

# ***US PNW Pulp Mill Sector***

**MAPPING THE COURSE**

VANCOUVER, WASHINGTON

JANUARY 24, 2019

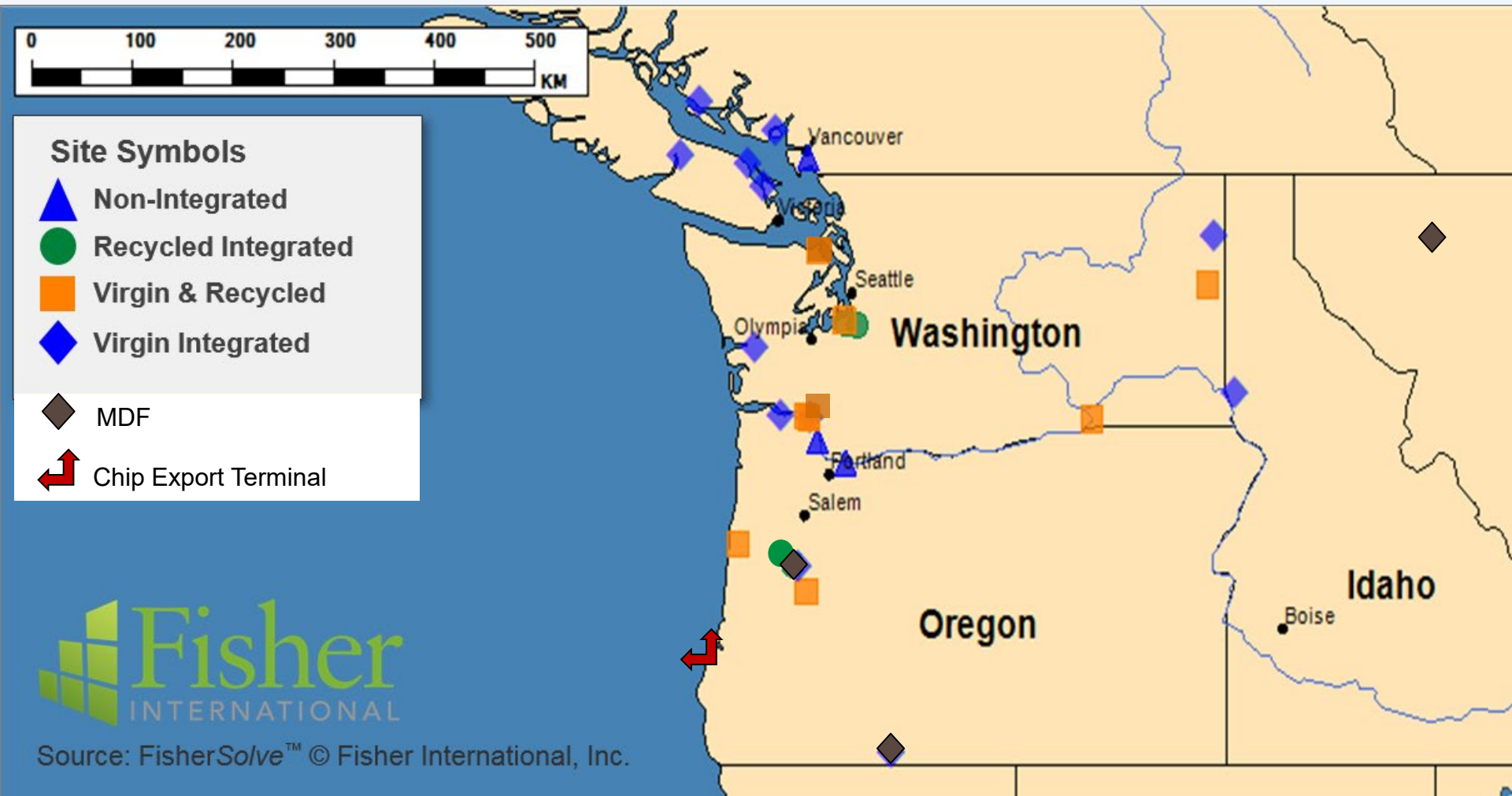
Larry Davis

**COSMO**  
SPECIALTY FIBERS INC.

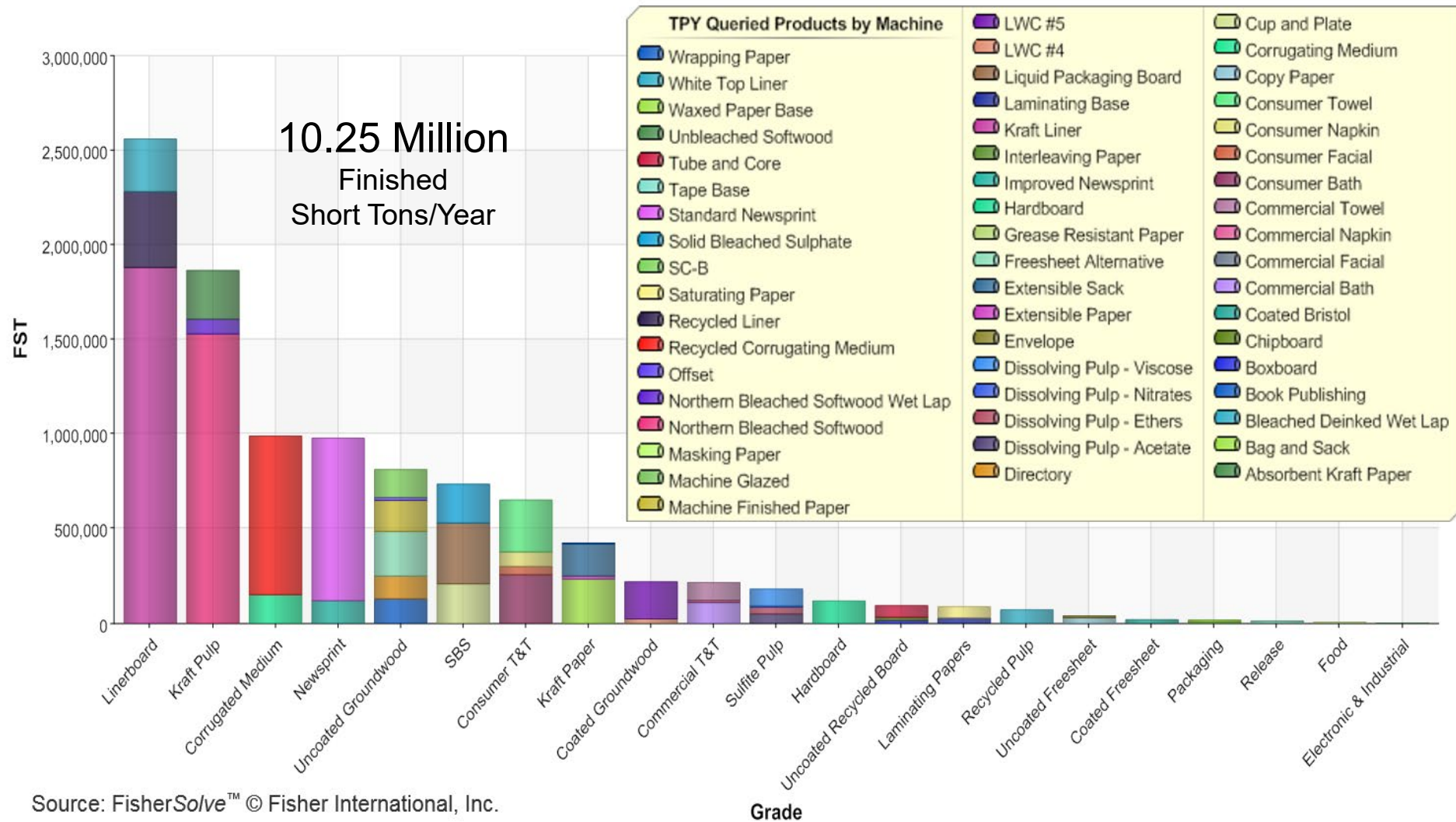
# Topics Covered

- PNW Pulp & Paper Products
- Demand-Side Drivers and Issues
  - Industry health
  - Trade disputes
  - Consolidation
- Supply-Side Fiber Sourcing Drivers and Issues
  - Lower timber harvest
  - Supply deficits in BC and China
  - Recycled fiber
- View of 2019
- Epilogue—What do bison, timber harvest, and climate change have in common?

# US PNW & Coastal BC Pulp & Paper Mills (and MDF plants)

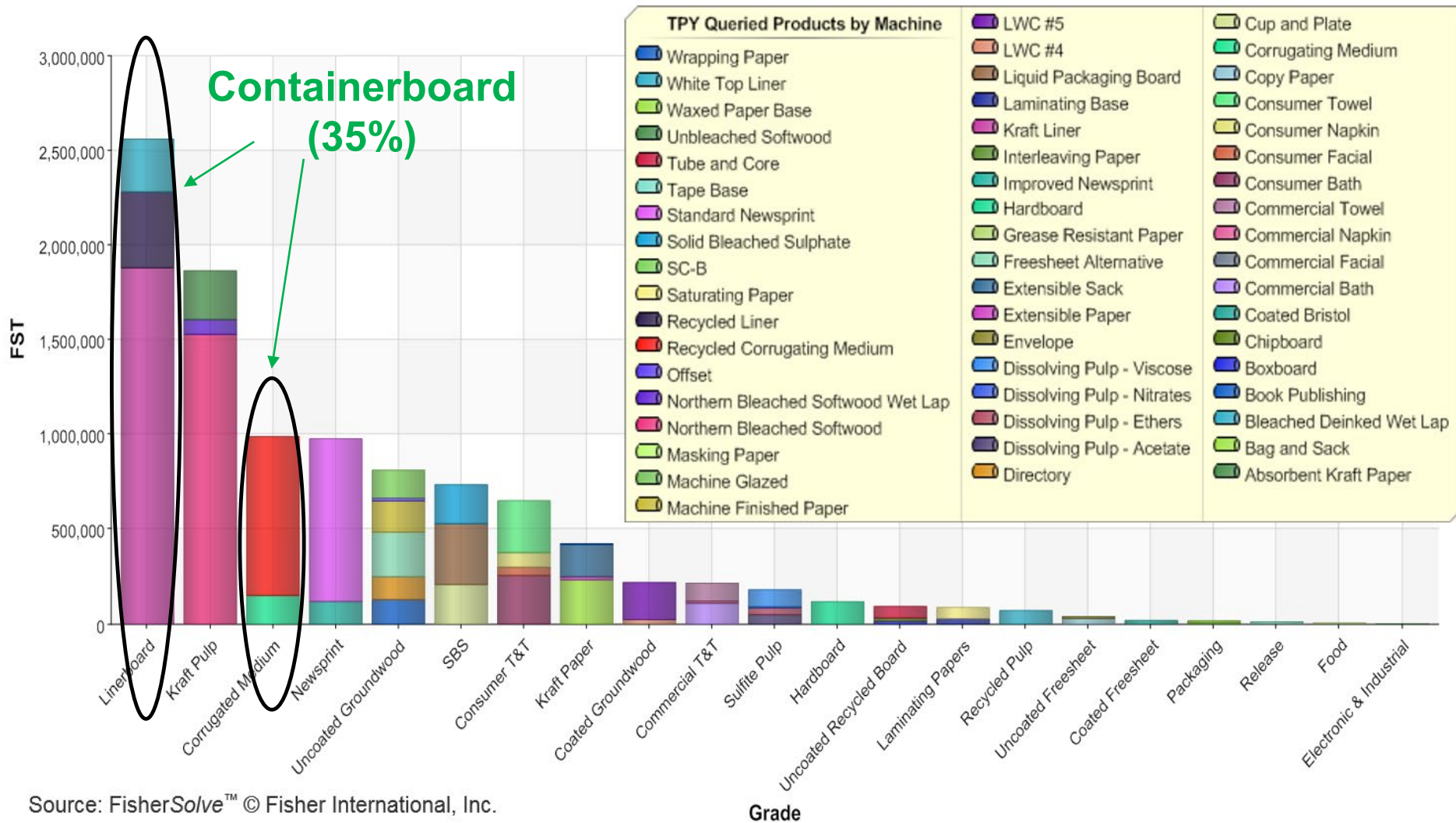


# US PNW & Coastal BC Pulp & Paper Grades

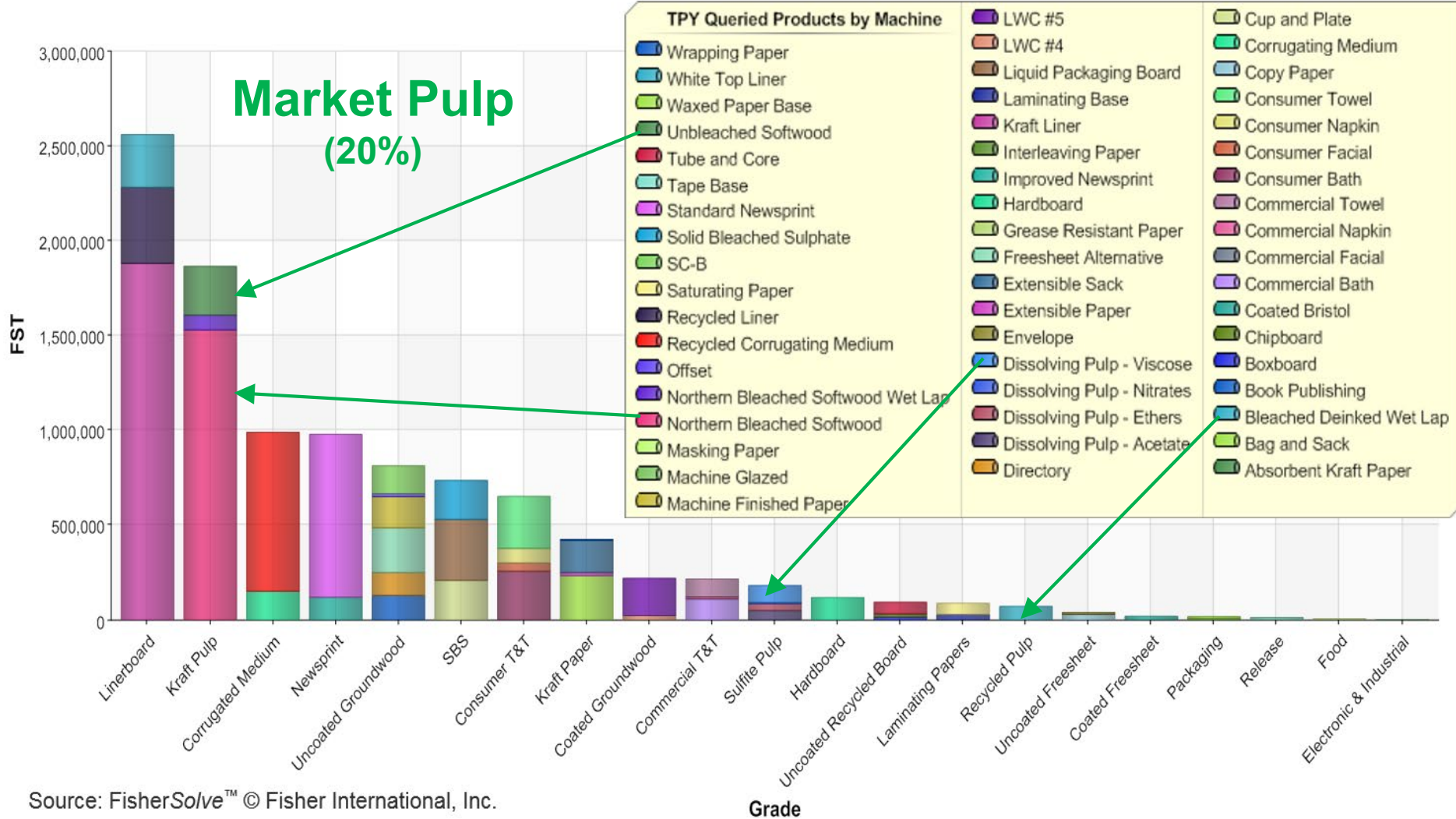




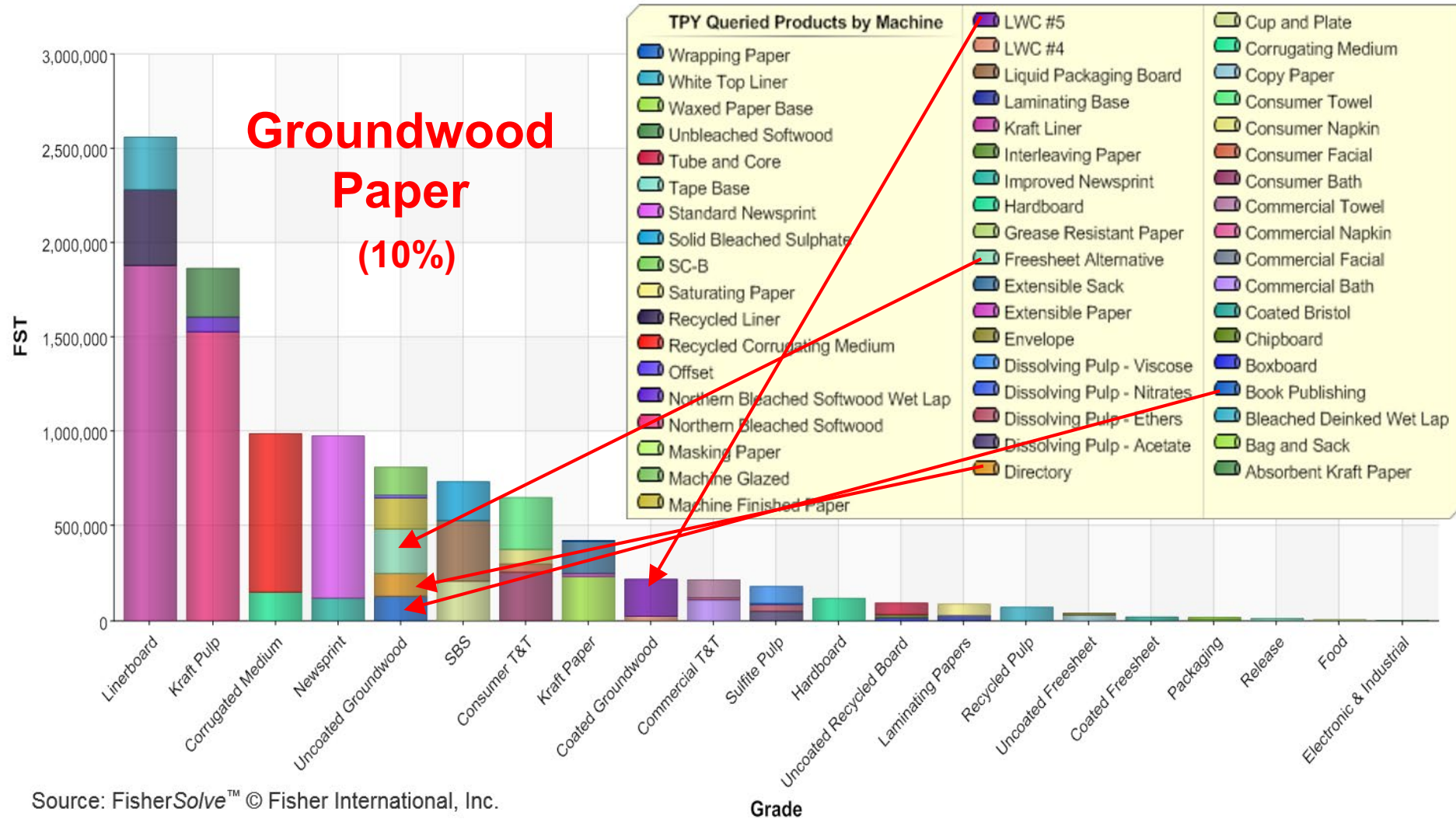
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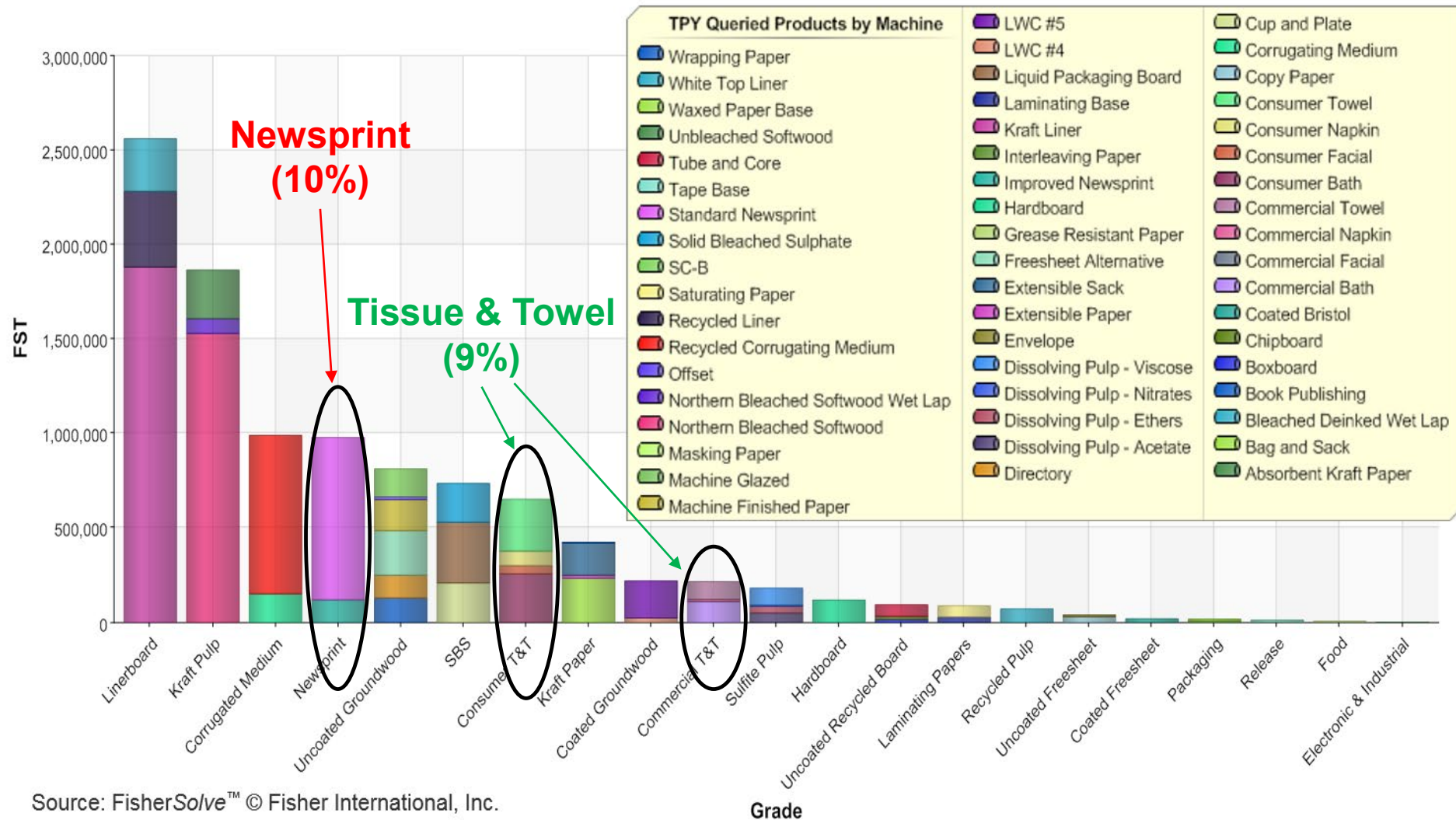


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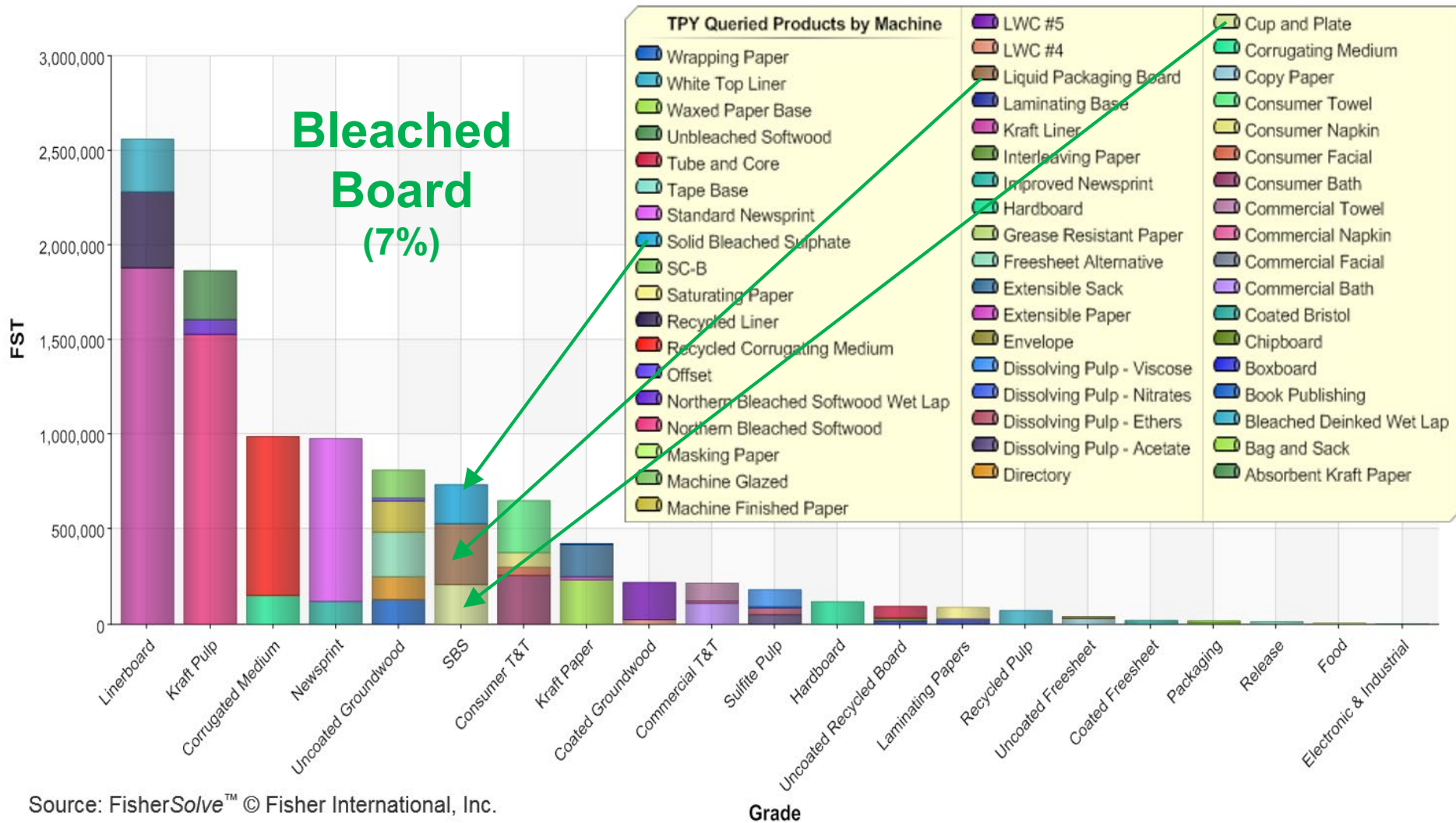


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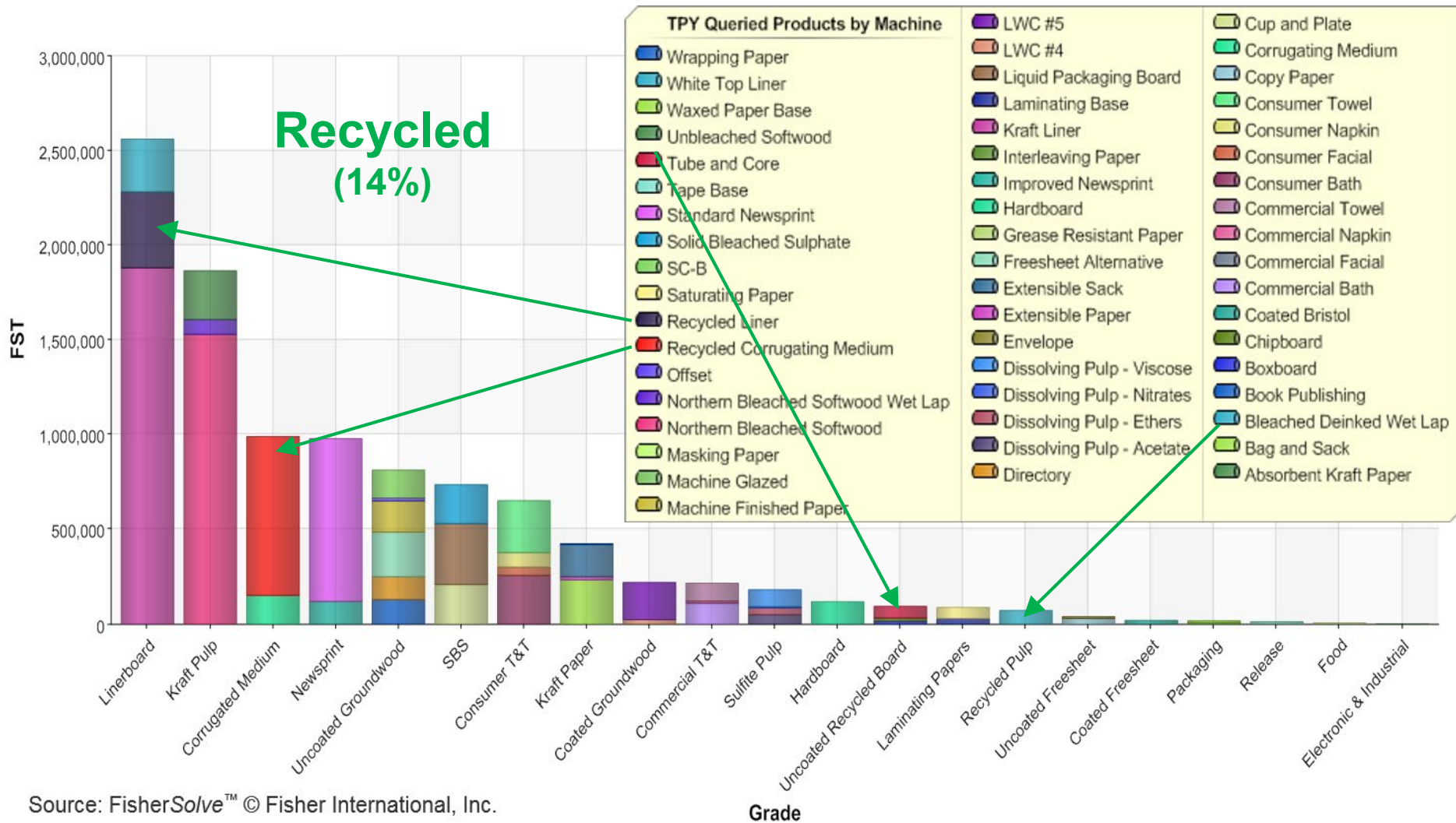


# US PNW & Coastal BC Pulp & Paper Grades



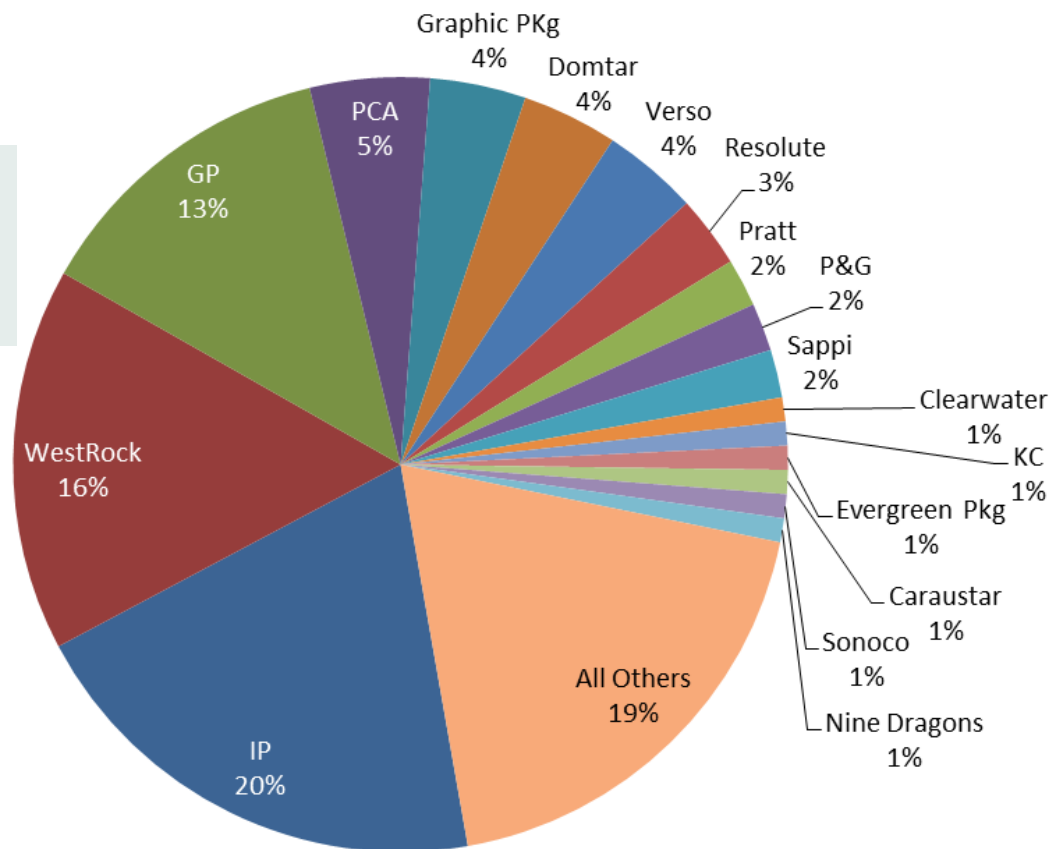
Source: FisherSolve™ © Fisher International, Inc.

# US PNW & Coastal BC Pulp & Paper Grades



# US Paper Manufacturers by Market Share

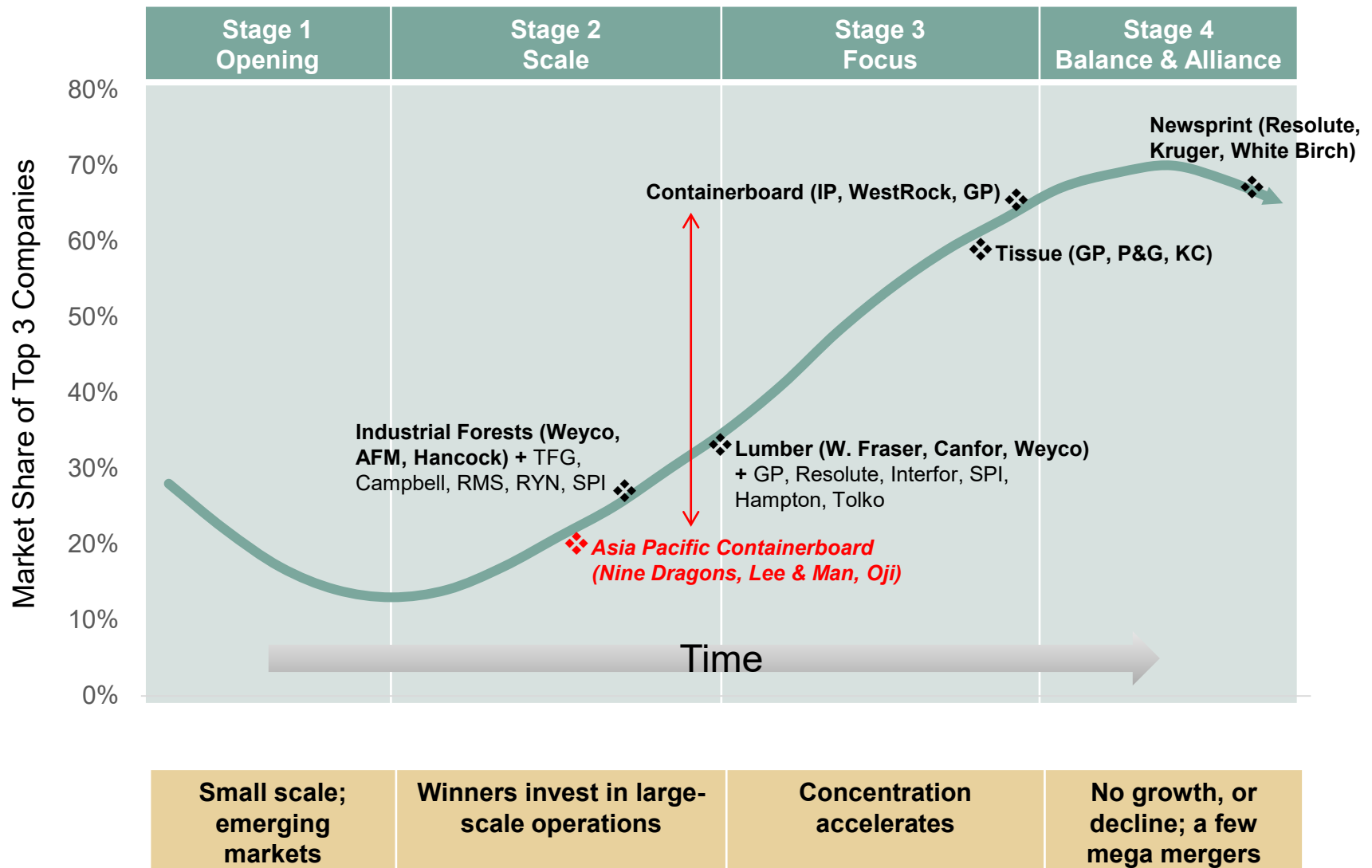
Over half of the 12 pulp & paper mills in the US PNW are owned by the 4 largest paper producers in the US



Source: FisherSolve™ © Fisher International, Inc.

# North America Industry Consolidation

## (and Asia Pacific Comparison)



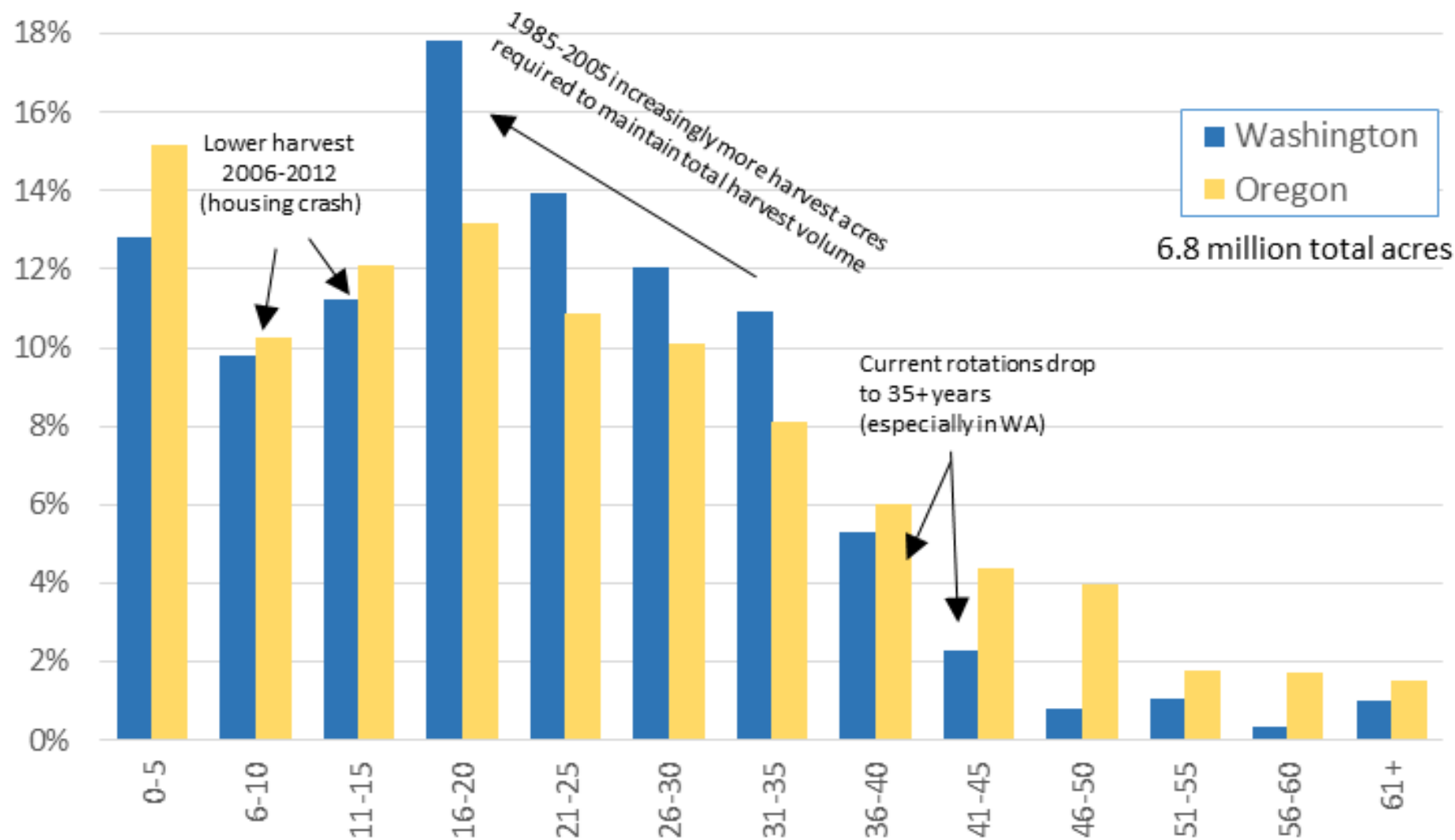


# Unique Challenges of PNW Fiber Procurement

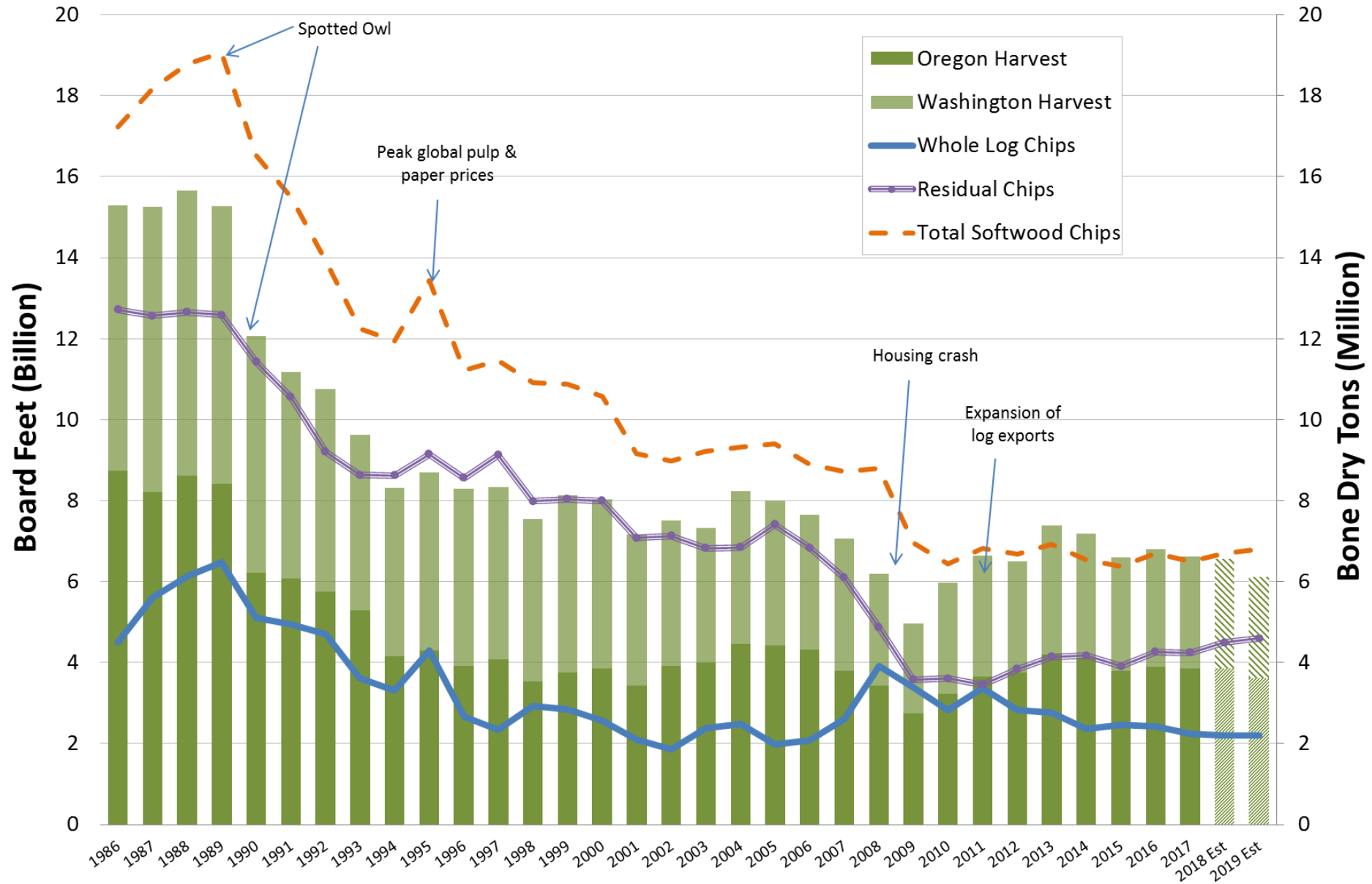
PNW chip prices are hypersensitive to changes in both supply and demand, due to:

- Producers of our raw material would prefer to reduce (if not eliminate) the residual chips and pulp logs that we depend upon
  - Improving sawmill and veneer plant efficiency reduces residuals
  - Landowners manage toward the significant step-up in value from pulpwood to sawlogs
- Residual chip supply often moves independently from chip demand
- Shift to ~~more~~ all unrelated-party chip transactions—few integrated forest products companies
- Export chip volumes can vary significantly over time and accentuate both up and down cycles

# Age Class Distribution on Planted Private Timberland in Western WA and OR

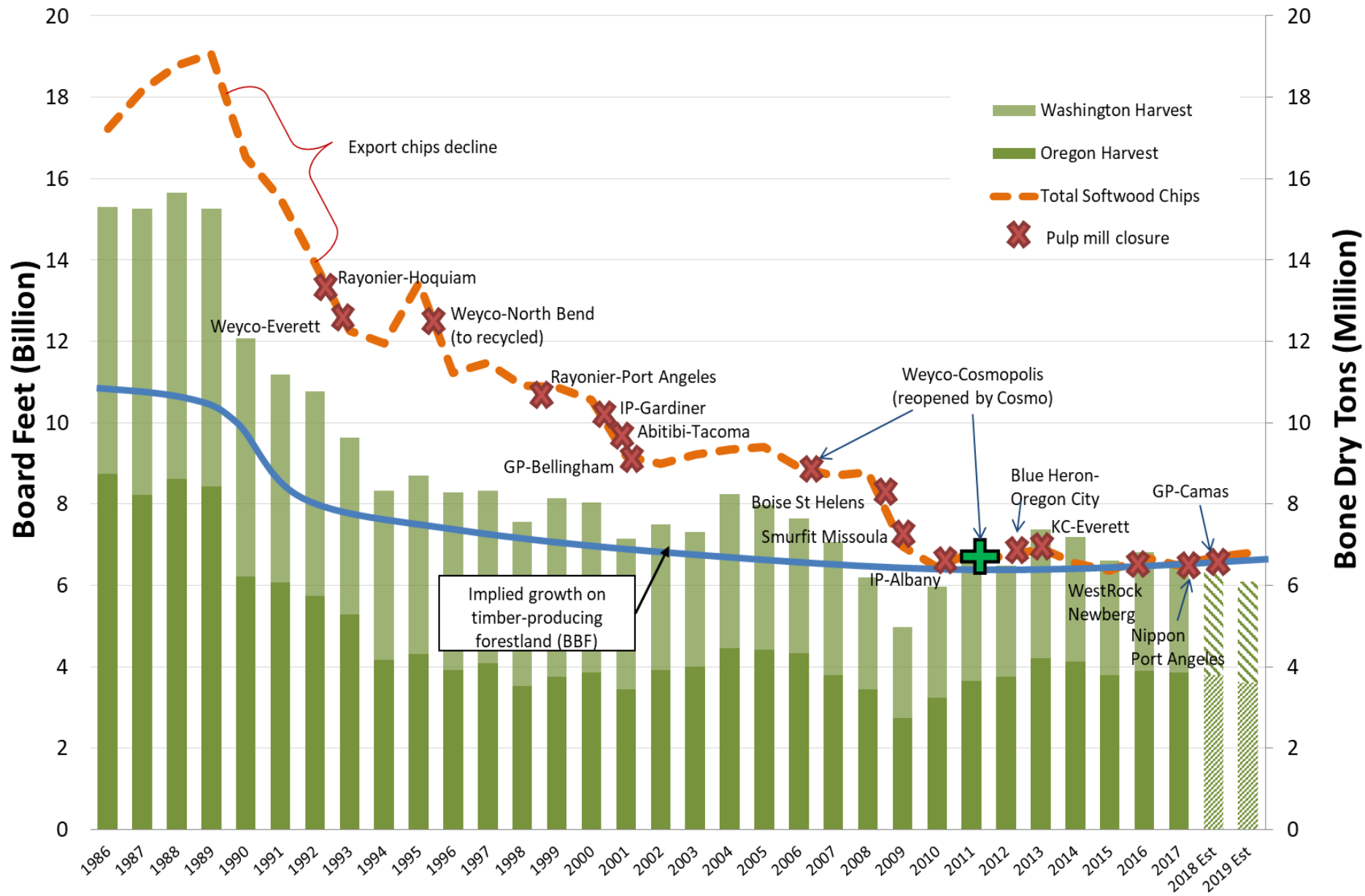


# Total Washington & Oregon Timber Harvest (BBF) and Softwood Chip Production (MBDT)



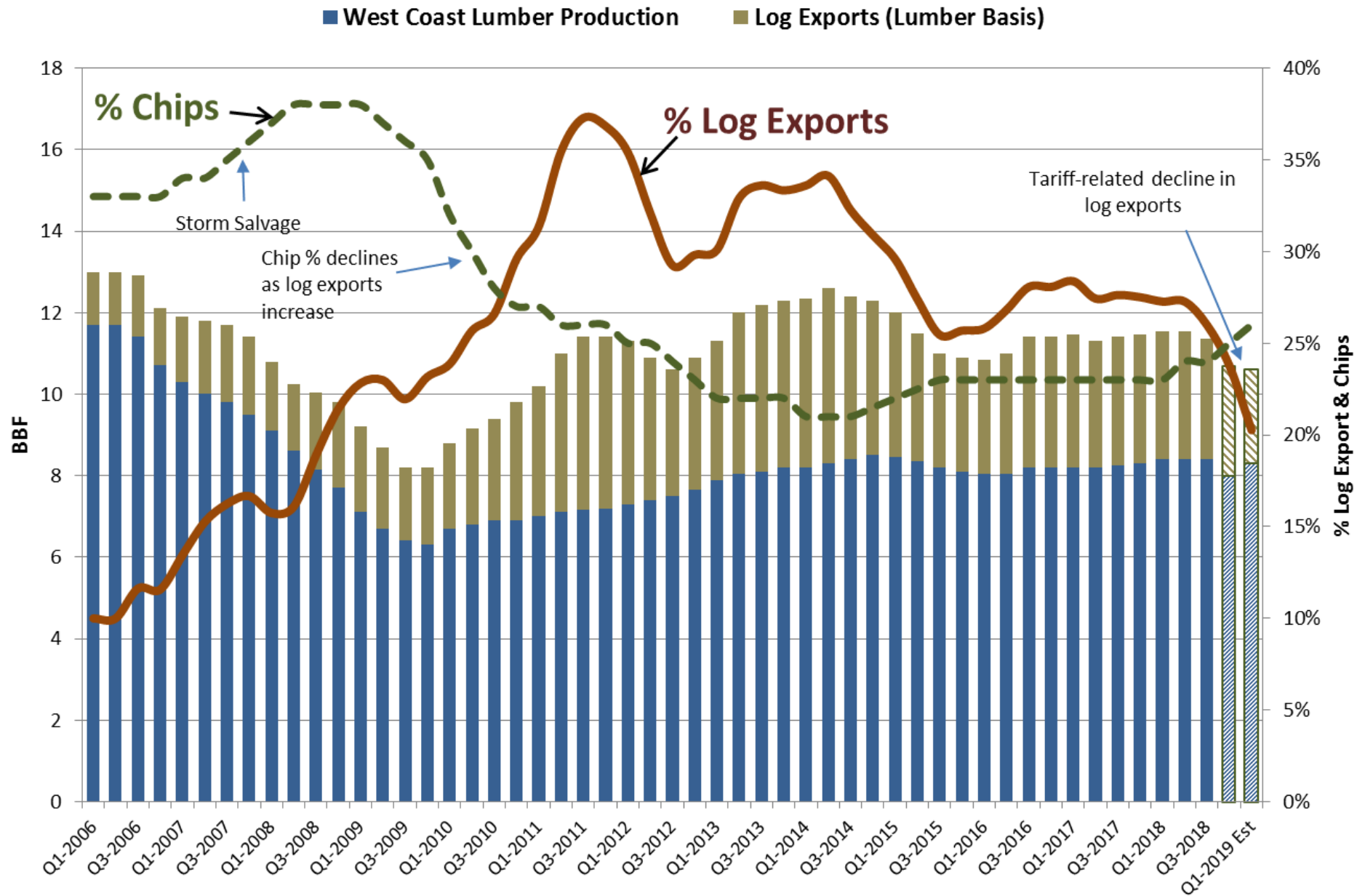
Sources: Timber Harvest—WA DNR & OR DOF; Chip Receipts—Forest Resources Association

# Pulp Mill Closures vs Chip Production, Timber Harvest, and Estimated Timber Growth

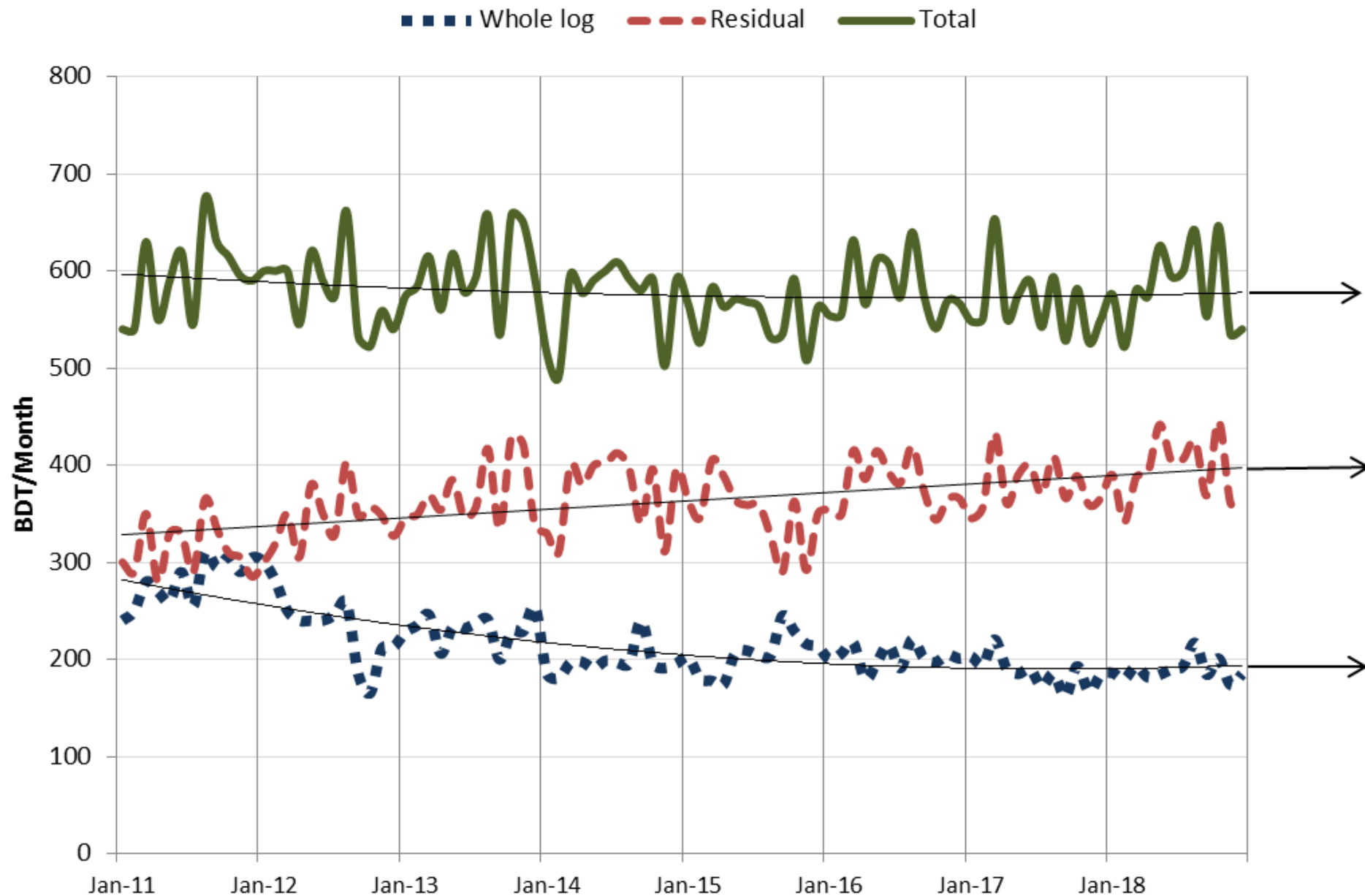




# PNW Log Demand

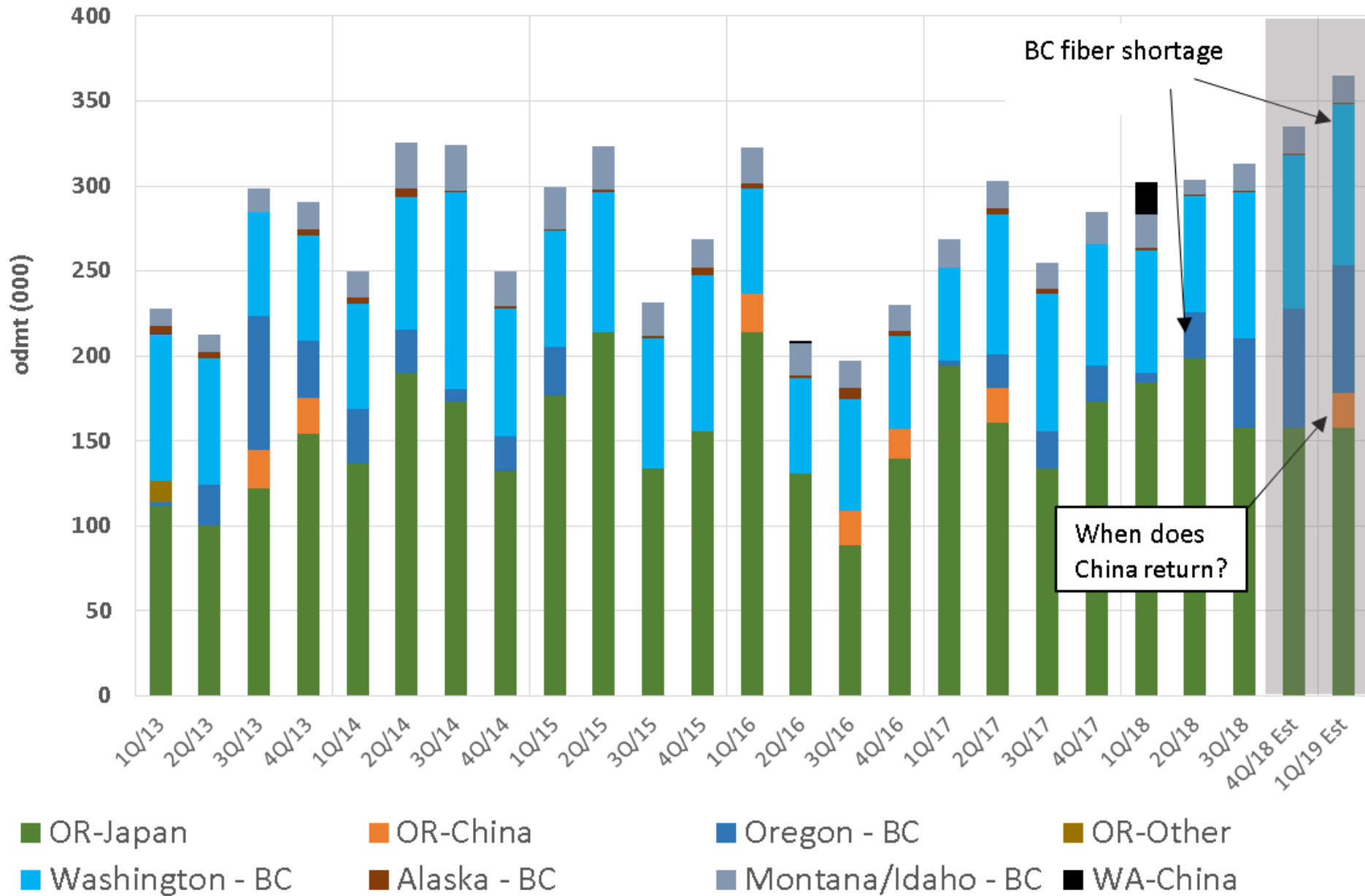


# Monthly PNW Softwood Chip Receipts

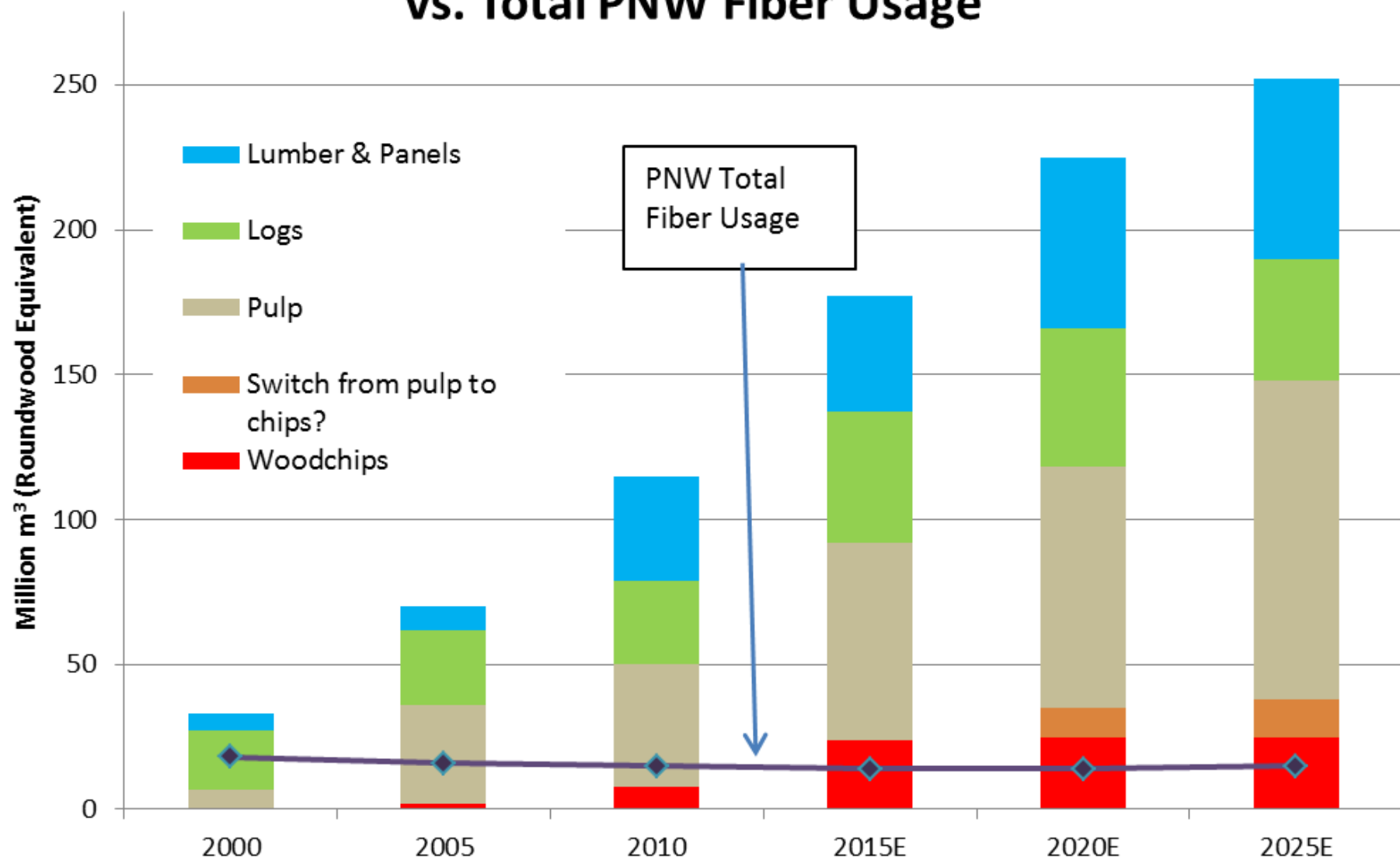


Source: Forest Resources Association

# US Northwest Chip Exports

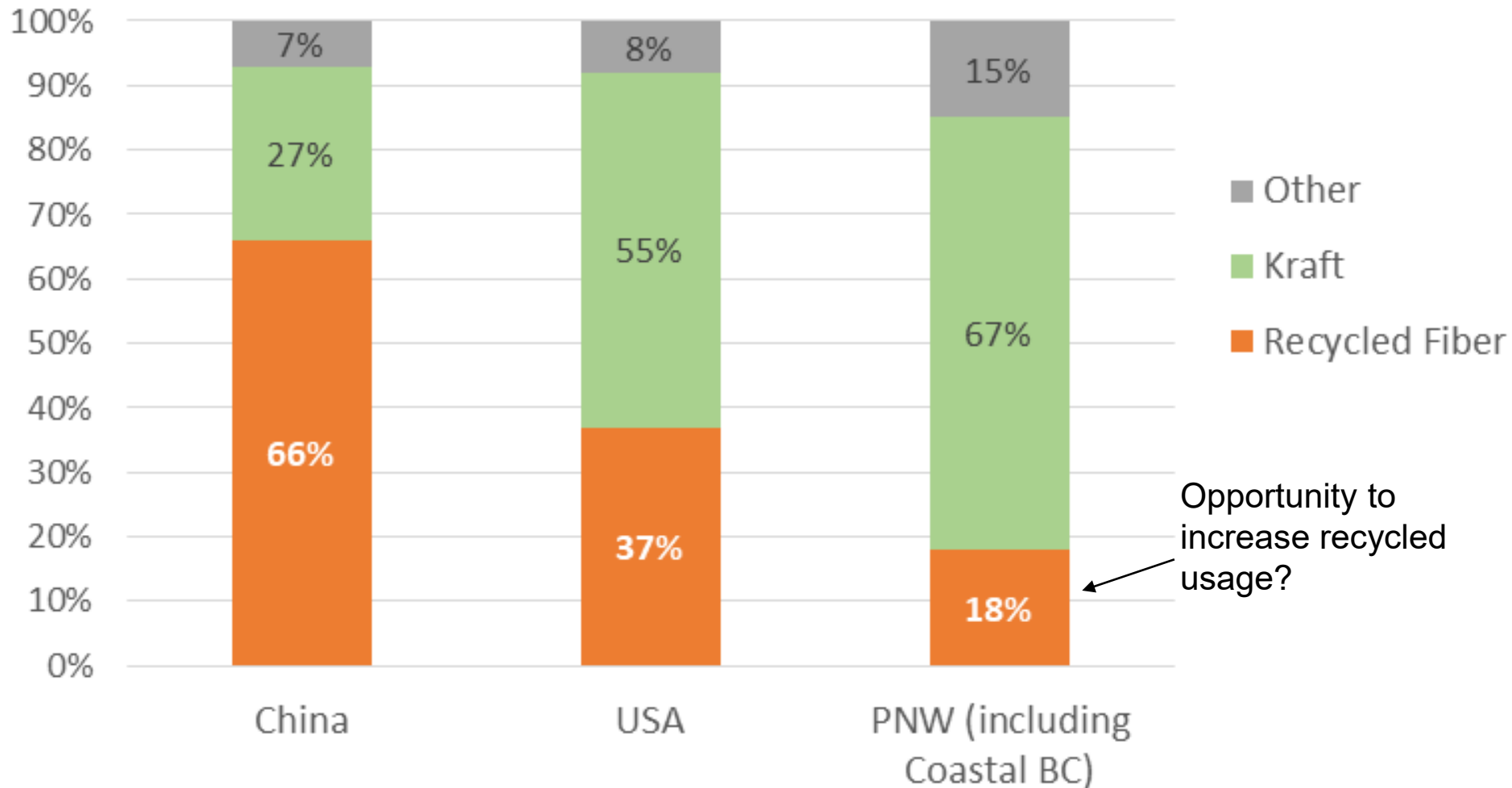


# China Total Timber Supply Deficit vs. Total PNW Fiber Usage





# Fiber Furnish of Paper Making Industry

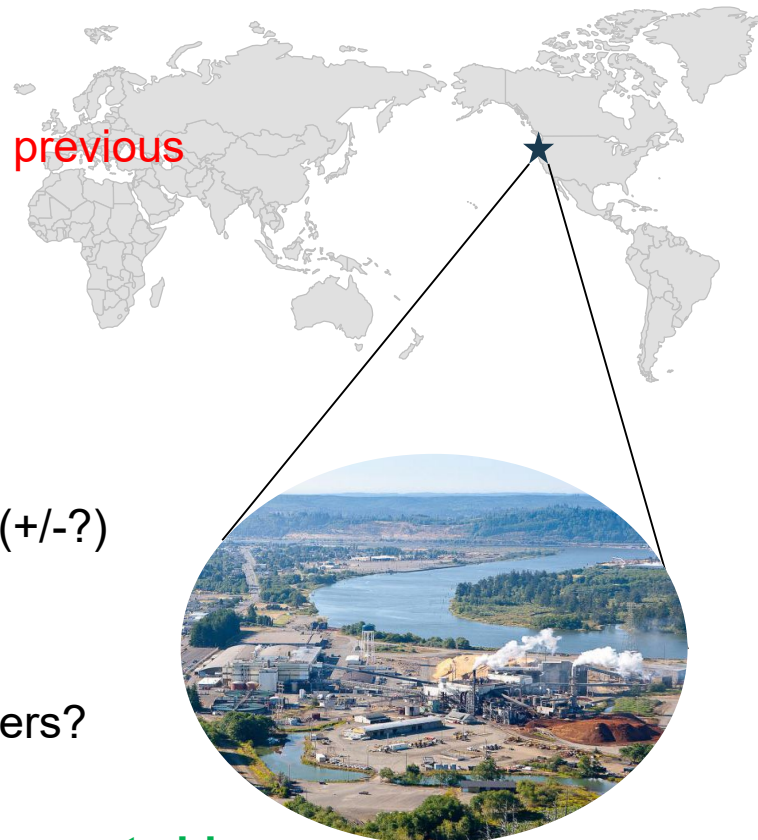


Source: FisherSolve™ © Fisher International, Inc.

# Summary of What May Be Coming

## 2019 (and beyond) Expectations

- Few landowners able to increase harvest due to previous excessive harvest levels
- Changing timber profile—shorter rotations
- High chip exports—BC, Japan, China?
- New demand for pulp logs (e.g. CLT, fuel chips)
- **Switch to higher recycled content**
- Lumber & panel production changes marginally (+/-?)
- Lower log export markets, short-term
- Better sawdust utilization (wood pellets?)
- More consolidation(s)...landowners, manufacturers?
- **Extreme weather events and fires**
- **Limited incremental USFS timber sales on the west side**
- New non-woody pulp production (e.g. Columbia Pulp)

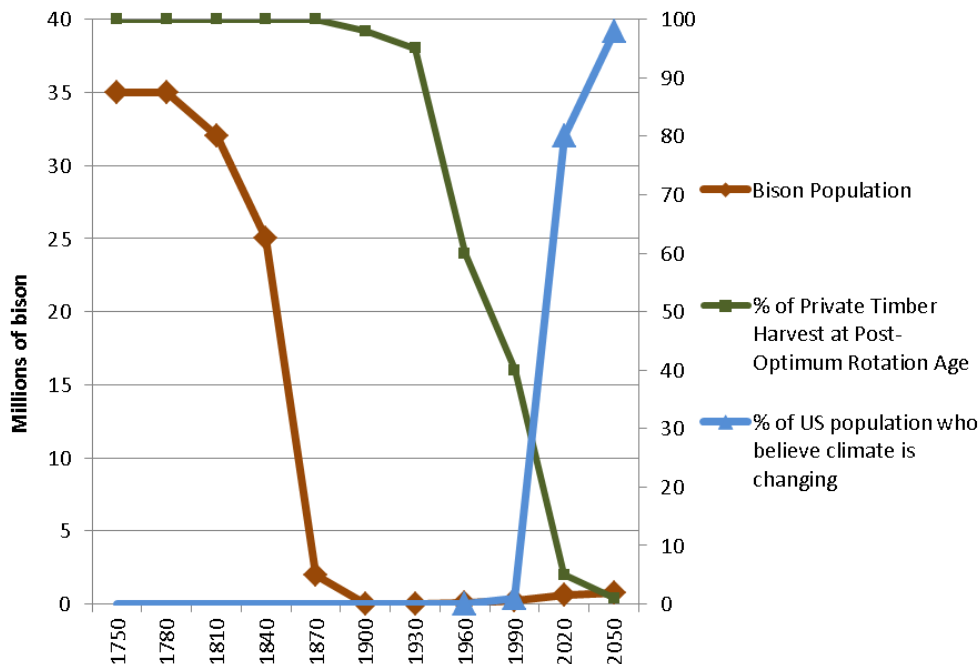


# Cosmo Specialty Fibers, Inc.



# Epilogue—Manifest Destiny Hangover

**Bison Population, Private Timber Harvest Timing, and Belief in Climate Change**



## 2018 Nobel Prize in Economics

- “William D. Nordhaus pioneered a framework for understanding how the economy and climate of our planet are mutually dependent on each other.
- Nordhaus emphasizes that the market economy, while a powerful engine of human development, has important imperfections and his contributions have thus offered insights into how government policy could potentially enhance our long-run welfare.
- **...the externalities are not properly taken into account by the individual polluter (*or short-term-rewarded timber executive in our case*), absent policy interventions such as subsidies/support for knowledge creation or taxes/quotas on emissions (*or unsustainable harvest in our case*).**
- To devise the right dose of the right medicine requires models of the sort that Nordhaus pioneered.
- His prize-winning contributions deal with long-run, global, and sustainable growth.”