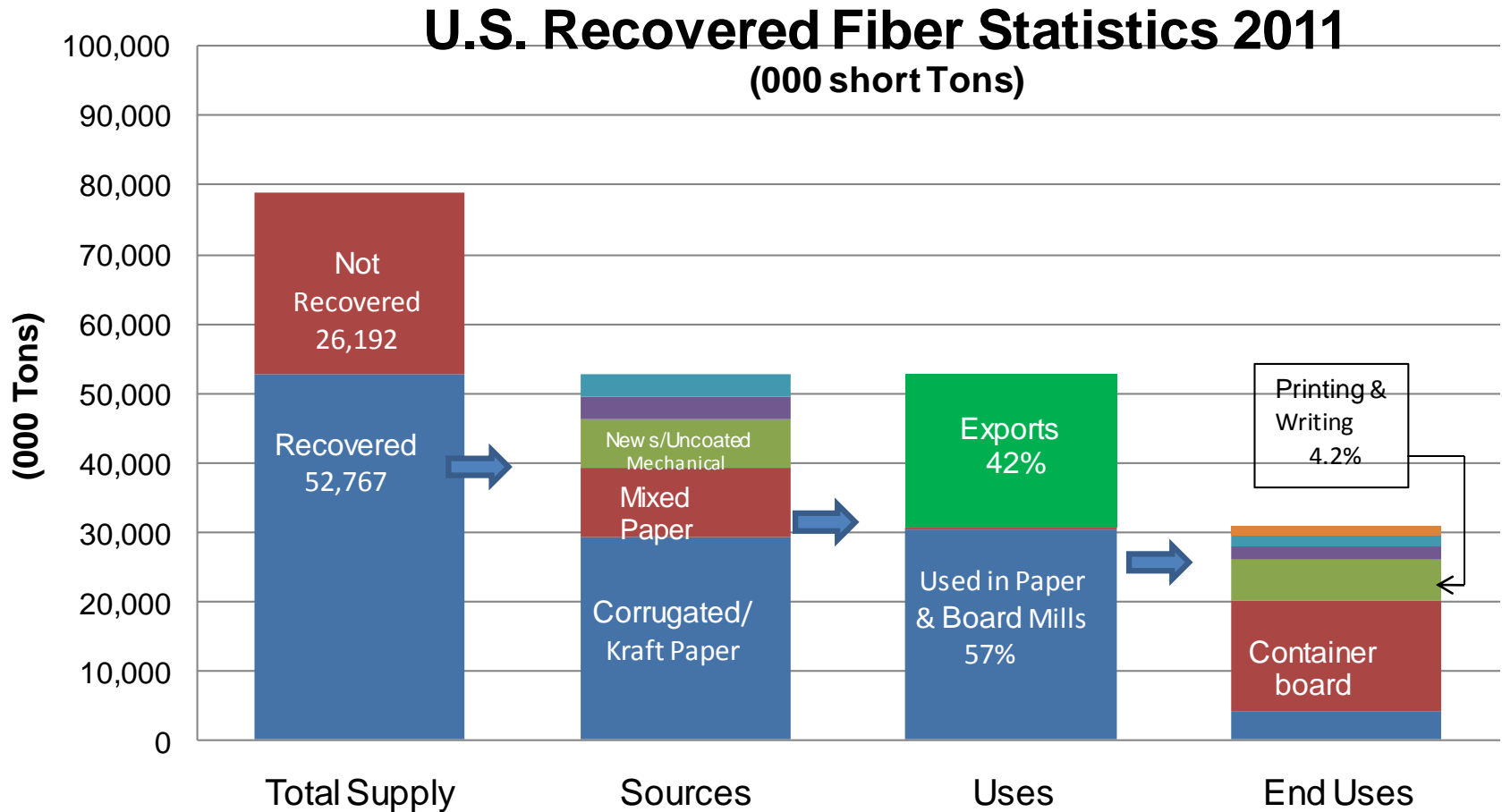
Source: AF&PA

Trend in Outthrows and Prohibitives in ONP



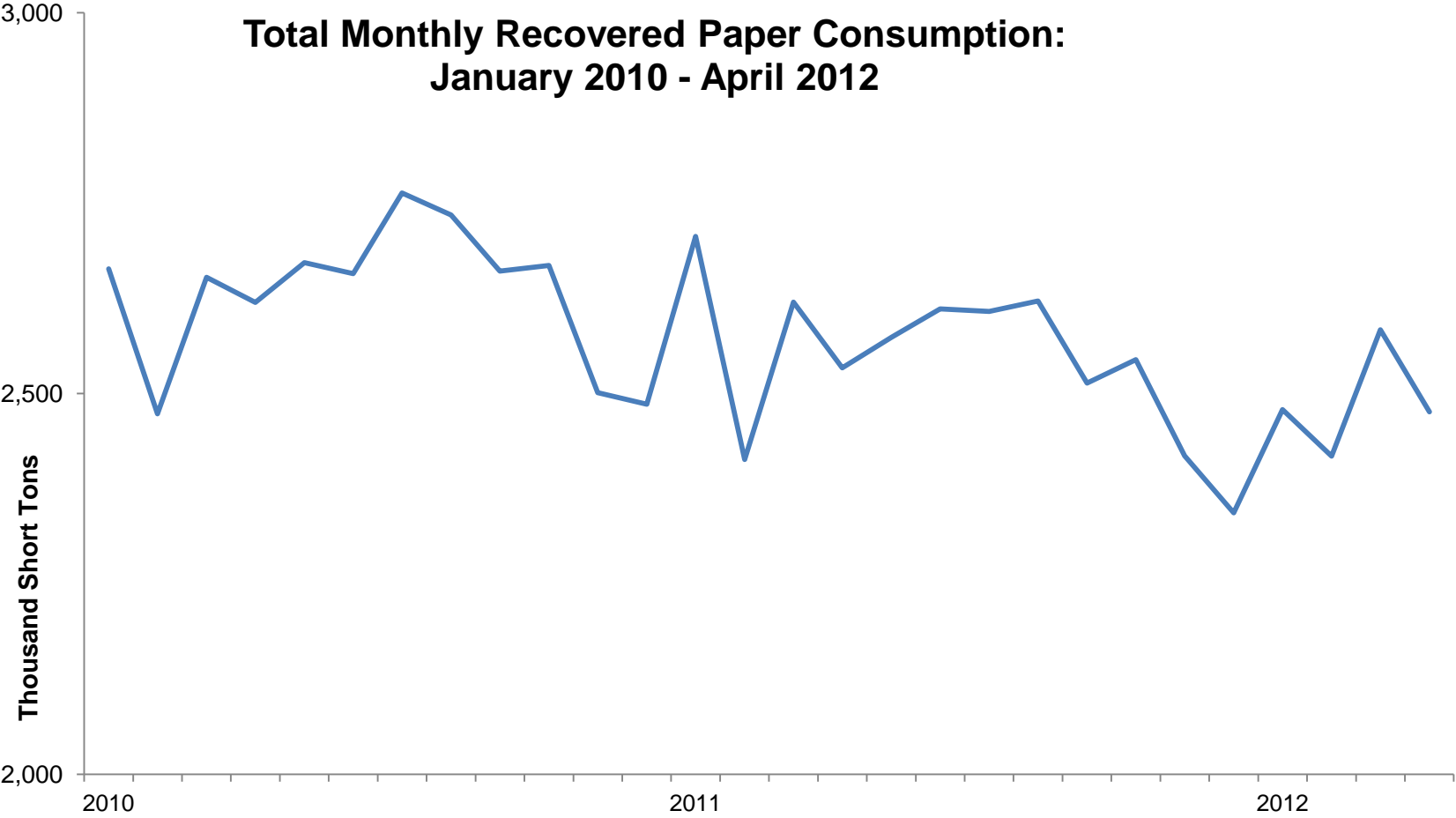
Source: Resolute Forest Products, Thorold Division

Sources & Uses of Recovered Fiber



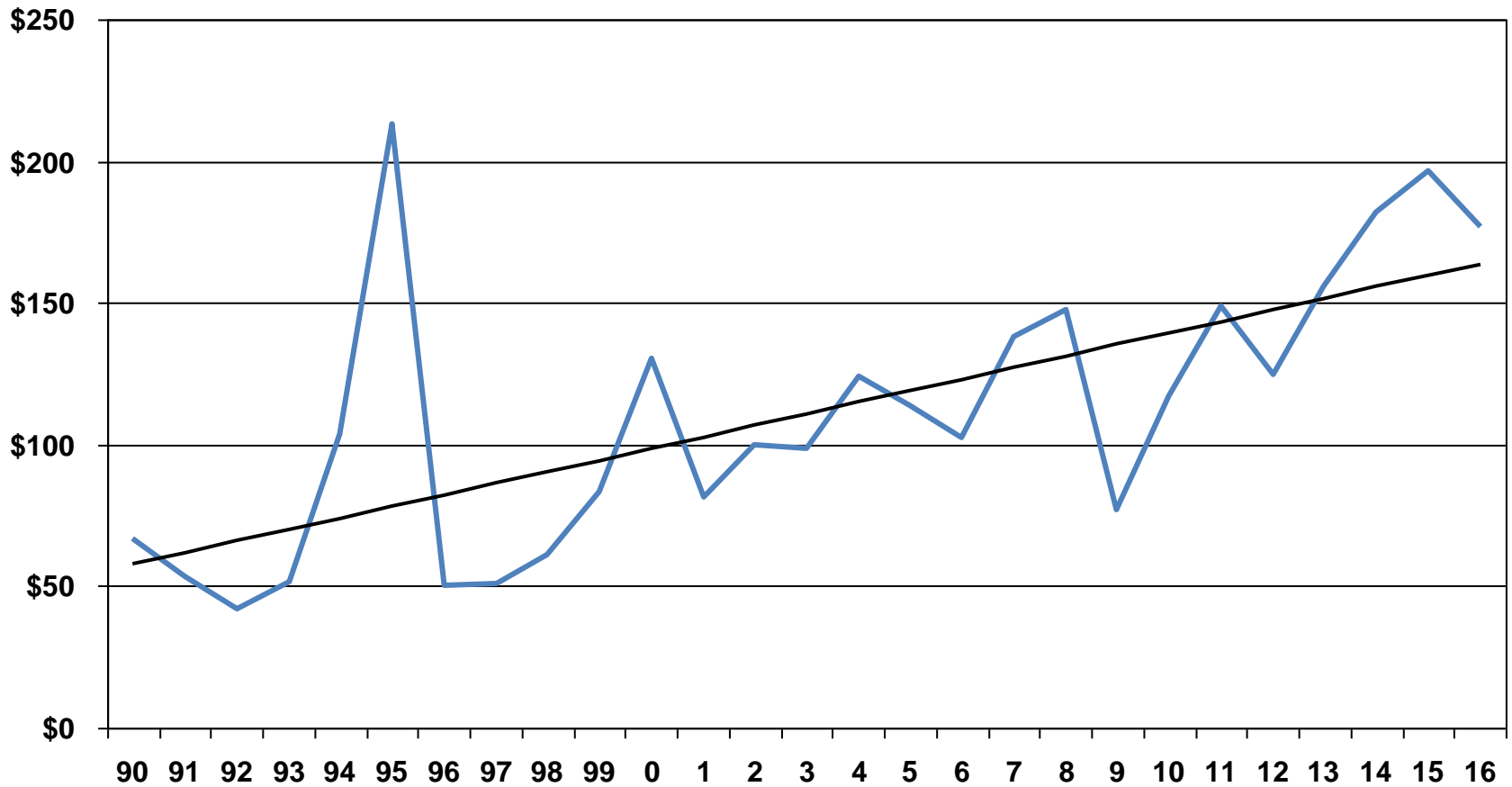
Source: AF&PA

Trend in U.S. Recovered Fiber Consumption in Paper Manufacturing



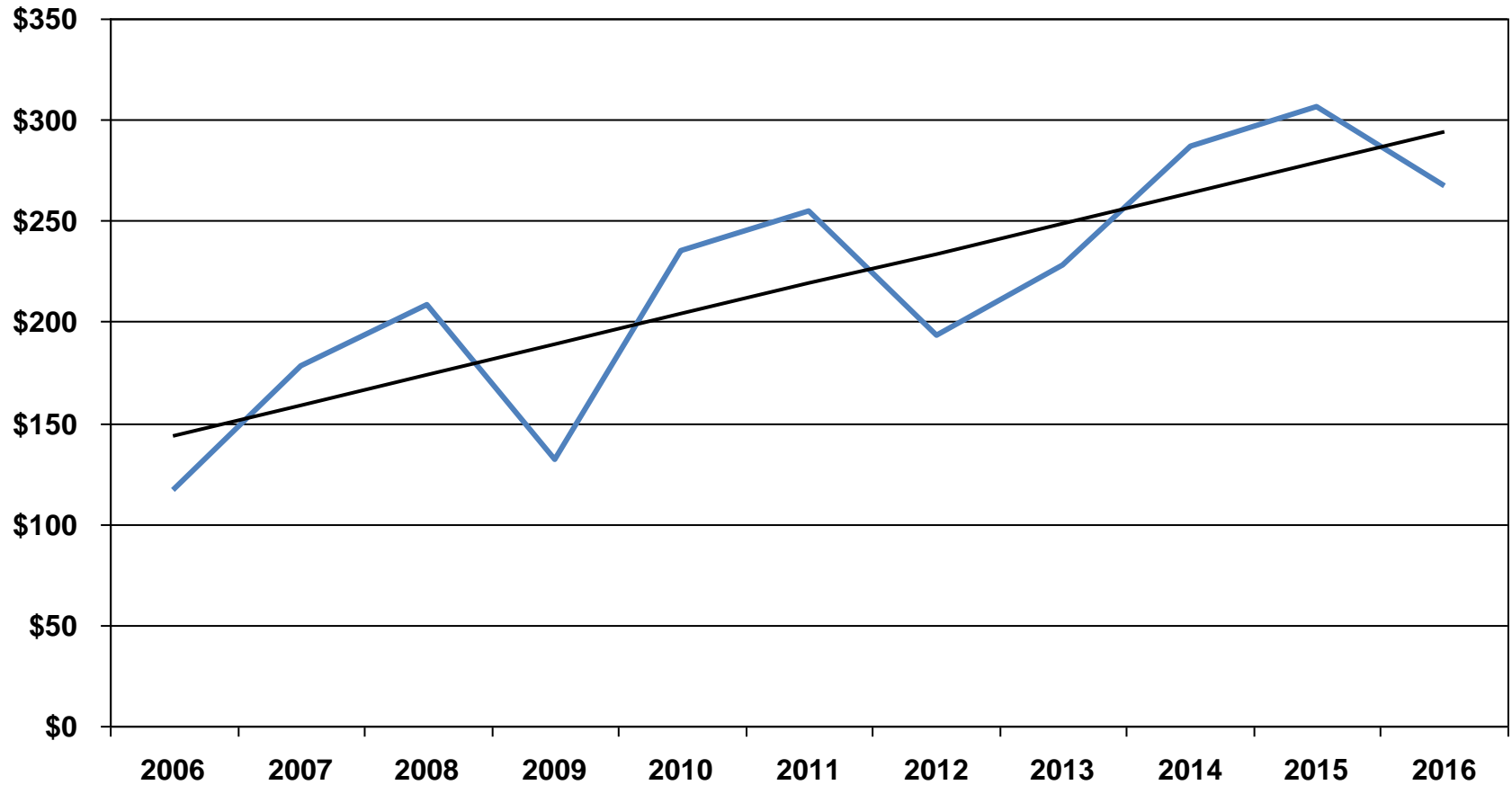
Source: AF&PA

Historical (and Forecasted) Pricing for No. 8 Special News



Source: RISI World Pulp and Recovered Paper Forecast, April 2012

Historical (and Forecasted) Pricing for No. 37 SOP



Source: RISI World Pulp and Recovered Paper Forecast, April 2012

Focus on Newsprint Producers

Given All of The Trends, what is the Impact to North American Paper Mills?

- **Recovered paper quality continues to deteriorate**
 - Outthrows, prohibitives and their relationship to single stream recycling
- **ONP required to produce high quality newsprint is disappearing**
 - Where is it going?
- **Price volatility due to global market forces and supply constraints seriously impacts profitability**
 - Long term pricing trend
- **North American ONP demand continues to fall as a result**



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What is the Value of Recovered Fiber in a Sheet of Paper?

- **High Cost of Fiber**
 - Virgin wood fiber cost less,
 - Deteriorating recovered fiber quality adds to process variability and cost
- **Hard to Get a Premium**
 - The market is over supplied
- **State Mandated Content**
 - Escape clauses based on cost
- **End User Community**
 - Starting to understand this isn't the only or the best solution
 - Greenhouse gas emissions becoming bigger determinant
 - Fiber certification playing an increasing role



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Conclusion

- **Demand in North America for ONP will continue to fall based on:**
 - Deteriorating quality and rising price,
 - Availability of less expensive wood fiber,
 - Inability of producers to recover additional costs,
 - Changing attitudes of the end user community, and
 - Reduction in the overall use of Graphic Papers



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Thank You

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