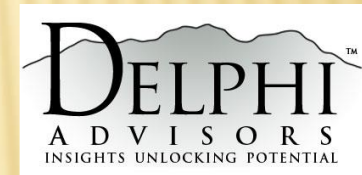


LEVERAGING CHAIN-OF-CUSTODY INVESTMENTS: WOOD BASIN ANALYSIS

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FSC[®] WOOD SOURCING DOCUMENTATION

- FSC[®]'s US Controlled Wood National Risk Assessment¹ provides three sets of options for documenting sources of wood supply:
 - 1) Exhaustive combination of invoices and/or legal documents explicitly denoting forest of origin; frequently coupled with sampling to verify
 - 2) Combination of invoices, supplier declarations, field audits and analysis of logical (economically feasible) supply area
 - 3) Specialized situation in which supply is drawn from geographically distinct “district of origin”

¹FSC US Controlled Wood National Risk Assessment; First Public Consultation Draft (V 0.1); January 12, 2015

WHICH OPTION TO CHOOSE?

- ❑ Option 3 applies in only specialized circumstances and so is not relevant for most FSC[®] certification applicants / certificate holders
- ❑ If receiving “indirect” supply, FSC[®] applicants may find Option 1 legally impossible or logistically difficult
- ❑ Option 2 offers greatest flexibility for documenting origin of wood sources – including field audits (expensive and intrusive), and an alternative allowing for modeling of suppliers’ economically feasible procurement areas

RECOMMENDED APPROACH

- ❑ **Recommend Option 2 with wood fiber flow documentation based on log accounting system information coupled with modeling**
 - + **Relative to Option 1 this approach allows greater wood procurement flexibility for the applicant / certificate holder**
 - + **In general this approach requires less intrusion by the certificate holder into its wood suppliers' businesses**
 - + **This approach reduces documentation burden on certificate holders' employees**
 - + **This approach provides information and data that may be beneficial for other business applications**

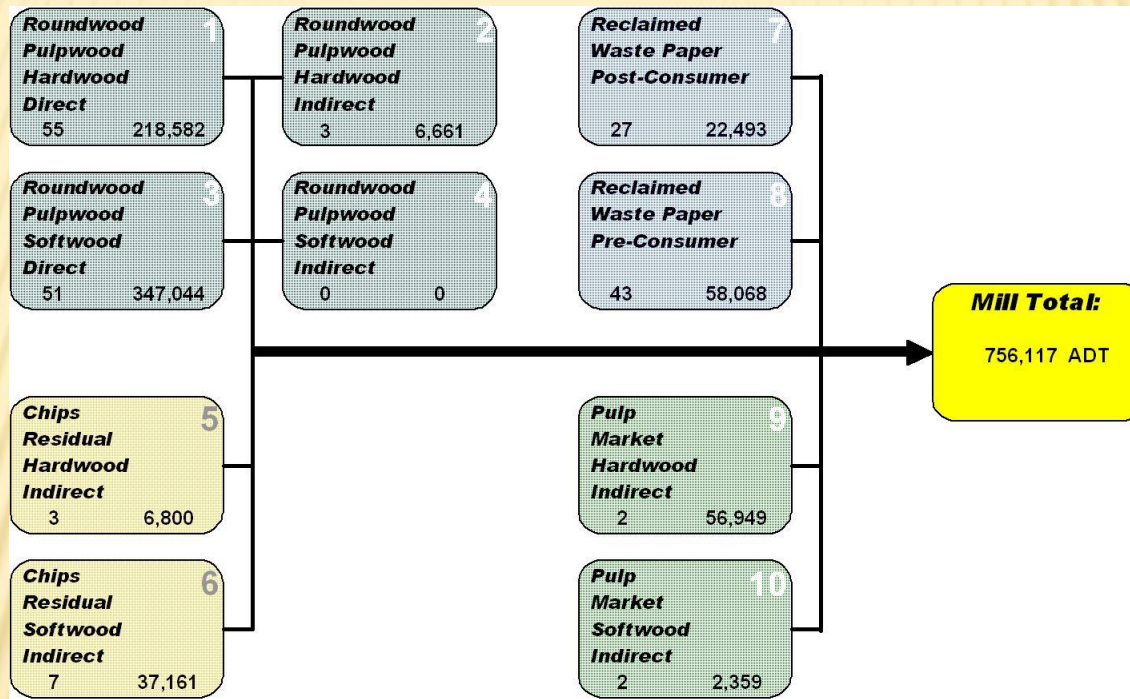
KEY ELEMENTS IN OPTION 2

- ❑ Documents wood fiber flow using information from existing log accounting systems
- ❑ County-level declarations by suppliers of where wood sourced from are coupled with logical supply analysis verifying the declarations are economically plausible

- The processes described below have been utilized since 2013
- FSC® has awarded clients with “Best in Class” acknowledgments for the results

WOOD FLOW DIAGRAM

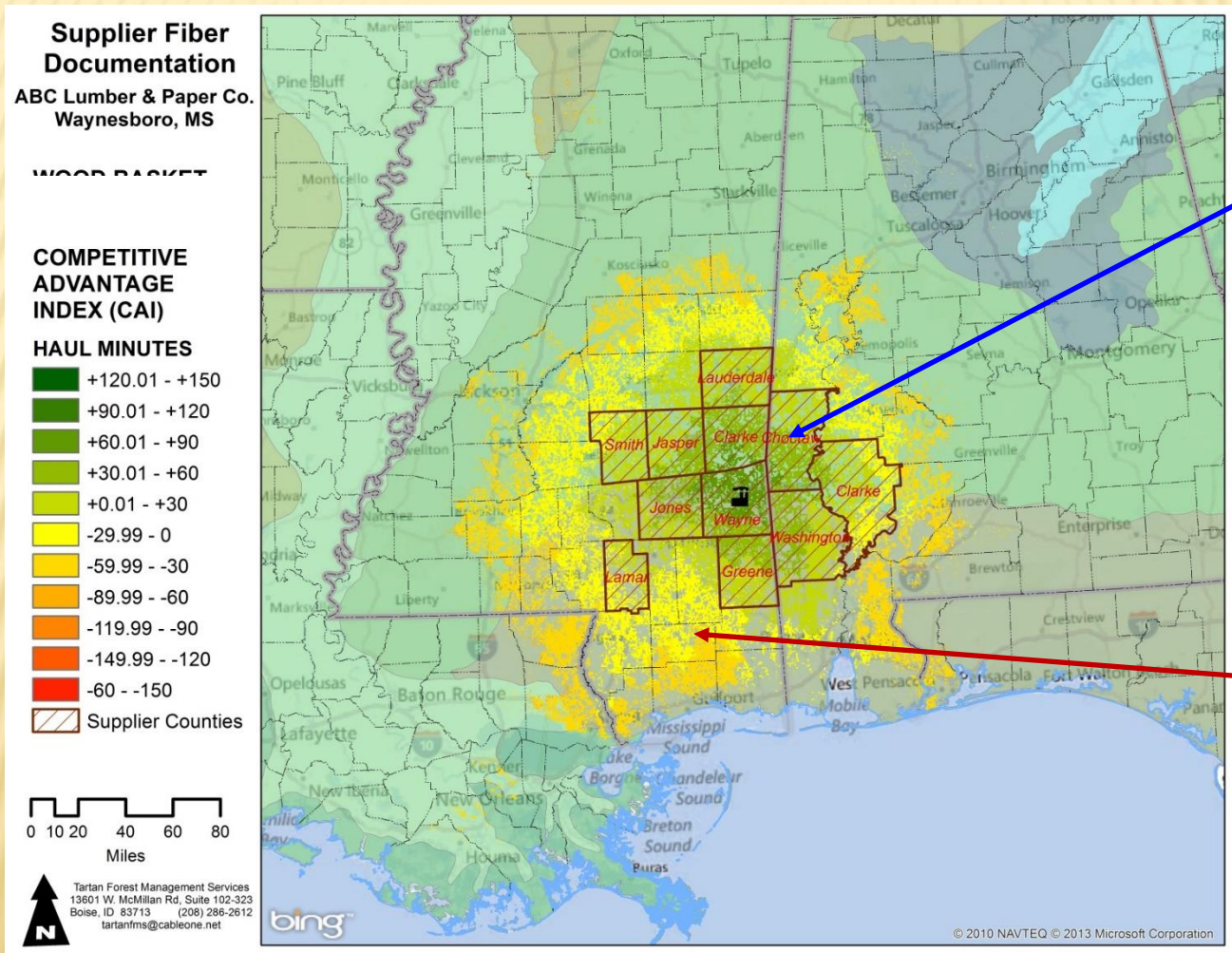
❑ Fiber flow diagram of each client mill



- + Utilizes log accounting system data
- + All types of wood deliveries, including gatewood

SUPPLIER SOURCING

Documentation & Validation



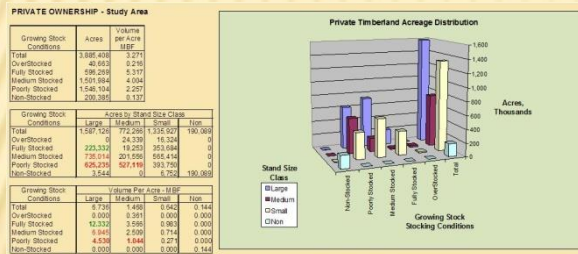
Cross-hatch region is supplier documentation of wood source counties

Colored region (see legend) is logical supply area based on logical supply area analysis

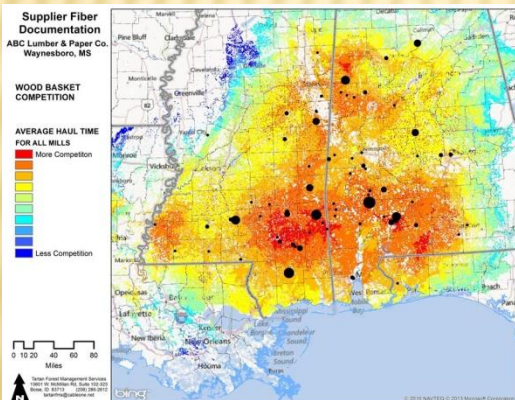
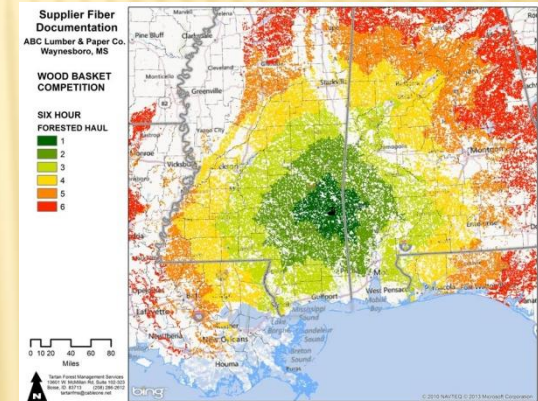
OTHER DELIVERABLES

- The methodology develops other information and data that generate unique insights into current wood basin conditions and create a foundation for developing wood basin projections

Supply conditions

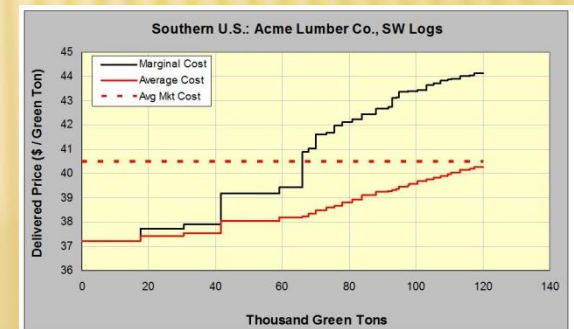


Mill Influence Zones (“procurement reach”) - Generated for EVERY mill in the wood basin



Market Competition

Estimated Wood Cost Curves (mill-level & regional)



KEY TAKE AWAYS

- ❑ **A key element in forest certification process involves documenting where wood fiber is sourced**
 - + Fiber transport cost is correlated with haul time
 - + Haul time is simultaneously calculated from forested locations to all competing mills
- ❑ **The geography from which wood fiber is sourced defines a mill's ecological footprint**
- ❑ **Introducing future supply and demand conditions facilitates other applications of the methodology**
 - + Capital programs (mill sales/acquisitions & reconfiguration)
 - + Wood fiber procurement strategies & logistics
 - + Wood basin market analysis & competitor assessment

WHAT WE BRING TO THE TABLE

- ❑ Broad understanding of forest management, planning, inventory, and growth and yield
- ❑ Wood fiber market analysis
- ❑ Mill database and transportation modeling
- ❑ Competent project management
- ❑ Good customer service and communication

QUESTIONS?

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