

GEORGIA FORESTRY  
COMMISSION



# Developing Forest Resource and Biomass Markets in the South

Volume I: An Overview of the Timber and Biomass Supply Chain

March 2012



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**Volume I: An Overview of the Timber and Biomass Supply Chain**

**March 2012**

## Notice

This volume is part of a series of technical reports designed to assist with the development of forest resource and biomass markets in the southern United States. The volumes and their intended purposes are as follows:

### ***Volume I: An Overview of the Timber and Biomass Supply Chain***

Volume I describes the general organization and operation of the typical forest resource supply chain for those with limited knowledge of forest-based industries.

### ***Volume II: Mechanisms for Securing Long-term Forest Biomass Supply***

Volume II explores alternative methods to providing long-term assurance of forest resource feedstock deliveries to a mill.

### ***Volume III: Biomass Designation and Tracking for Renewable Biofuels Production***

Volume III suggests methods that lead to compliance with the Renewable Fuels Standard established by the Energy Independence and Security Act of 2007. It is also useful to those establishing procurement systems that document sustainability of the forest resource.

## Disclaimer

With respect to descriptions, recommendations, sample contracts, and other information in this report, neither the author, the state of Georgia, the United States government, nor their employees, makes any warranty, express or implied, including the warranties of fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of information, or represents that its use would not infringe upon privately owned rights. This report is not intended to provide constraints, agreements, or encourage concerted actions that may restrain competition, set prices, or in any way violate antitrust laws. The author, the Georgia Forestry Commission and the federal government do not recommend the use of any specific form of timber or biomass procurement or transaction. The information provided herein provides a partial list of the various alternatives to meeting individual company or landowner goals and requirements.

## Acknowledgements

The Georgia Forestry Commission wishes to express appreciation to those individuals and organizations contributing to the development and review of this report, including the following:

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Georgia Forestry Commission Communications Department staff

## Introduction

Manufacturing facilities that utilize harvested forest products, such as round logs and chips, must become adept at managing the feedstock supply chain. The typical timber supply chain in the South has several separate links which develop and handle the forest raw material prior to it reaching the mill. The variety of types of forest raw material that can be harvested from any given location adds further complication to the system. This report provides an overview of the supply chain responsible for providing wood and forestry biomass to existing and proposed forest product manufacturing facilities. The roles of various supply chain participants, typical purchasing procedures, and sustainability issues are covered.

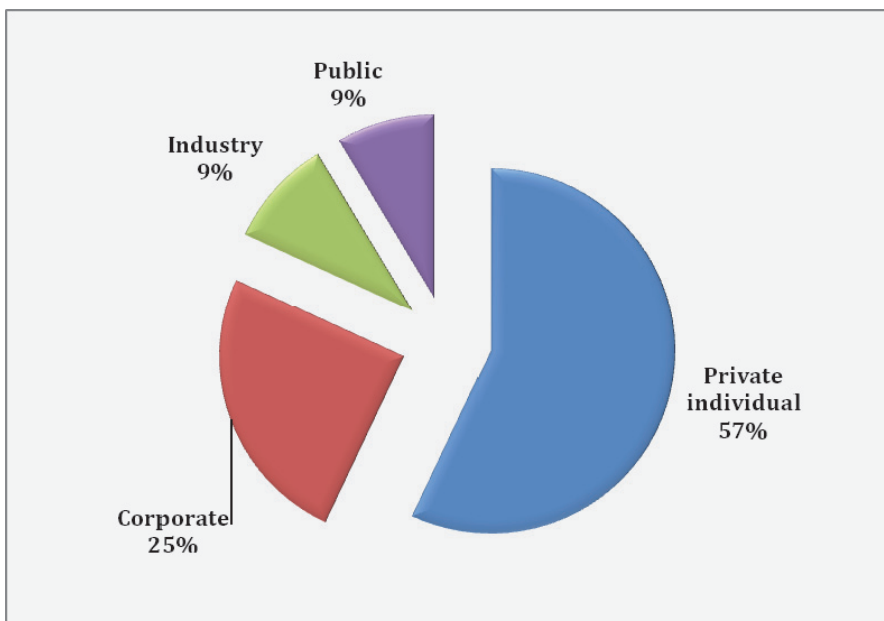
## Roles of the Supply Chain Participants

Timber and other raw material harvested from forests follow a supply chain that consists of the forest landowner, the wood dealer and the processing mill. Forestry consultants, loggers and trucking firms are also involved, but are usually employed by others in the supply chain. The following sections briefly describe the general role of each supply chain participant.

### *Forest Landowners and Managers*

Georgia has 24.4 million acres of timberland. Non-industrial private ownership controls 57% of this timberland, 25% is owned by corporations that do not have forest products manufacturing facilities (such as Timberland Investment Management Organizations or TIMO's), 9% is owned by the forest industry, and 9% is owned by the federal, state and local governments.<sup>1</sup> Chart 1 shows this ownership pattern. Similar proportions of timberland ownership types exist through most areas of the South.

*Chart 1: Ownership Classifications for Georgia Timberlands<sup>1</sup>*

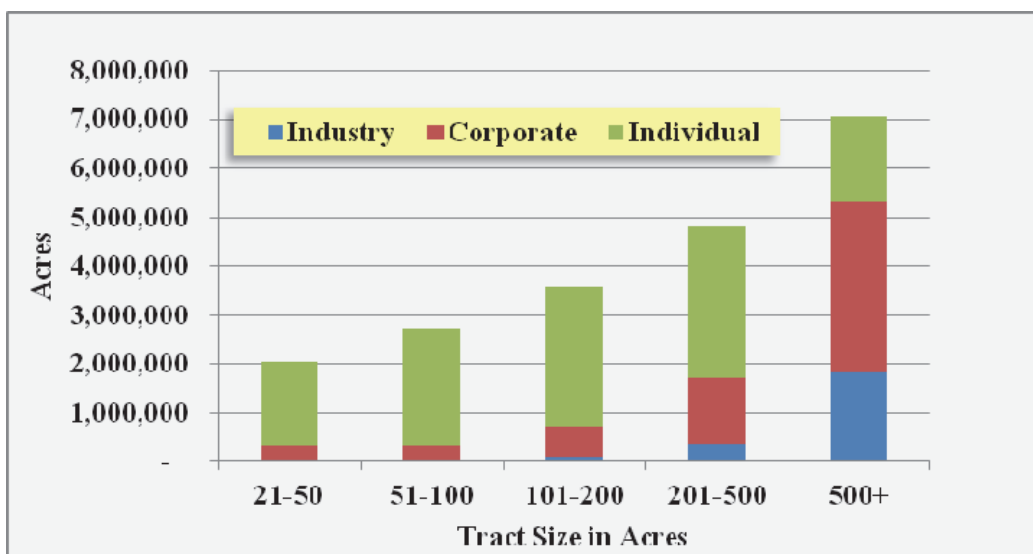


Forest managers are hired to manage lands for a variety of benefits, with timber production often being the primary or secondary management objective. Many landowners hire forestry consultants on a contract basis, as managers. Forestry consultants must meet specific education and experience requirements and be licensed by many states, including Georgia, to practice forestry. Landowners may also contract with forestry consultants for one-time services, such as timber appraisal and sales. Forestry consultants do not buy timber. Larger corporate landowners directly employ foresters to manage forests and sell timber when appropriate.

Landowners holding large tracts (typically corporate owners) will sometimes enter into long-term timber supply agreements with forest product manufacturing companies. These agreements are referred to as timber supply contracts. Prices are usually based on market rates, with prices reviewed quarterly or annually. Minimum and maximum amounts to be supplied each year are also incorporated into the contracts. These arrangements are not common, but are used in certain circumstances. Beginning in the mid-twentieth century, a few landowners with large holdings leased their timberland to industry, using terms of 25 to 50 years. Timberland leases of these types are now rare, but shorter term leases may be possible.

As explained above, owners of small and mid-size tracts typically sell forest products to wood dealers, either directly or through the use of forestry consultants, while owners of large tracts are more likely to enter longer term agreements for timber supply. In Georgia, 19% of the private timberland is in tracts less than 50 acres, 49% is within the 51 – 500 acre range and 32% is within tracts over 500 acres.<sup>2</sup> Tract size patterns for Georgia timberland are shown in Chart 2. Tract size tends to be larger in the coastal plain areas of south Georgia.

*Chart 2: Georgia Timberland Amounts by Tract Size and Ownership Class<sup>2</sup>*



## ***Wood Dealers***

Timber is typically purchased from a landowner by a wood dealer, who in turn sells the harvested wood to a variety of wood processing mills. The dealer often has a contract to supply certain mills. Supply amounts (quotas) and ranges of price may or may not be included in contracts between mills and timber dealers. Historically, large sawmills and pulp mills grew much of their timber on company-owned land and purchased additional standing timber directly from landowners. In the late 1980's, larger forest product manufacturers began divesting their timberlands and began relying more on purchased wood from other privately- owned timberland and "gate wood." Gate wood refers to wood hauled to a mill that had not purchased it as standing timber, or that was not involved in a timber supply contract.

In some instances, wood dealers operate stand-alone chip mills that process small-diameter stems into pulp quality chips. Chip mills allow for some storage of wood, often utilize rail for transport of chips to pulp mills, and provide another option for wood supply. These issues result in more flexibility for the timber buyer, can reduce the costs of transportation, and provide some protection for the mills on supply shortages. Forest product industries also operate or contract the operation of chip mills.

## ***Timber Harvesting and Hauling***

Loggers are either directly employed by wood dealers or are employed through contracts by wood dealers to harvest purchased wood. The trucking of logs and chips may or may not be part of the logging company's responsibility. Trucking is sometimes performed by another firm that is employed under contract by the wood dealer or logger. There are some loggers who are timber buyers, but most logging is performed by contract, with payment based on the amount (tonnage of product) of wood harvested.

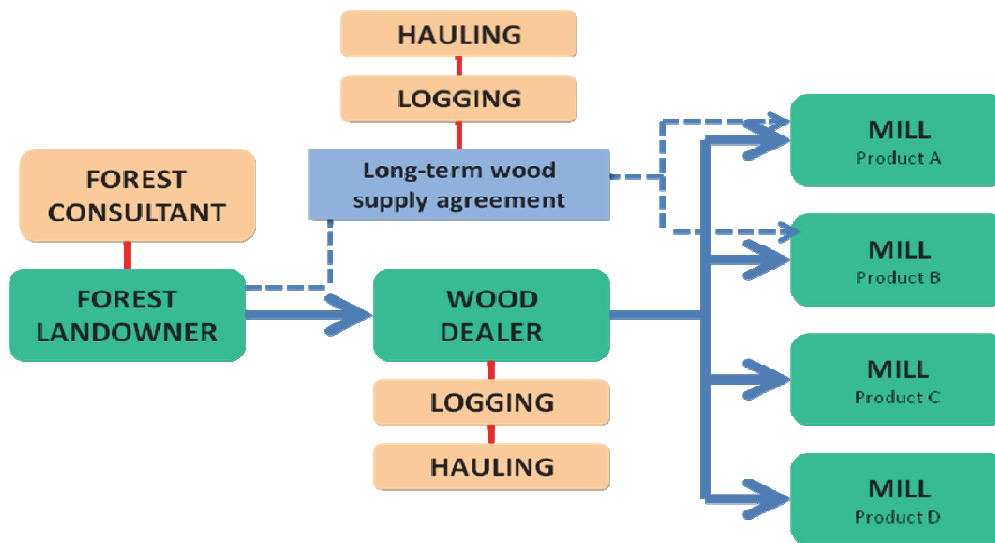
Where long-term supply agreements exist, logging and hauling is often the responsibility of the landowner. However, agreements can assign a variety of alternatives to manage the actual harvesting and delivery.

## ***Forest Product Mills***

Currently, procurement of wood or forest biomass by a mill is most often handled by one or two procurement managers doing business with several independent wood dealers. Dealers are paid for delivery of various forest products based on supply agreements between the two parties. The procurement managers also handle any activities related to long-term timber supply agreements with landowners.

The relationships between the timber supply chain participants are shown in Chart 3.

Chart 3: Illustration of the Timber and Biomass Supply Chain



## Timber Purchasing Procedure and Payment Methods

### *Landowner to Buyer*

Timber procurement from landowners is accomplished in the South using one of three (3) general methods: 1) lump-sum payment for a specific timber sale, 2) per unit payment for timber in a specific timber sale, 3) per unit payment for a minimum supply of timber within a long-term supply contract.

Lump-sum timber sale procedure:

1. A forestland owner, or his/her forestry consultant, specifies which timber is to be sold, designates its location, determines the value of the timber, and specifies any limiting factors that may impact harvesting activities.
2. The timber sale is advertised using the information in #1, usually including a mail-out to prospective buyers
3. Bids are accepted based on the total amount of timber to be harvested by a specific date.
4. A successful bidder is chosen, usually the highest, at a bid opening conducted by the landowner or his representative.
5. A deposit (typically 5%) is often taken with the successful bid at the time of bid opening, to be held in an escrow account
6. Within 2-3 weeks a contract is executed between the landowner and the timber buyer, at which time full payment is made for the timber. Contract terms are typically 12 months, but are sometimes 18 months, or longer.
7. The timber harvest is conducted.
8. At the completion of the timber harvest the deposit is returned, if the provisions of the contract have been met.

Per-Unit timber sale procedure:

1. The forestland owner, or his/her forestry consultant, specifies which timber is to be sold, designates its location, and specifies any limiting factors that may impact harvesting activities.
2. The timber sale is advertised or negotiated by mail, telephone, or in person with a timber buyer(s).
3. Bids or negotiated prices are accepted based on a rate per ton for each product expected to be harvested, such as pine pulpwood, small pine saw timber (chip-n-saw), large pine saw timber, pine ply logs, oak saw logs, poplar veneer, hardwood pulpwood, de-barked pine chips, whole tree chips, processed logging residues, etc.
4. A deposit is accepted that is agreed upon by buyer and seller at the time that a contract is executed for the sale of the wood.
5. The timber harvest is conducted.
6. Payment is made to the landowner weekly, or as agreed upon by buyer and seller, based on the amounts of each timber product harvested. Georgia law requires scale tickets for each load that show weights and product types to be provided to the landowner with payment.
7. At the appropriate completion of the timber harvest, the deposit is returned.

Sample timber sale agreements for lump-sum and per unit individual timber sales are shown in the Appendix.

Long-term supply agreement:

Supply agreements provide for delivery of timber or other forest products to a mill from year to year in the long-term. Agreements can use a guaranteed maximum cost for an agreed-upon quantity of delivered timber for the mill and they can provide a guaranteed minimum payment rate for the agreed upon quantity of sold timber for the landowner. Between the minimum and maximum value of the delivered timber product, the value changes as dictated by a financial index, such as reported prices in Timber MartSouth, or based on other traditional financial rates. The value will change once each period (3 mo., 6 mo, 12 mo.), based on the prescribed index and bounded by the agreed-upon minimum and maximum value per unit of delivered timber. Supply contracts may also contain provisions to include additional quantities of timber at prices below the minimum and/or above the maximum, if agreed upon by both the landowner and mill.

Supply contracts are typically used by larger landowners, especially when the landowner can provide harvesting and delivery of the timber to the mill. Details of the payment structure can be changed in the agreement and will generally follow that outlined in point #6 in the Per-Unit Timber Sale Procedure described above. Long-term supply agreements are addressed in detail in *Volume II: Mechanisms for Securing Long-term Forest Biomass Supply*.



## ***Wood Dealer to Mill***

Timber products delivered to a mill are purchased from a dealer by a mill based on tonnage and product. Rates are normally pre-arranged by contract, with allowances made to adjust them upon notification to the wood dealer by the mill. Rates are commonly adjusted on a tract by tract basis, determined by the quality and quantity of wood products involved. Long-term contracts are sometimes made concerning amounts of wood to supply a mill, and are addressed in detail within *Volume II: Mechanisms for Securing Long-term Forest Biomass Supply*. Quotas or limits to these amounts are sometimes applied, based on market and weather conditions.

## **Sustainable Timber Harvests**

### ***Master Timber Buyers and Harvesters***

The Sustainable Forestry Initiative (SFI) is a forest certification system that provides standards for management of forestlands in a manner that protects soil and water while providing for the sustainable production of ecological benefits and forest products. SFI also establishes a standard for “fiber sourcing” for use by the forest industry when harvesting forest products from non-industrial private timberlands and other non-certified forest lands. SFI Fiber Sourcing requires that timber harvests be performed by those loggers and by those timber buyers who attend special training to implement *Best Management Practices (BMPs)* which protect water and soil resources. Wood dealers and loggers attending this training are referred to as Master Timber Buyers and Master Timber Harvesters. The Georgia Forestry Commission lists the Master Timber Buyers and the Master Timber Harvesters on their website at GaTrees.org.

### ***Best Management Practices***

Recommendations for Best Management Practices in forestry operations have been developed by various state and federal agencies in cooperation with forest industry stakeholders. These recommended practices are designed to protect soil and water resources during reforestation, forest management and forest harvesting activities. The implementation of forestry BMPs is voluntary in most situations. However, the most recent Georgia survey, conducted in 2009, showed BMP implementation to be over 94%, and that more than 98% of the forest areas receiving treatments were in compliance with BMPs.<sup>3</sup>

Participants throughout the forest products supply chain expect forestry BMPs to be implemented, and most contracts involving timber and biomass sales will require BMP implementation.

## References

<sup>1</sup> Forest Inventory and Analysis, US Forest Service Southern Research Station, 2010

<sup>2</sup> Harper, R., Forest Inventory and Analysis program, Southern Research Station, US Forest Service, 2010, (industry ownership tract sizes are interpolated from smaller sample)

<sup>3</sup> Results of Georgia's 2009 Silvicultural Best Management Practices Implementation and Compliance Survey, Georgia Forestry Commission, 2010

# Appendix

SAMPLE FOREST PRODUCTS SALE AGREEMENT  
FOR PRIVATE LANDOWNERS SELLING TREES, TIMBER OR WOOD LUMP-SUM

**STATE OF GEORGIA**  
COUNTY OF \_\_\_\_\_

This **AGREEMENT** is made and entered into by and between \_\_\_\_\_ of (address) \_\_\_\_\_ hereinafter referred to as the **SELLER** and \_\_\_\_\_ of \_\_\_\_\_ hereinafter referred to as the **BUYER**.

**WITNESSETH:**

**ARTICLE 1 THE SELLER:**

1. Agrees to sell and the **BUYER** agrees to buy above-ground forest products designated for harvesting by the **SELLER** or his/her **AGENT** located and in the manner as described as follows:
  - A. Location and description of sale area:  
\_\_\_\_\_  
\_\_\_\_\_
  - B. Estimated Volumes and products to be harvested and removed:  
\_\_\_\_\_  
\_\_\_\_\_
  - C. Method of marking or designating forest products to be harvested and removed:  
\_\_\_\_\_  
\_\_\_\_\_
  - D. Biomass understory and residue harvesting:
    - i. Tops and branches of merchantable harvested trees \_\_\_\_\_ (will or will not) be harvested and delivered to biomass markets
    - ii. Understory trees with diameter at breast height <5" \_\_\_\_\_ (will or will not) be harvested and delivered to biomass energy markets
    - iii. Payment for any harvested biomass will be included in the payment described in Article IV Paragraph 1 of this agreement. The **SELLER** also recognizes the benefit in removing this material in preparation for reforestation.
2. Guarantees that he/she has full right and authority to sell the forest products described in Par. 1 above and that such forest products are free from all liens and otherwise unencumbered.
3. Grants to the **BUYER** the right of ingress and egress across and upon the sale area and existing roads adjacent to the sale area. The **SELLER** also reserves the right to regulate ingress and egress and designate and approve the location of any new roads across and upon the sale area prior to construction of said road(s) to ensure that total road length and potential erosion and sedimentation is minimized.
4. Shall in no way assume any responsibility for damage to equipment belonging to the **BUYER** or injury to persons employed by the **BUYER** or his/her **AGENT**; said responsibility being totally assumed by the **BUYER**.
5. Has set forth that the following conditions listed in **Article II** and known as **BEST MANAGEMENT PRACTICES (BMP's)** and referenced in the Georgia Forestry Commission 2009 publication "Georgia's Best Management Practices for Forestry" (BMP manual) apply to the sale of said forest products and will be adhered to by the **BUYER** insofar as practical and possible.

**ARTICLE II BEST MANAGEMENT PRACTICES:**

1. Roads
  - A. The location of all roads constructed and used during the extraction and transportation of forest products shall be approved by the **SELLER** or his/her **AGENT** and follow the contour with slope grades of five percent or less maintained, except where terrain or the use of existing roads requires short, steep grades necessitating the construction of water diversion measures (broad based dips, turnouts, culverts, etc.) installed at the proper intervals.
  - B. New Roads will be constructed on the sides of ridges to allow for proper drainage. Roads will not be located on ridge tops.
  - C. Except at stream crossings, roads will not be constructed within the Streamside Management Zone (SMZ) of any stream, pond, or lake on the property as designated in Table 2A of the BMP manual.
  - D. All necessary stream crossings will require the appropriate installation of \_\_\_\_\_ inch diameter culverts unless a

bridge or ford in the creek is approved by the **SELLER** or his/her **AGENT**. All exposed soil at the crossings will be stabilized with gravel, or grassed and mulched, or silt fences to prevent erosion and sedimentation. (See Table 3C in the BMP manual for proper culvert size)

- E. Under no circumstances will temporary stream crossings made of logs and brush be piled in the stream and covered with soil be permitted.
- F. All existing and newly constructed roads on and adjacent to the sale area used by the **BUYER** shall be maintained and left in a passable condition during and at time of completion of the logging operation by the **BUYER**.

## 2. Harvesting

- A. Only forest products designated in Art. 1 Par. 1 shall be harvested.
- B. All trees cut shall be utilized within the stump height and merchantable top diameter consistent with sound forest harvesting practices.
- C. Any and all merchantable timber not designated for removal as per **ARTICLE 1, Par. 1, Sub-par. A., B., and C**, and not included in this sale but due to being unavoidably damaged or to facilitate the removal of said timber shall be paid for by the **BUYER** at \_\_\_\_\_ [approximate market rate] if agreed upon and marked by the **SELLER** or his/her **AGENT**, with the exception of biomass as described in Art.1, Par. 1., Sub-par. D.
- D. Any and all merchantable timber designated for harvest and cut by the **BUYER** or his **AGENT** but not hauled off within four weeks thereafter shall be paid for at \_\_\_\_\_ [approximate market rate], with the exception of biomass described in Art. 1., Par. 1, Sub-par.D.
- E. Any and all merchantable timber not designated for removal as per **ARTICLE 1, Par. 1, Sub-par A., B., and C** and not included in this sale but removed or damaged unnecessarily as determined by **SELLER** or his/her **AGENT** shall be paid for at \_\_\_\_\_ [three times the market rate], with the exception of biomass described in Art.1, Par. 1., Sub-par. D.
- F. There shall be no penalty for damage to trees with diameter at breast height <5",
- G. Wheeled or tracked equipment is not allowed within any SMZ or any stream, pond, or lake on the property. Timber within the SMZ should be chainsaw felled and cable winched out.
- H. All logging debris (trees, tops, and limbs) if felled into streams, rivers, or lakes will be removed immediately by the **BUYER**.
- I. Streams are not to be randomly crossed by skidders. Any necessary crossings will be by temporary culvert of appropriate diameter or with skidder bridges with each location approved by the **SELLER** or his/her **AGENT**. Under no conditions will crossings made from logs and brush topped with soil be permitted.
- J. All log decks, portable sawmills, or chippers will not be allowed within any SMZ of any stream, pond, or lake on the property.
- K. Skid trails will be spread out on several paths and not concentrated. Skidding will be conducted on gradual grades instead of straight up and down slopes as much as possible. Water bars will be constructed at the proper intervals listed for percent slope (Figure 7, page 12 in the BMP book) by the **BUYER** when skid trails are retired. This must be completed within 14 days after the completion of the harvest.
- L. All human garbage, tires, cables, used lubricants, fuels, fluids and their containers of the **BUYER** will be removed from sale area and disposed of properly by the **BUYER**.

## ARTICLE III THE BUYER AGREES:

1. That prior to execution of this **AGREEMENT**, provide to the **SELLER** proof of Worker's Compensation coverage for all his/her employees and/or his/her **AGENT'S** employees who will be performing the work on this forest products sale and General Liability insurance with limits of one million dollars/two million dollar aggregate; such coverage to be maintained throughout the period of forest products harvest operations.
2. To protect unmarked and undesignated trees and areas from damage during wood operations.
3. To repair to original conditions or pay for at replacement costs any damage to fences or other improvements of the **SELLER**.
4. To reimburse the **SELLER** from escrow account or otherwise for all cost borne by the **SELLER** in suppressing any and all fires caused by the **BUYER** or his/her **AGENT** upon lands subject to this **AGREEMENT**.
5. To indemnify, release, and hold harmless the **SELLER** and his/her **AGENT** from and against all liabilities, damages, costs, and expenses arising from by reason of, or in connection with the **BUYER'S operations** hereunder.

## ARTICLE IV BOTH PARTIES MUTUALLY AGREE:

1. The **BUYER** agrees to pay the **SELLER** the sum of \$ \_\_\_\_\_ for all forest products\_which is/are designated for harvesting in **ARTICLE 1, Par. 1** of this **AGREEMENT**.
2. Payment for the forest products shall be made to the **SELLER** in the following manner: Lump sum at the time of signing of **AGREEMENT**.
3. In lieu of a performance bond, \$ \_\_\_\_\_ submitted with the bid on the forest products shall be held in an escrow account with the **SELLER** pending satisfactory completion of performance by the **BUYER** of all terms, provisions, conditions, and obligations on the part of the **BUYER** to be performed or observed in this **AGREEMENT**. The amounts so deposited shall be held to cover (a) any amounts which have become due the **SELLER** hereunder and that remain unpaid by **BUYER**; (b) the amount of any damage to forest products or property caused by failure of **BUYER** to fully observe and perform all conditions herein with respect to **BUYER'S** operation under this agreement; and (c) any costs, damages, or expenses to which the **SELLER** may be put by reason of default or breach of any terms, provisions, conditions, or obligations on part of the **BUYER** to be performed or observed in this **AGREEMENT**. Upon written notification to the **SELLER** or his/her **AGENT** that forest products harvest has been completed, there shall be repaid to the **BUYER** any balance of said deposit remaining after **BUYER'S** obligations and performance in this **AGREEMENT** have been fulfilled.
4. The **SELLER** or his/her **AGENT** reserves the right to inspect all operations covered by this **AGREEMENT** on a periodic basis to determine whether or not the terms of this **AGREEMENT** are being carried out.

5. The **SELLER** or his/her **AGENT** reserves the right to adjust or suspend harvesting and/or hauling operations in their sole discretion when it is determined that ground conditions or harvesting practices would result in excessive damage to the road systems or forest resources. In the event of a suspension, the total **AGREEMENT** term will not be shortened but rather the suspension time will be added to the **AGREEMENT** term.
6. Title to and responsibility for trees included in this **AGREEMENT** shall pass to the **BUYER** as they are severed from the stump and their removal from the property shall be the responsibility of the **BUYER**.
7. Any designated forest products, harvested or unharvested, which remain on the sale area at the date this **AGREEMENT** terminates, remain the property of the **SELLER**.
8. The **SELLER** retains all rights associated with the carbon sequestration and storage in all forest products designated for harvest, with the exception of certain carbon rights transferred to the **BUYER**; transferred carbon rights being specifically those rights associated with carbon in manufacturing residues and those rights associated with the biomass harvesting described in Article I, Par. 1 Sub-par. D.
9. No oral statement by any person shall be allowed to modify or change any written portion of this **AGREEMENT**.
10. This **AGREEMENT** shall not be assigned in whole or in part without the written consent of the other **PARTY**.
11. Any breach of the terms of this **AGREEMENT** shall be cause for termination.
12. This **AGREEMENT** shall terminate on the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.
13. In case of dispute over the terms of this **AGREEMENT** that cannot be satisfactorily agreed upon between the **PARTIES**, final decision shall rest with an arbitration board of three persons - one to be selected by each **PARTY** to this **AGREEMENT** and a third agreed upon by both **PARTIES**. Should the arbitration board determine a breach of the terms of this **AGREEMENT** has occurred, said breach shall be cause for termination of **AGREEMENT**.

IN WITNESS WHEREOF, the **PARTIES** hereto have set their hand and seals this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_.

**BUYER:** \_\_\_\_\_

**WITNESS:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**SELLER:** \_\_\_\_\_

**WITNESS:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

SAMPLE FOREST PRODUCTS SALE AGREEMENT  
FOR PRIVATE LANDOWNERS SELLING TREES, TIMBER OR WOOD BY THE UNIT

**STATE OF GEORGIA**  
**COUNTY OF \_\_\_\_\_**

This **AGREEMENT** is made and entered into by and between \_\_\_\_\_ of  
(address) \_\_\_\_\_ hereinafter referred to as  
the **SELLER** and \_\_\_\_\_ of \_\_\_\_\_ (address) hereinafter  
referred to as the **BUYER**.

**WITNESSETH:**

**ARTICLE 1 THE SELLER:**

1. Agrees to sell and the **BUYER** agrees to buy above-ground forest products designated for harvesting by the **SELLER** or his/her **AGENT** located and in the manner as described as follows:

E. Location and description of sale area:

\_\_\_\_\_  
\_\_\_\_\_

F. Estimated Volumes and products to be harvested and removed:

\_\_\_\_\_  
\_\_\_\_\_

G. Method of marking or designating forest products to be harvested and removed:

\_\_\_\_\_  
\_\_\_\_\_

H. Biomass understory and residue harvesting:

iv. Tops and branches of merchantable harvested trees \_\_\_\_\_(will or will not) be harvested –and delivered to biomass markets

v. Understory trees with diameter at breast height <5" \_\_\_\_\_(will or will not) be harvested and delivered to biomass energy markets

vi. Payment for any harvested biomass will be made as described in Article IV Paragraph 1 of this agreement. The **SELLER** also recognizes the benefit in removing this material in preparation for reforestation.

2. Guarantees that he/she has full right and authority to sell the forest products described in Par. 1 above and that such forest products are free from all liens and otherwise unencumbered.

3. Grants to the **BUYER** the right of ingress and egress across and upon the sale area and existing roads adjacent to the sale area. The **SELLER** also reserves the right to regulate ingress and egress and designate and approve the location of any new roads across and upon the sale area prior to construction of said road(s) to ensure that total road length and potential erosion and sedimentation is minimized.

4. Shall in no way assume any responsibility for damage to equipment belonging to the **BUYER** or injury to persons employed by the **BUYER** or his/her **AGENT**; said responsibility being totally assumed by the **BUYER**.

5. Has set forth that the following conditions listed in **Article II** and known as **BEST MANAGEMENT PRACTICES (BMP's)** and referenced in the Georgia Forestry Commission 2009 publication "Georgia's Best Management Practices for Forestry" (BMP manual) apply to the sale of said forest products and will be adhered to by the **BUYER** insofar as practical and possible.

**ARTICLE II BEST MANAGEMENT PRACTICES:**

1. Roads

G. The location of all roads constructed and used during the extraction and transportation of forest products shall be approved by the **SELLER** or his/her **AGENT** and follow the contour with slope grades of five percent or less maintained, except where terrain or the use of existing roads requires short, steep grades necessitating the construction of water diversion measures (broad based dips, turnouts, culverts, etc.) installed at the proper intervals.

H. New Roads will be constructed on the sides of ridges to allow for proper drainage. Roads will not be located on ridge tops.

I. Except at stream crossings, roads will not be constructed within the Streamside Management Zone (SMZ) of any stream, pond, or lake on the property as designated in Table 2A of the BMP manual.

J. All necessary stream crossings will require the appropriate installation of \_\_\_\_\_ inch diameter culverts unless a bridge or ford in the creek is approved by the **SELLER** or his/her **AGENT**. All exposed soil at the crossings will be stabilized with gravel, or grassed and mulched, or silt fences to prevent erosion and sedimentation. (See Table 3C in

- the BMP manual for proper culvert size)
- K. Under no circumstances will temporary stream crossings made of logs and brush be piled in the stream and covered with soil be permitted.
- L. All existing and newly constructed roads on and adjacent to the sale area used by the **BUYER** shall be maintained and left in a passable condition during and at time of completion of the logging operation by the **BUYER**.

2. Harvesting

- M. Only forest products designated in Art. 1 Par. 1 shall be harvested.
- N. All trees cut shall be utilized within the stump height and merchantable top diameter consistent with sound forest harvesting practices.
- O. Any and all merchantable timber not designated for removal as per **ARTICLE 1, Par. 1, Sub-par. A., B., and C**, and not included in this sale but due to being unavoidably damaged or to facilitate the removal of said timber shall be paid for by the **BUYER** at \_\_\_\_\_ [approximate market rate] if agreed upon and marked by the **SELLER** or his/her **AGENT**, with the exception of biomass as described in Art.1, Par. 1., Sub-par. D.
- P. Any and all merchantable timber designated for harvest and cut by the **BUYER** or his **AGENT** but not hauled off within four weeks thereafter shall be paid for at \_\_\_\_\_ [approximate market rate], with the exception of biomass described in Art. 1., Par. 1, Sub-par.D.
- Q. Any and all merchantable timber not designated for removal as per **ARTICLE 1, Par. 1, Sub-par A., B., and C** and not included in this sale but removed or damaged unnecessarily as determined by **SELLER** or his/her **AGENT** shall be paid for at \_\_\_\_\_ [ three times the market rate], with the exception of biomass described in Art.1, Par. 1., Sub-par. D.
- R. There shall be no penalty for damage to trees with diameter at breast height <5",
- S. Wheeled or tracked equipment is not allowed within any SMZ or any stream, pond, or lake on the property. Timber within the SMZ should be chainsaw felled and cable winched out.
- T. All logging debris (trees, tops, and limbs) if felled into streams, rivers, or lakes will be removed immediately by the **BUYER**.
- U. Streams are not to be randomly crossed by skidders. Any necessary crossings will be by temporary culvert of appropriate diameter or with skidder bridges with each location approved by the **SELLER** or his/her **AGENT**. Under no conditions will crossings made from logs and brush topped with soil be permitted.
- V. All log decks, portable sawmills, or chippers will not be allowed within any SMZ of any stream, pond, or lake on the property.
- W. Skid trails will be spread out on several paths and not concentrated. Skidding will be conducted on gradual grades instead of straight up and down slopes as much as possible. Water bars will be constructed at the proper intervals listed for percent slope (Figure 7, page 12 in the BMP book) by the **BUYER** when skid trails are retired. This must be completed within 14 days after the completion of the harvest.
- X. All human garbage, tires, cables, used lubricants, fuels, fluids and their containers of the **BUYER** will be removed from sale area and disposed of properly by the **BUYER**.

**ARTICLE III THE BUYER AGREES:**

1. That prior to execution of this **AGREEMENT**, provide to the **SELLER** proof of Worker's Compensation coverage for all his/her employees and/or his/her **AGENT'S** employees who will be performing the work on this forest products sale and General Liability insurance with limits of one million dollars/two million dollar aggregate; such coverage to be maintained throughout the period of forest products harvest operations.
2. To protect unmarked and undesignated trees and areas from damage during wood operations.
3. To repair to original conditions or pay for at replacement costs any damage to fences or other improvements of the **SELLER**.
4. To reimburse the **SELLER** from escrow account or otherwise for all cost borne by the **SELLER** in suppressing any and all fires caused by the **BUYER** or his/her **AGENT** upon lands subject to this **AGREEMENT**.
5. To indemnify, release, and hold harmless the **SELLER** and his/her **AGENT** from and against all liabilities, damages, costs, and expenses arising from by reason of, or in connection with the **BUYER'S operations** hereunder.

**ARTICLE IV BOTH PARTIES MUTUALLY AGREE:**

1. The **BUYER** agrees to pay the **SELLER** the sum of \$ \_\_\_\_\_/Ton for \_\_\_\_\_ product,  
 \$ \_\_\_\_\_/Ton for \_\_\_\_\_ product,  
 \$ \_\_\_\_\_/Ton for \_\_\_\_\_ product,  
 \$ \_\_\_\_\_/Ton for \_\_\_\_\_ product,  
 \$ \_\_\_\_\_/Ton for biomass chipped or otherwise removed

which is/are designated for harvesting in **ARTICLE 1, Par. I** of this **AGREEMENT**.

2. Payment for the forest products shall be made to the **SELLER** in the following manner: The **BUYER** shall have the loads weighed across any State certified or forest products industry scale, with the scale weight recorded on a written scale ticket. The **BUYER** shall submit payment to the **SELLER** based on the weight recorded on these scale tickets. The **BUYER** shall include with the payment all scale tickets and a Harvest Record and Sales Report based on the timber harvested and recorded on each scale ticket. The Harvest Records and Sales Report should recap the wood products weights and payment due to the **SELLER**. This reporting and payment should be done once every week covering a continuous weekly period. The **Buyer must make this weekly payment beginning at a minimum 14 days after harvest operations begin**. Upon the expiration of 21 days without receiving payment after harvest operations begin, the **SELLER** will notify the **BUYER** in writing and by certified mail or by personal delivery, to the **BUYER'S** last known address stating the **Seller's demand for payment**. Failure to make payment will subject the **BUYER** to litigation and/or prosecution under the law to include all associated costs for these actions by the **SELLER** for this purpose, under this contract.

3. The Buyer will notify the Seller or the sellers designated agent in advance, of the estimated date and time of day when the last load shipment will be made from the Seller's property.
4. In lieu of a performance bond, \$ \_\_\_\_\_ submitted with the bid on the forest products shall be held in an escrow account with the **SELLER** pending satisfactory completion of performance by the **BUYER** of all terms, provisions, conditions, and obligations on the part of the **BUYER** to be performed or observed in this **AGREEMENT**. The amounts so deposited shall be held to cover (a) any amounts which have become due the **SELLER** hereunder and that remain unpaid by **BUYER**; (b) the amount of any damage to forest products or property caused by failure of **BUYER** to fully observe and perform all conditions herein with respect to **BUYER'S** operation under this agreement; and (c) any costs, damages, or expenses to which the **SELLER** may be put by reason of default or breach of any terms, provisions, conditions, or obligations on part of the **BUYER** to be performed or observed in this **AGREEMENT**. Upon written notification to the **SELLER** or his/her **AGENT** that forest products harvest has been completed, there shall be repaid to the **BUYER** any balance of said deposit remaining after **BUYER'S** obligations and performance in this **AGREEMENT** have been fulfilled.
5. The **SELLER** or his/her **AGENT** reserves the right to inspect all operations covered by this **AGREEMENT** on a periodic basis to determine whether or not the terms of this **AGREEMENT** are being carried out.
6. The **SELLER** or his/her **AGENT** reserves the right to adjust or suspend harvesting and/or hauling operations in their sole discretion when it is determined that ground conditions or harvesting practices would result in excessive damage to the road systems or forest resources. In the event of a suspension, the total **AGREEMENT** term will not be shortened but rather the suspension time will be added to the **AGREEMENT** term.
7. Title to and responsibility for trees included in this **AGREEMENT** shall pass to the **BUYER** as they are severed from the stump and their removal from the property shall be the responsibility of the **BUYER**.
8. The **SELLER** retains all rights associated with the carbon sequestration and storage in all forest products designated for harvest, with the exception of certain carbon rights transferred to the **BUYER**; transferred carbon rights being specifically those rights associated with carbon in manufacturing residues and those rights associated with the biomass harvesting described in Article I, Par. 1 Sub-par. D.
9. Any designated forest products, harvested or unharvested, which remain on the sale area at the date this **AGREEMENT** terminates, remain the property of the **SELLER**.
10. No oral statement by any person shall be allowed to modify or change any written portion of this **AGREEMENT**.
11. This **AGREEMENT** shall not be assigned in whole or in part without the written consent of the other **PARTY**.
12. Any breach of the terms of this **AGREEMENT** shall be cause for termination.
13. This **AGREEMENT** shall terminate on the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.
14. In case of dispute over the terms of this **AGREEMENT** that cannot be satisfactorily agreed upon between the **PARTIES**, final decision shall rest with an arbitration board of three persons - one to be selected by each **PARTY** to this **AGREEMENT** and a third agreed upon by both **PARTIES**. Should the arbitration board determine a breach of the terms of this **AGREEMENT** has occurred, said breach shall be cause for termination of **AGREEMENT**.

IN WITNESS WHEREOF, the **PARTIES** hereto have set their hand and seals this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_.

**BUYER:** \_\_\_\_\_

**WITNESS:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**SELLER:** \_\_\_\_\_

**WITNESS:** \_\_\_\_\_

**DATE:** \_\_\_\_\_



GEORGIA FORESTRY  
COMMISSION



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