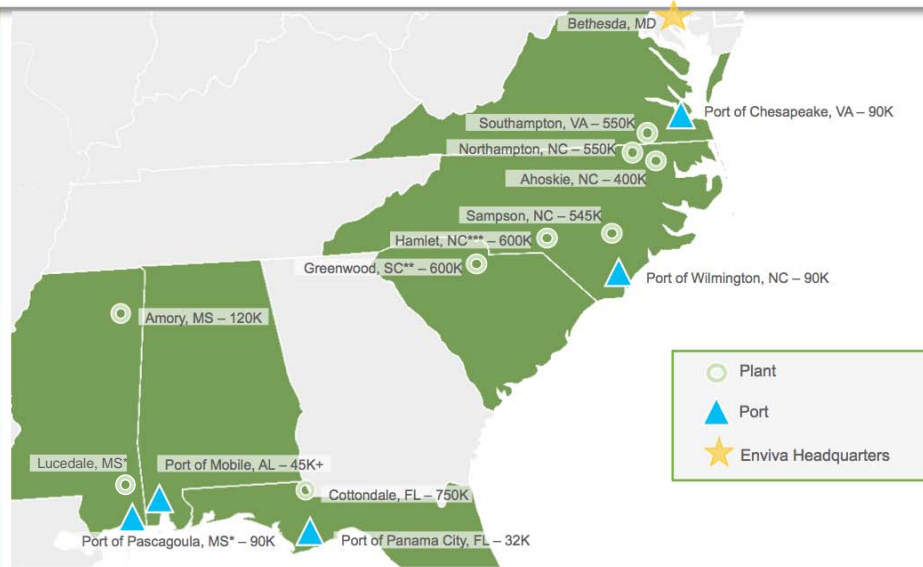




# SUSTAINABLE WOOD FIBER SUPPLY



# ENVIVA'S ASSETS



## Storage and Terminating Assets



Port of Wilmington



Port of Panama City



Port of Mobile



Port of Chesapeake

## Production Plants



Amory



Ahoskie



Southampton



Northampton



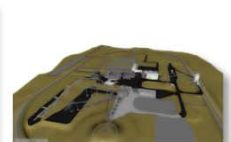
Sampson



Cottondale



Greenwood\*\*



Hamlet\*\*\*

\*Under development by Enviva JV Development Company, LLC

\*\*Acquisition by Enviva JV Development Company, LLC

\*\*\*Enviva Wilmington Holdings, LLC; opening targeted early 2019



# U.S. SOUTHEAST FOREST LANDSCAPE

Timber has been harvested from Southern forests since European settlement;<sup>1</sup> trees we see today form the 5<sup>th</sup> or 6<sup>th</sup> generation of these forests

§ Conditions today reflect legacy of agricultural & forestry land use

Forests cover about 99 million hectares in the South, roughly 45% of total land area.

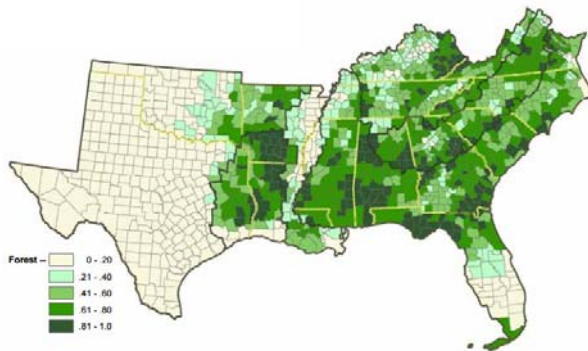
§ No remaining primary forests available for harvest

§ 11.4 billion metric tons of growing stock inventory

86% of Southern U.S. forests are held by 5 million private landowners, mostly families

§ Strong property rights and tax structures mean that most landowners look to generate revenue from their land

## PROPORTION OF COUNTIES IN FORESTLAND USE<sup>1</sup>

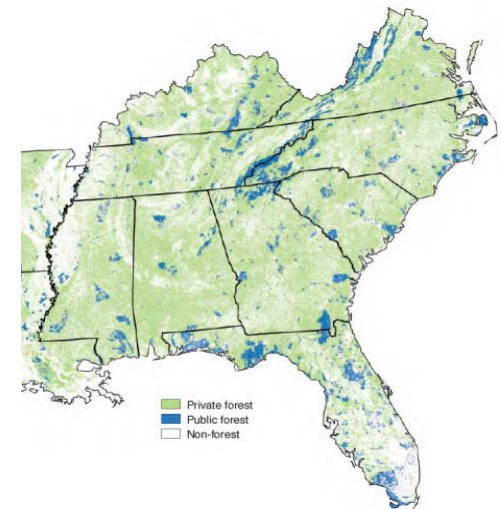


U.S. pulpwood consumption has dropped 28% since 1988 and is at the same level as 1970

U.S. Pulpwood Consumption (million metric tons)<sup>2</sup>



## FOREST OWNERSHIP STATUS<sup>2</sup>



1) Wear, D. N., & Greis, J. G. (2012). The Southern Forest Futures Project: Summary Report. Research Triangle Park: United States Department of Agriculture Forest Service Southern Research Station. [http://www.srs.fs.fed.us/pubs/gtr/gtr\\_srs168.pdf](http://www.srs.fs.fed.us/pubs/gtr/gtr_srs168.pdf)

2) Butler, Brett J. and David N. Wear. "Southern Forest Futures Project Chapter 6: Forest Ownership Dynamics of Southern Forests." USDA Forest Service, 2013. [http://www.srs.fs.fed.us/pubs/gtr/gtr\\_srs178.pdf](http://www.srs.fs.fed.us/pubs/gtr/gtr_srs178.pdf)

# FOREST PRODUCT SPECIFICATIONS FOR HIGH-GRADE MARKETS V. LOW-GRADE MATERIAL AT ENVIVA

## HIGH-GRADE PRODUCT SPECIFICATIONS<sup>1</sup>

- § Highly variable by product, region, market demand, etc.
- § Generally, trees sold into higher-grade markets can produce one-12 foot or two 8-foot logs meeting at least the following quality specifications:
  - § Straight form – no crooks or significant sweep/ taper
  - § Clear wood quality – no growth defects, rot, or stain
  - § Diameter – Small end at least 9 in. for pine and 11 in. for HW



## ENVIVA PRODUCT SPECIFICATIONS

- § Feedstocks are inspected for the following specification at the pellet mill gate:
  - § Less than 18 in. diameter on large end
  - § No cypress species
  - § No GMO species (no commercial use of GMO tree species in US South)



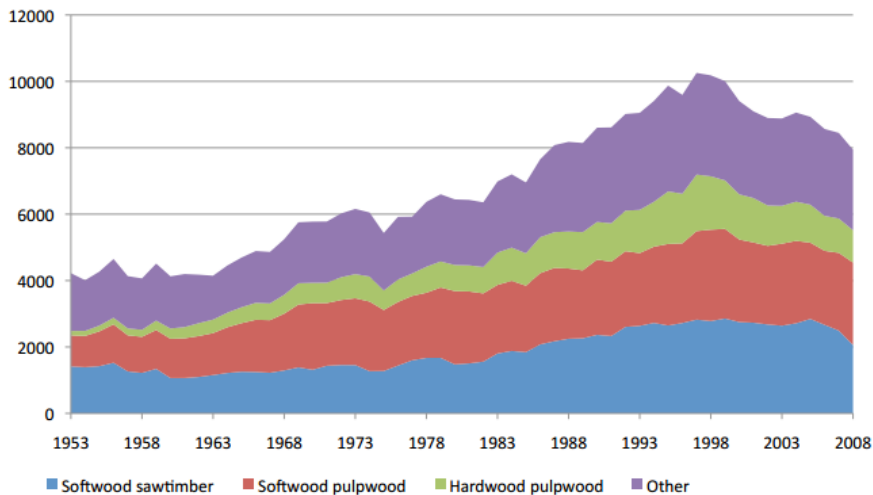
# FOREST PRODUCTS MARKETS AND INCREASED WOOD PRODUCTION

Markets for forest products positively affect forest extent and inventory

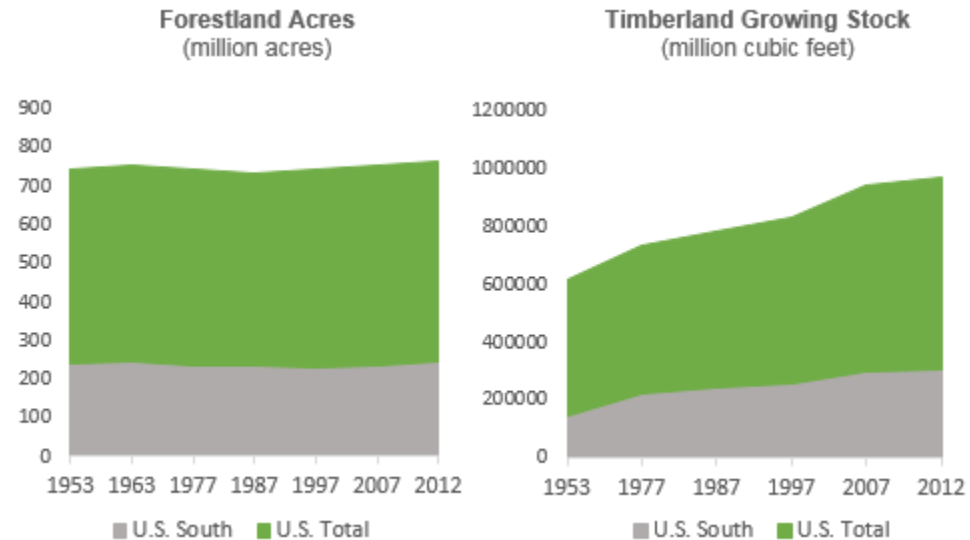
Southern forest trends since introduction of forest industry in the mid-1900's:

- § More than 2X increase in forest product demand
- § 4 million+ acre increase in forest area
- § More than 2X increase in forest growing stock inventory

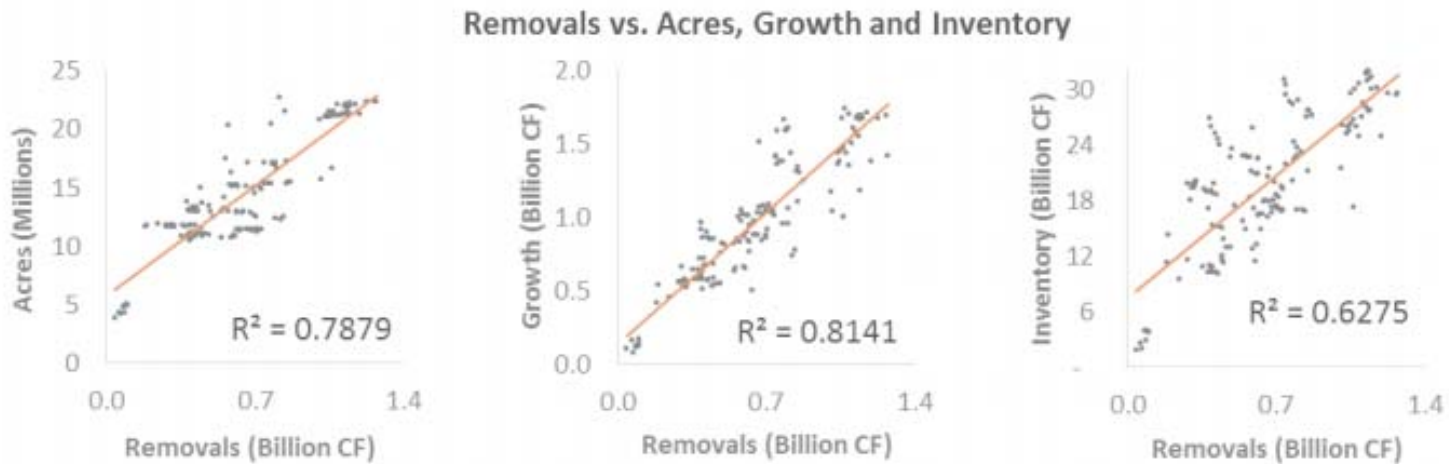
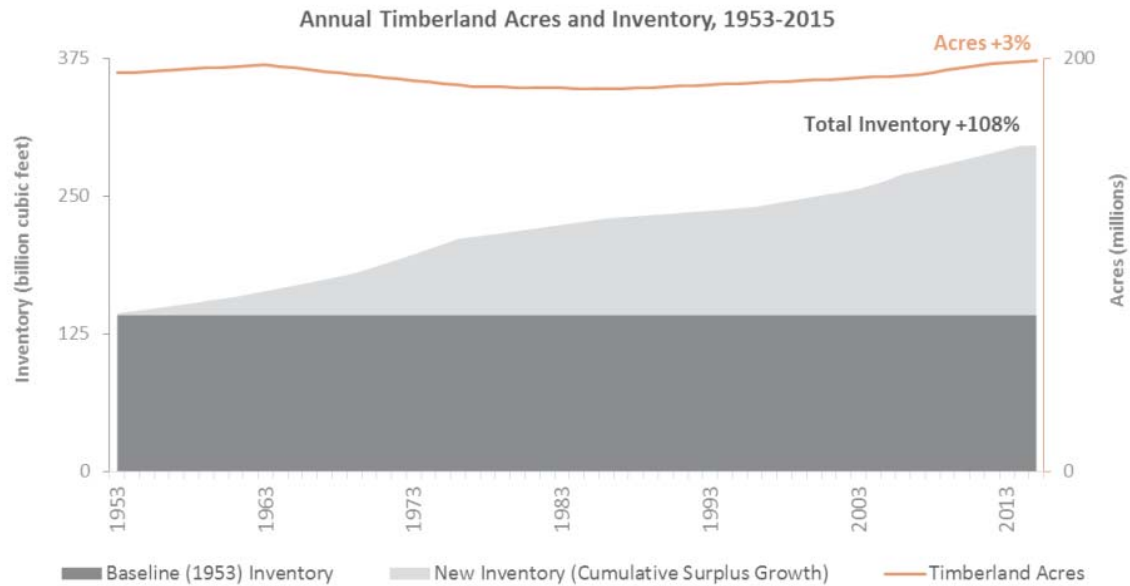
## Southern Roundwood Production<sup>1</sup>



## Southern Forest Area and Inventory<sup>2</sup>



# TRENDS IN FOREST AREA & INVENTORY IN THE SE US



# THREE PILLARS OF SUSTAINABILITY

Certification



Care for the Forest Landscape



Transparency



# PILLAR ONE: CERTIFICATION

Enviva's manufacturing facilities are certified to industry-leading forest and biomass sustainability programs



## Sustainable Forestry Initiative (SFI)

- § SFI Certified Sourcing Certification
- § SFI Chain of Custody Certification



## Forest Stewardship Council (FSC)

- § FSC Chain of Custody Certification



## Programme for the Endorsement of Forest Certification (PEFC)

- § PEFC Chain of Custody Certification



## American Tree Farm System (ATFS)

- § Independently Managed Group

## Sustainable Biomass Program





# PILLAR TWO

Certification



Care for the Forest Landscape



Transparency



# FOREST STEWARDSHIP: SCIENCE-BASED, INDIVIDUALIZED SOURCING DECISIONS

## SCIENCE-BASED SOURCING

- § For each and every tract we encounter, we make a decision on whether and what kind of harvest is the best outcome for that tract.
- § To make these decisions, we've developed operational, traceable, and scalable processes.
- § These processes rely on the considerable expertise of our highly trained and experienced staff as well as input solicited from academic and forest conservation experts.



# FOREST CONSERVATION

## The Enviva Forest Conservation Fund

- § A \$5 million, 10-year program
- § Conserving working forests and sensitive bottomland ecosystems in VA and NC
- § Partnership with the U.S. Endowment for Forestry and Communities
- § Annual matching-fund grants to nonprofit organizations



# PILLAR THREE

Certification



Care for the Forest Landscape



Transparency



# TRANSPARENCY: 100% VISIBILITY INTO BIOMASS SUPPLY AND SOURCING PRACTICES

## STORY OF THE TYPICAL HARVEST

LANDOWNER

TIMBER DEALER

ENVIVA  
PROCUREMENT FORESTER

ENVIVA  
SUSTAINABILITY TEAM



80% of volume harvested from tract is high-quality product sent to other industries

20% of volume harvested from tract is low-quality product sent to Enviva

### Tract Detail

County  
Northampton (Mid-Atlantic)  
Landowner Type  
Family Forest  
Forest Type  
Oak-Pine  
Harvest Type  
Final Harvest  
Age Class  
30 to 40  
Harvest Acres  
83  
% Volume to Enviva  
20%

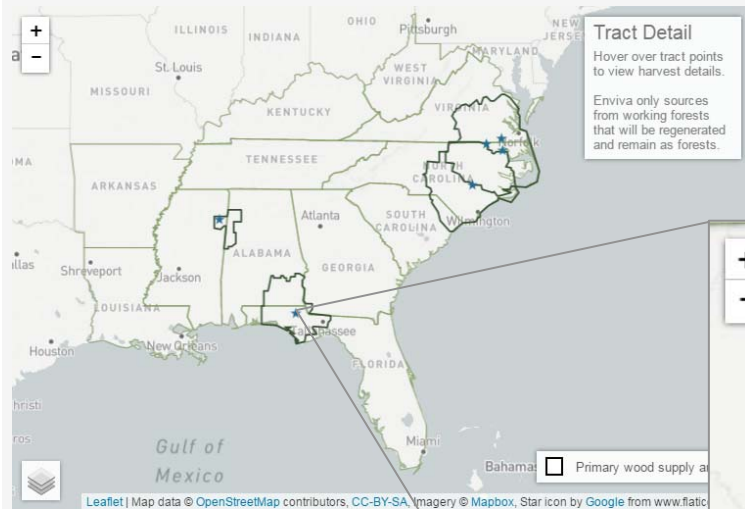
What information do we collect?

### What do we verify?

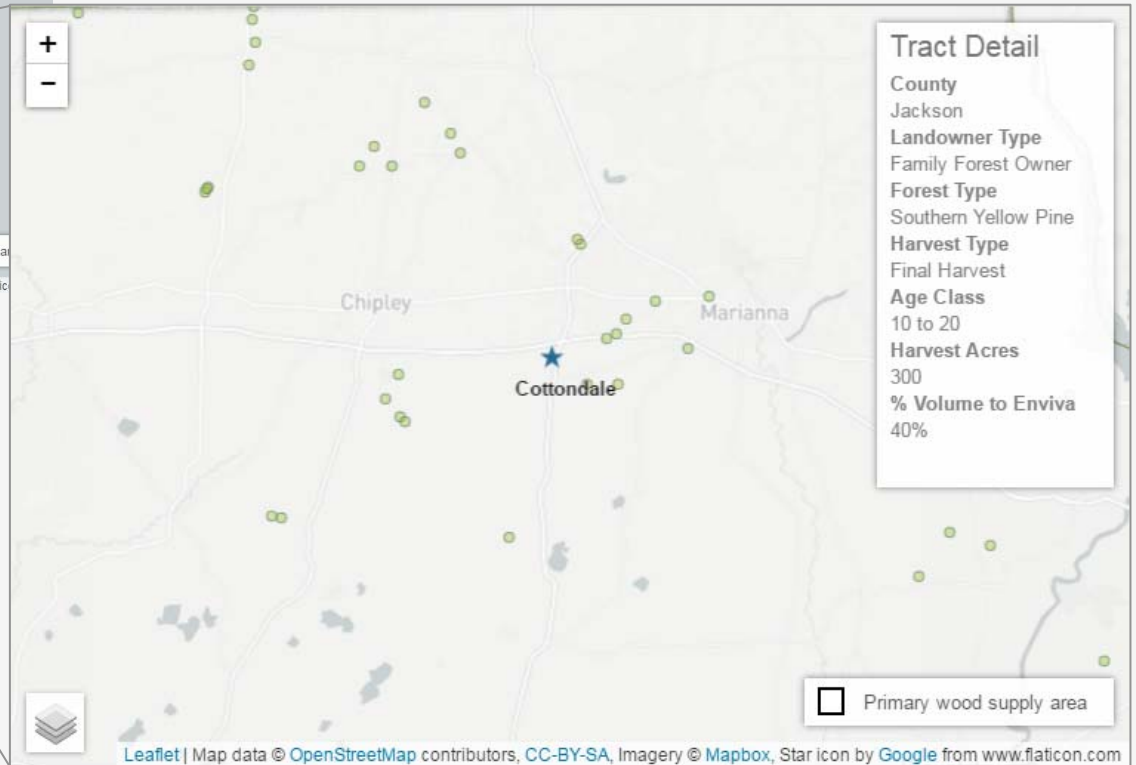
- ü Clear, operable, and traceable sourcing requirements ensure all feedstock aligns with our values of forest stewardship

# TRACK & TRACE: SUPPLY CHAIN MONITORING SYSTEM AND TRANSPARENCY TOOL

We track every ton of primary wood back to its origin in the forest or at a sawmill



- § Enables us to track specific attributes of wood sourced directly from the forest.
- § In January 2017, we launched a website to share findings with the public.
- § Quarterly updates allow us to be fully transparent about our sourcing.



# TRANSPARENCY: 100% VISIBILITY INTO BIOMASS SUPPLY AND SOURCING PRACTICES

The total amount of forested land in Enviva's primary supply area has increased  
**by 320,842 acres since 2011.**

**The forests in the Southeast  
United States continue to grow and thrive.**

*The most recent data confirms that Enviva's sourcing practices  
are encouraging sustainable forest management, with forests  
continuing to grow faster than they are harvested.*

Where does Enviva  
source its wood?

**1,183** in **77** in **5**  
working forest harvests counties Southern states



# TRANSPARENCY: 100% VISIBILITY INTO BIOMASS SUPPLY AND SOURCING PRACTICES

