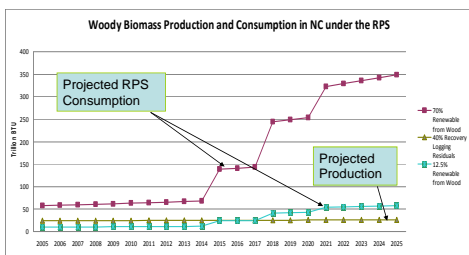


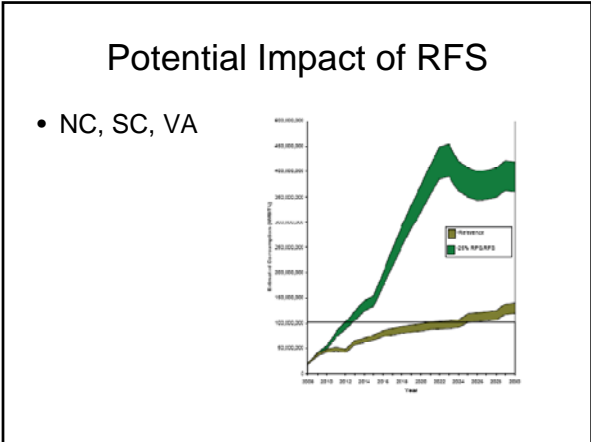
What about the economic sustainability of wood as a fuel?

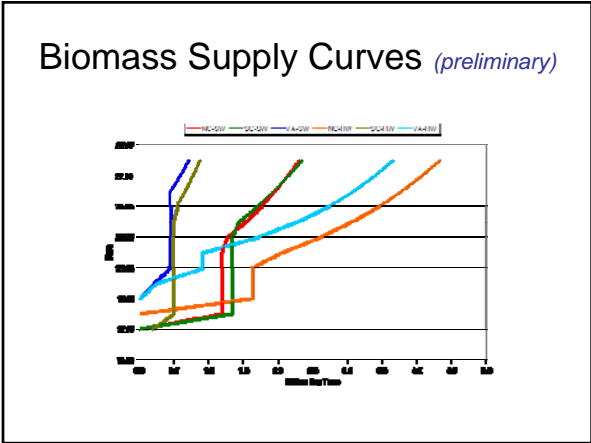
Bob Abt
bob_abt@ncsu.edu

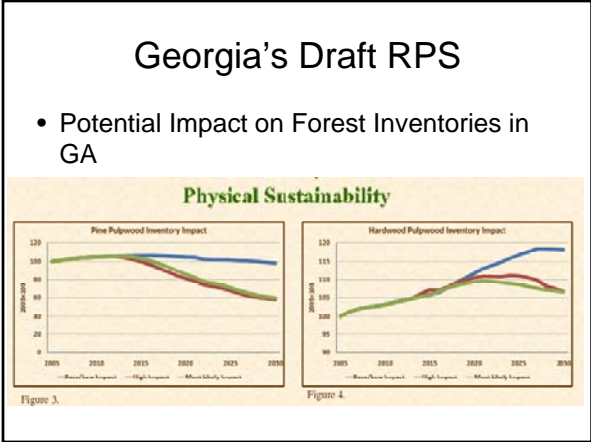
- What are the potential implications of using wood for energy?
 - Use of logging residuals for energy has been touted as a way to use a “free” resource without affecting current wood-based industry
 - Is this a free lunch? - what are the tradeoffs?

Potential Impact of NC's RPS



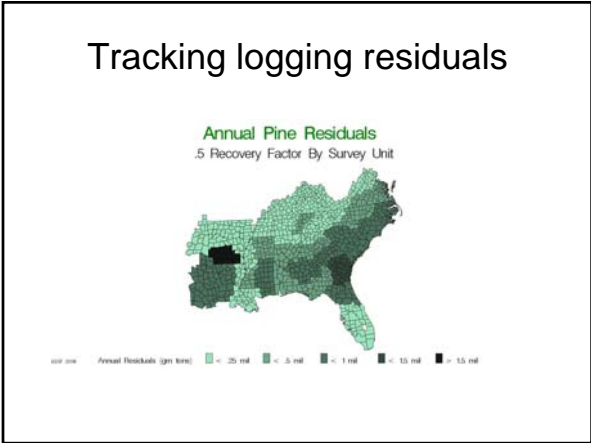


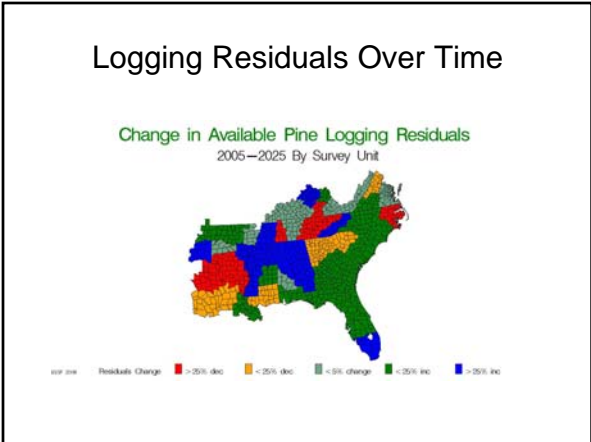




SOFAC Biomass Research

- Track Logging Residuals
- State Level RPS Impacts
- Gulf Region Analysis





Gulf Coast Biomass Impact

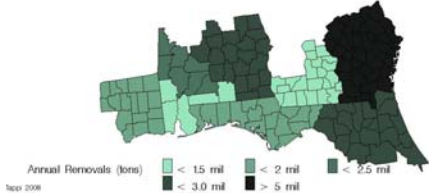
- From F&W Forestry Services
 - 3 new plants
 - 15 proposed or under consideration
 - Emphasis on pine
 - Potential demand of 5.75 mill green tons annually

Gulf Coast Biomass Impact

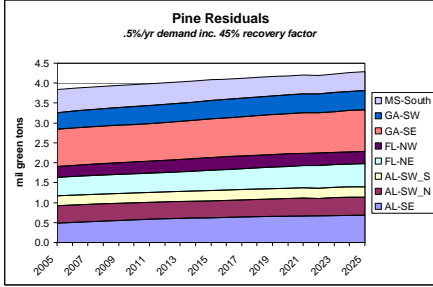
- Demand Scenario
 - .5%/yr demand increase for current products
 - Over 10 yr period (2007 – 2016) increase demand by .575 mill tons/yr
 - 100% pine
 - Reduce demand by available logging residuals (45%,35%,25%,15% recovery)

Gulf Coast PPW Removals

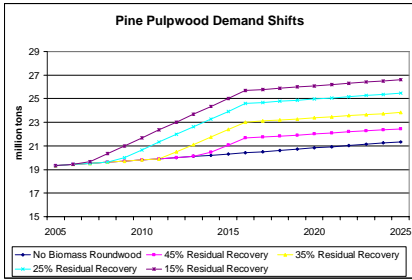
Annual Pine Pulpwood Removals
FIA 2005 By Survey Unit



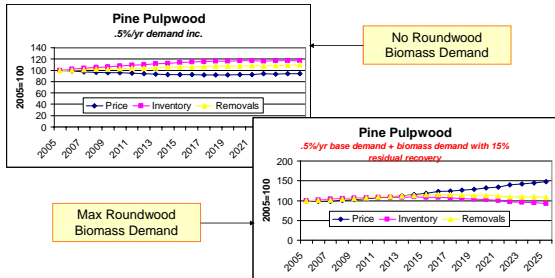
Gulf Coast Pine Residuals



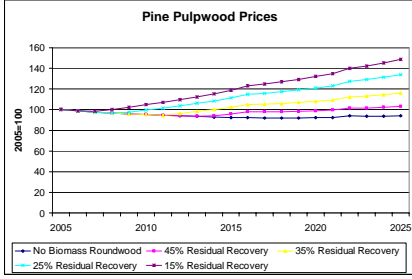
Demand Increase



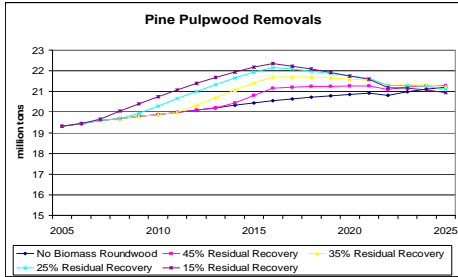
Price/Harvest/Inventory Impact



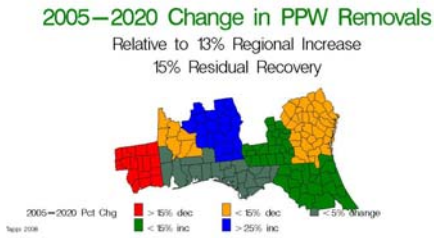
Price By Scenario



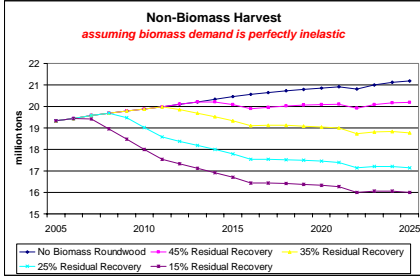
Higher Prices and Lower Inventory Reduce Harvest



Increased harvest distribution



What if biomass demand is not price responsive?



Key Points

- “Worst Case Scenario” or “best case” if you are a timberland owner
- Everything being considered adds to demand
- 100% pine
- Biomass demand perfectly inelastic (no short run substitutes)
- No silvicultural response

Key Points

- But:
- Power companies already negotiating long term supply agreements
- New projects announced monthly
- Current roundwood prices are very attractive
- These runs don't include timberland loss (1.5%/yr)

Key Unknowns

- Residuals utilization and market development
- Biomass demand elasticity
- Realized biomass demand
- Carbon cap and trade
