

Supply Base Report: MRE Crossville, LLC

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Completed in accordance with the Supply Base Report Template Version 1.3

For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

Document history

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1 Overview

Producer name: MRE Crossville, LLC
Producer location: 17551 AL Hwy 68, Crossville, AL 35962 USA
Geographic position: 34° 16' 21.71"N; 86° 2' 26.96"W
Primary contact: Mike Walker
 Plant Manager
 17551 AL Hwy 68, Crossville, AL 35962 USA
 256-572-8928
mwalker@moheganrenewables.com
Company website: www.moheganrenewables.com
Date report finalised: 12/Jul/2019
Close of last CB audit: Evaluation Audit (17/Jul/2019)
Name of CB: SCS Global Services
Translations from English: Yes
SBP Standard(s) used: Standard 1 version 1.0, Standard 2 version 1.1, Standard 4 version 1.0, Standard 5 version 1.0
Weblink to Standard(s) used: <https://sbp-cert.org/documents/standards-documents/standards>
SBP Endorsed Regional Risk Assessment: Not Applicable
Weblink to SBE on Company website: Not Applicable

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations				
Main (Initial) Evaluation	First Surveillance	Second Surveillance	Third Surveillance	Fourth Surveillance
X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 Description of the Supply Base

2.1 General description

Mohegan Renewable Energy – Crossville (MREC) purchases secondary feedstock in the form of hardwood and softwood chips and sawdust through its sole supplier, DeKalb Forest Products. DeKalb Forest Products purchases hardwood directly from the forest and chips this wood at its wood yard/chip mill about 0.25 miles from the MREC pellet mill. DeKalb also purchases pine & hardwood residual chips, sawdust and shavings for about 20 secondary sawmills in Alabama, Georgia and Tennessee. The supply base for the pellet mill and its secondary suppliers includes two hundred fifteen (215) counties (27,779,472 hectares) in Alabama (57 counties), Georgia (64 counties), Mississippi (25 counties) and Tennessee (69 counties) within the United States. The suppliers and sub-suppliers identified were located using GIS technology. Their estimated supply area was determined through interviews to establish the counties they source from, a stated maximum haul radius or a sixty (60) mile delivery radius was established for each supplier. The accumulation of these feedstock supplier areas was then used to identify the origin of wood fiber by states and counties from which MREC purchases wood fiber.

Forests are the predominant land use in this supply base (64%). Hardwood forests comprise the largest forest type (54.1%) of the supply area's forestland followed by pine forests (34.2%). The pine/oak forest comprises 11.2% of the supply area's forestland while about 0.5% of the forestland is considered non-stocked. About 77% of the supply area's forests are managed as natural forests while the remaining 23% of the supply area's forests are artificially regenerated.

The forest products industry is a very large part of the area's economy and is one of the top industries within the states generating \$18.5 billion in AL (2016), \$21.3 billion in GA (2017) and \$24.3 billion in TN (2015) annually.

MREC uses hardwood and pine chips and sawdust. Primary species used include loblolly pine (*Pinus taeda*), oak (*Quercus spp.*), Maple (*Acre spp.*), and many other hardwood species. None of these species are listed on the CITES list. Longleaf pine is on the IUCN Red List and is classified as endangered.

Pine forests are typically managed on an even-aged basis with a rotation age of 30 to 40 years. During this rotation the pine stand may be thinned one or two times during the middle of the rotation with a final harvest completing the rotation. Most pine forests are artificially regenerated with pine seedlings planted to defined stand densities. Chemical and/or mechanical site preparation is typically used to manage the less desirable hardwood species and herbaceous species at stand establishment. Chemical treatments are minimal or below label rates; do not kill all competing species and last about two years so the pine seedlings can become established. Fertilizers are not normally applied to these forests due to cost. Some private investment groups (REITS, TIMOs) may apply fertilizers on forests which are more intensively managed. These intensively managed pine forests represent a very small percentage of the overall pine forests in the supply basin.

Hardwood forests can be managed either as even-aged or uneven-aged stands. Most hardwood stands are 40 to 50 years when harvested if managed as an even-aged stand. No site preparation or fertilizers are used on hardwood forests.

The vast majority of forests in the MREC supply area are managed according to state forestry best management practices (BMPs). Overall BMP compliance reported for the various states within the supply base are: AL – 98.2% (2016); GA - 93.17% (2017); MS – 96.1% (2016) and TN - 88.5% (2017).

Sustainable forestry certification is present in MREC’s supply base. Based on state-wide reporting approximately 20.6% of the forestland is certified (SFI – 17.7%; FSC – 2.5% and ATF – 0.4%). No FSC certified fiber has been purchased to date.

MREC does not purchase any primary feedstock.

2.2 Actions taken to promote certification amongst feedstock supplier

MREC promotes certification through its own certification and the certification of its secondary suppliers. MREC is certified to the Forest Stewardship Council® (FSC®) chain of custody and controlled wood standards (SCS-COC-006410 and SCS-CW-006410). The facility was also SBP certified under different ownership. This facility maintained the SBP certificate (SBP-02-02).

MREC also promotes certification through the purchase of feedstock from its sole certified secondary supplier, DeKalb Forest Products (BV-COC-142241 and BV-CW-142241) who is FSC Chain of Custody certified. Of the approximately 20 secondary sub-suppliers, five are certified to the Sustainable Forestry Initiative® (SFI) Fiber Sourcing standard. These certifications are validated at least once annually as part of the secondary supplier annual audit.

2.3 Final harvest sampling programme

Not applicable. Facility only receives secondary feedstock.

2.4 Flow diagram of feedstock inputs showing feedstock type [optional]

2.5 Quantification of the Supply Base

Supply Base

- a. Total Supply Base area (ha): 27,779,472 ha
- b. Tenure by type (ha): 15,880,705 ha (privately owned) / 1,936,882 ha (public)
- c. Forest by type (ha): Temperate 17,817,589 ha
- d. Forest by management type (ha): 4,083,998 ha (plantation) / 13,434,373 ha (managed natural) / 328,356 ha (natural)
- e. Certified forest by scheme (ha):

Cert Hectares by Standard by State					
	AL	GA	MS	TN	Total
ATF	22,312	26,923	10,050	10,455	69,740
FSC	271,512	33,023	250,868	40,645	596,047
SFI	1,179,130	939,249	852,984	173,874	3,145,237
					3,811,024

Feedstock

- f. Total volume of Feedstock: tonnes or m3 - 0 – 200,000 tonnes*

- g. Volume of primary feedstock: tonnes or m³ – 0 tonnes
- h. List percentage of primary feedstock (g), by the following categories.
 - Certified to an SBP-approved Forest Management Scheme – Not Applicable
 - Not certified to an SBP-approved Forest Management Scheme – Not Applicable
- i. Forest Management Schemes:
 - Certified to an SBP-approved Forest Management Scheme – Not Applicable
 - Not certified to an SBP-approved Forest Management Scheme – Not Applicable
- j. List all species in primary feedstock, including scientific name

Species List	
Loblolly Pine (<i>Pinus taeda</i>)	Hickory (<i>Carya spp</i>)
Longleaf Pine (<i>Pinus palustris</i>)	Locust (<i>Robinia spp</i>)
Sand Pine (<i>Pinus clausa</i>)	Maple (<i>Acer spp</i>)
Shortleaf Pine (<i>Pinus echinata</i>)	Oak (<i>Quercus spp</i>)
Slash Pine (<i>Pinus elliotii</i>)	Persimmon (<i>Diospyros virginiana</i>)
Virginia Pine (<i>Pinus virginiana</i>)	Red maple (<i>Acer rubrum</i>)
American beech (<i>Fagus grandifolia</i>)	Red mulberry (<i>Morus rubra</i>)
Ash (<i>Fraxinus spp</i>)	Red oak (<i>Quercus rubra</i>)
Basswood, American (<i>Tilia americana</i>)	River birch (<i>Betula nigra</i>)
Black cherry (<i>Prunus serotina</i>)	Sassafras (<i>Sassafras albidum</i>)
Black walnut (<i>Juglans nigra</i>)	Sourwood (<i>Oxydendrum arboreum</i>)
Blackgum (<i>Nyssa sylvatica</i>)	Sugarberry (<i>Celtis laevigata</i>)
Boxelder (<i>Acer negundo</i>)	Sweetgum (<i>Liquidambar styraciflua</i>)
Buckeye (<i>Aesculus spp</i>)	Sycamore (<i>Platanus occidentalis</i>)
Eastern cottonwood (<i>Populus deltoides</i>)	Water oak (<i>Quercus nigra</i>)
Elm (<i>Ulmus spp</i>)	White oak (<i>Quercus alba</i>)
Hackberry (<i>Celtis occidentalis</i>)	Yellow-poplar (<i>Liriodendron tulipifera</i>)

- k. Volume of primary feedstock from primary forest - 0
- l. List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP-approved Forest Management Schemes:
 - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme – 0%
 - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme – 0%
- m. Volume of secondary feedstock: specify origin and type - the volume may be shown as a % of the figure in (f) and percentages may be shown in a banding between XX% to YY% if a compelling justification is provided*.

Pine chips	40%-59%	Hdwd chips	0%-19%
Pine sawdust	20%-39%	Hdwd sawdust	20%-39%

n. Volume of tertiary feedstock: specify origin and composition - the volume may be shown as a % of the figure in (f) and percentages may be shown in a banding between XX% to YY% if a compelling justification is provided*. 0 tonnes

* Compelling justification would be specific evidence that, for example, disclosure of the exact figure would reveal commercially sensitive information that could be used by competitors to gain competitive advantage. State the reasons why the information is commercially sensitive, for example, what competitors would be able to do or determine with knowledge of the information.

Bands for (f) and (g) are:

1. 0 – 200,000 tonnes or m³
2. 200,000 – 400,000 tonnes or m³
3. 400,000 – 600,000 tonnes or m³
4. 600,000 – 800,000 tonnes or m³
5. 800,000 – 1,000,000 tonnes or m³
6. >1,000, 000 tonnes or m³

Bands for (h), (l) and (m) are:

1. 0%-19%
2. 20%-39%
3. 40%-59%
4. 60%-79%
5. 80%-100%

NB: Percentage values to be calculated as rounded-up integers.

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
X	<input type="checkbox"/>

SBE was completed so that all material can be SBP compliant in accordance with SBP Standard 4, 5.2.2.

4 Supply Base Evaluation

4.1 Scope

The scope of the supply base evaluation is to determine the level of risk as compared to the indicators of SBP Framework Standard 1: Feedstock Compliance Standard. The scope of the evaluation covered the supply area for the pellet mill including all existing sources of secondary feedstocks, as well as the feedstocks' point of origination. The evaluation is consistent with MREC's due diligence processes and risk assessment for FSC Controlled Wood.

4.2 Justification

The evaluation assessed each of the indicators within SBP Framework Standard 1: Feedstock Compliance to determine the level of risk associated with each indicator. This assessment reviewed applicable laws and regulations and forestry best management practices, analysed high conservation areas within the supply base for their rareness and level of protection and assessed the economic impact of the company's presence in the supply base. Forestland ownership in the supply area is mainly private. The forest industry is well established with logger training and forestry best management practices required by all large wood consuming mills.

This review and analysis was completed using stated laws and regulations, published forestry best management practices, recognized research and data from the USDA Forest Service and conservation organizations such as the World Wildlife Fund, NatureServe, state forestry and wildlife agencies and other noted experts.

4.3 Results of Risk Assessment

Each indicator was assessed against MREC's FSC controlled wood and chain of custody programs. The FSC US Controlled Wood National Risk Assessment (US NRA) was used as a baseline to determine if areas of high conservation value, biodiversity and conversion exist in MREC's supply base area. Based on this assessment, MREC has determined a rating of "low risk" for each indicator with the exception of indicators 2.1.2, 2.1.3, 2.2.3, 2.2.4 and 2.4.1.

4.4 Results of Supplier Verification Programme

Not applicable; the results of the risk assessment indicate there are no indicators determined to be "unspecified risk".

4.5 Conclusion

Based on the results of the supply base evaluation there is low risk to all indicators SBP Framework Standard 1: Feedstock Compliance except for indicators 2.1.2, 2.1.3, 2.2.3, 2.2.4 and 2.4.1, which are determined to be "specified risk" and will require mitigation measures to lower this identified risk.

This conclusion is based on the strong legal and regulatory system found within the supply base. Federal, state and local laws regulations are in place to address a wide range of indicators including, but not limited to, illegal harvesting, water quality, rare and endangered species, worker health and safety, labour rights and

air quality. In addition to these laws and regulations, voluntary state forestry best management practices (BMPs) are in place to provide guidance to forest landowners and contractors on how to sustainably manage forests. The company has made these voluntary guidelines mandatory through contract language requiring the use of all BMPs.

5 Supply Base Evaluation Process

The Supply Base Evaluation was completed in partnership with Greener Options Inc., a sustainability consulting company specializing in sustainable forest certification and Biological Integrity LLC, a consulting company specializing in conservation and biodiversity assessments.

Gary Boyd, Greener Options Inc. is a Society of American Foresters (SAF) Certified Forester, a Georgia Registered Forester and an ISO 14001 Environmental Management Lead Auditor. He is also a lead auditor and conducts audits to the FSC, SFI and Programme for the Endorsement of Forest Certification (PEFC) chain of custody, controlled wood, fiber sourcing and forest management standards. He had more than 35 years of experience in the forestry profession. Mark Hughes Ph.D., Biological Integrity LLC, is an accomplished wildlife biologist who has published more than 10 scientific articles, books and monographs. He has developed more than thirty (35) risk assessments for forest products companies addressing sustainable forestry certification schemes such as the FSC and PEFC.

The supply base was determined based on secondary feedstock suppliers to ensure the complete geography of the supply area. USDA Forest Service Forest Inventory and Analysis (FIA) data based on this established supply base was used to verify forest growth and harvest levels, forest ownership and overall forest composition (species, age, stand structure). Ecosystem and biodiversity data from WWF, GreenPeace, World Resources Institute (WRI), Conservation International (CI), NatureServe and the various state natural heritage programs from within the supply base was also reviewed to determine potential high conversation value (HCV) areas and the level of protection for these HCVs.

Forest management regimes for the supply base were determined from information gathered from local forestry professionals and contractors within the region. Regional economic and forest health information was gathered from state forestry agencies and forestry associations.

MREC's supplier and sub-suppliers are visited at least annually to confirm their supply base and the species they purchase for their operations.

6 Stakeholder Consultation

Thirty-one (31) local and regional stakeholders were identified for consultation. These stakeholders represent interests from local contractors and businesses, local governments, state forestry and wildlife agencies, conservation organizations such as the Nature Conservancy, state forestry associations, local forest landowner associations, US Forest Service and US Fish & Wildlife Service.

Letters were sent to the identified stakeholders between 10 May 2019 and 16 May 2019 notifying them the intent of MREC to become SBP certified and asking for input on their thoughts on MREC's business practices and their impact on sustainable forestry in their area. Feedback was requested during a 45-day review process via letter or email. All feedback will be reviewed and responses will be provided.

6.1 Response to stakeholder comments

No responses were received.

7 Overview of Initial Assessment of Risk

The initial results of the supply base evaluation has determined there is low risk to all indicators SBP Framework Standard 1: Feedstock Compliance except for indicators 2.1.2, 2.1.3, 2.2.3, 2.2.4 and 2.4.1, which are determined to be “specified risk”. The assessment used evidence in conjunction with MRE’s FSC Controlled Wood due diligence and risk assessment. It also assessed compliance with the European Union Timber Regulation and the UK Department of Energy and Climate Change’s Timber Standard for Heat and Electricity. The low risk ratings were supported by the fact that the United States and the relevant states have well established systems of laws and regulations that satisfy all applicable SBP indicators.

Table 1. Overview of results from the risk assessment of all Indicators (prior to SVP)

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
1.1.1		X	
1.1.2		X	
1.1.3		X	
1.2.1		X	
1.3.1		X	
1.4.1		X	
1.5.1		X	
1.6.1		X	
2.1.1		X	
2.1.2	X		
2.1.3	X		
2.2.1		X	
2.2.2		X	
2.2.3	X		
2.2.4	X		
2.2.5		X	
2.2.6		X	
2.2.7		X	
2.2.8		X	
2.2.9		X	

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
2.3.1		X	
2.3.2		X	
2.3.3		X	
2.4.1	X		
2.4.2		X	
2.4.3		X	
2.5.1		X	
2.5.2		X	
2.6.1		X	
2.7.1		X	
2.7.2		X	
2.7.3		X	
2.7.4		X	
2.7.5		X	
2.8.1		X	
2.9.1		X	
2.9.2		X	
2.10.1		X	

8 Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

Not applicable; all indicators of the initial risk assessment were determined to be low or specified risk and no unspecified risk was identified. No Supplier Verification Programme is required.

8.2 Site visits

Not applicable.

8.3 Conclusions from the Supplier Verification Programme

Not applicable.

9 Mitigation Measures

9.1 Mitigation measures

Central Appalachian CBA

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Central Appalachian CBA.

2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.
3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.

Southern Appalachian CBA

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Mark Hughes, PhD, owner of Biological Integrity, LLC attended the Southeast Region meeting on July 31, 2018 in Atlanta, GA. Hughes actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc., and Mark Hughes, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.

2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.
3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation;

and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.

Late Successional Bottomland Hardwoods

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for Late Successional Bottomland Hardwoods (LSBH).

2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits & values of LSBH, threats from forest management activities & related loss of values, and opportunities for conservation through management that restores or maintains LSBH and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.
3. Engage with and/or provide monetary or in-kind resources to conservation organizations or similar entities that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of LSBH, with a goal of long-term conservation of this forest type within the specified risk area and MREC's supply area.

Mesophytic Cove Sites

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.

2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits and values of Mesophytic Cove Sites, how to identify them in the field, threats from incompatible forest management activities, and opportunities for conservation through management that enhances these sites and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

Native Longleaf Pine Systems

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the NLPS.

2. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the social benefits and values of NLPS, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains NLPS and reduces or eliminates these threats. Communications should recognize the importance of the forest understory and fire to NLPS. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.
3. MREC will engage with and/or provide monetary or in-kind resources to conservation organizations such as the Longleaf Alliance that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of NLPS, with a goal of long-term conservation of this system within the specified risk area and the MREC's supply area.

IUCN Centre for Plant Diversity

1. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the values of granite outcrops, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains granite outcrops and reduces or eliminates these threats. Communications should recognize the importance of granite outcrops. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

Forestland Conversion

1. MREC is developing and implementing binding written agreements with its feedstock suppliers that:
 - i. mitigate the risk that material supplied originates from forest areas converted into plantation or non-forest use; or
 - ii. assure that if some conversion has occurred, that material supplied originates from limited and legal sources of conversion (e.g., conversion that results in conservation benefits, publicly approved changes in zoning in urban areas, etc.) and does not come from sources where the conversion threatens High Conservation Values.
2. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for forestland conversion.

3. MREC will work with suppliers who source wood fiber from these counties to communicate and educate suppliers, their loggers and landowners on the social benefits of keeping forests as forests, and the value-enhancing alternatives to conversion and opportunities for the maintenance of forests. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.
4. MREC will also maintain membership in the Alabama Forestry Association to keep abreast of forestry issues within MREC's supply area. Below are some sources of information used to educate suppliers and their loggers, and landowners of forest conservation.

9.2 Monitoring and outcomes

Mitigation as been implemented. Monitoring will occur during annual supplier audits and documented using MREC-DOC-012 Secondary Supplier Audit Checklists. The plans to measure effectiveness for these mitigation measures are below:

Central Appalachian CBA

1. Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.
2. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.
3. Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

Southern Appalachian CBA

1. Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.
2. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.
3. Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

Late Successional Bottomland Hardwoods

1. Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.
2. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.
3. Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

Mesophytic Cove Sites

1. Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.
2. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

Native Longleaf Pine Systems

1. Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.
2. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.
3. Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

IUCN Centre for Plant Diversity

1. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

Forestland Conversion

1. The Company will annually review Fiber Supply Agreements to ensure agreements contain applicable requirements.
2. Consultant will have an annual review with the company on forestland conversion to review any updates or changes on forestland conversion. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.
3. The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on forestland conversion. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.
4. MREC will also maintain membership in the Alabama Forestry Association to keep abreast of forestry issues within MREC's supply area.

10 Detailed Findings for Indicators

Detailed findings for each Indicator are given in Annex 1.

11 Review of Report

11.1 Peer review

No peer review of this report was completed.

11.2 Public or additional reviews

No additional external review of this report has been completed by other stakeholders.

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	<i>Gary Boyd</i>	<i>Owner Greener Options Inc.</i>	<i>7/11/2019</i>
	Name	Title	Date
The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.			
Report approved by:	<i>Mike Walker</i>	<i>Plant Manager</i>	<i>July 12, 2019</i>
	Name	Title	Date
Report approved by:	<i>Gerry Amenta</i>	<i>V P of Logistics</i>	<i>July 12, 2019</i>
	Name	Title	Date

13 Updates

13.1 Significant changes in the Supply Base

Not applicable; This is the certification audit report.

13.2 Effectiveness of previous mitigation measures

Not applicable; This is the certification audit report.

13.3 New risk ratings and mitigation measures

Not applicable; This is the certification audit report.

13.4 Actual figures for feedstock over the previous 12 months

Not applicable; This is the certification audit report.

13.5 Projected figures for feedstock over the next 12 months

Not applicable; This is the certification audit report.

14 Annex 1: Detailed Findings for Supply Base Evaluation Indicators

	Indicator
1.1.1	The Biomass Producer’s Supply Base is defined and mapped.
Finding	The Company’s Supply Base is defined and mapped as part of the company’s MREC-DOC-005 FSC Controlled Wood Risk Assessment. The map (Figure 1) and list of states and counties (Table 1) are defined by present & potential secondary feedstock suppliers and sub-suppliers of the facility. Supply areas for each feedstock supplier and sub-supplier were determined by input obtained from the supplier and/or sub-supplier where either specific states & counties were identified as their supply area or they provided a maximum haul distance from which they define their supply area. States/counties that intersected the stated radius were considered a part of their supply area. All supplier and sub-supplier supply area information was merged into the Company’s overall supply area.
Means of Verification	Origin of secondary feedstocks are determined initially on the MRE Supply Area Declaration. Once an supplier is active, the suppliers are verified during the Company’s secondary supplier audits that are conducted annually for each supplier and documented on MREC-DOC-012 Secondary Supplier Audit Checklist.
Evidence Reviewed	<ul style="list-style-type: none"> • MRE Supply Area Declaration • MREC-DOC-005 FSC Controlled Wood Value Risk Assessment • MREC-DOC-012 Secondary Supplier Audit Checklist
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.1.2	Feedstock can be traced back to the defined Supply Base.
Finding	All feedstock is purchased through one supplier, DeKalb Forest Products. Secondary feedstock comes from about twenty-three (23) pine & hardwood sawmills supplying chips, sawdust or shavings. Feedstock can be tracked by scale tickets upon receipt from supplier or sub-suppliers. Communications with suppliers and sub-suppliers confirms feedstock originates from within the Company supply base and is recorded using MREC-DOC-012 Secondary Supplier Audit Checklist. Traceability to the county of origin is required in Company policies and procedures.
Means of Verification	Company procedures, records in feedstock inventory system and communications with suppliers

Evidence Reviewed	<ul style="list-style-type: none"> • Scale Tickets • MREC-POL-001 Sustainability Policy • MREC-PROC-001 Chain of Custody Procedures • MREC-PROC-002 Due Diligence Procedures • MREC-PROC-003 SBP Procedures • MREC-DOC-012 Secondary Supplier Audit Checklist
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.1.3	The feedstock input profile is described and categorised by the mix of inputs.
Finding	The Company purchases secondary & tertiary feedstocks that are described in MREC-DOC-004 Chain of Custody Product Group List as a part of its FSC Chain of Custody system. Receiving records record the type of feedstock and the species group purchased from secondary & tertiary suppliers and sub-suppliers. The Company’s inventory system tracks all feedstock purchases. Receiving records are maintained for a five-year period to meet FSC Chain of Custody standard requirements.
Means of Verification	Verify wood purchases in feedstock inventory system.
Evidence Reviewed	<ul style="list-style-type: none"> • Feedstock receiving records • Scale Tickets • MREC-DOC-004 Chain of Custody Product Group List • MREC-PROC-001 Chain of Custody Procedures • MREC-PROC-002 Due Diligence Procedures • MREC-PROC-003 SBP Procedures
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.2.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Supply Base.
Finding	<p>The Company has approved and implemented MREC-POL-001 Sustainability Policy that provides guidance to demonstrate the Company is committed to adhering to all applicable Federal, State and local laws and regulations. This policy also requires the avoidance of sourcing wood fiber from illegally harvested wood.</p> <p>Fiber Purchase Agreements executed with suppliers contain language requirements of meeting applicable laws and regulations and not knowingly purchasing illegally harvested wood. MREC-PROC-001 Chain of Custody Procedures and MREC-PROC-002 Due Diligence Procedures provide guidance on the purchase of feedstock to ensure it is legally sourced.</p> <p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 1: Illegally harvested wood to be “low risk”. MREC-DOC-005 FSC Controlled Wood Risk Assessment supports this low risk assessment through the listing of various applicable laws showcasing the rule of law and public agency governance.</p>
Means of Verification	Fiber Purchase Agreements, Federal & State laws
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-PROC-001 Chain of Custody Procedures • MREC-PROC-002 Due Diligence Procedures • MREC-DOC-005 FSC Controlled Wood Risk Assessment • FSC US Controlled Wood National Risk Assessment (US NRA)
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.3.1	The BP has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.
Finding	<p>The Company has approved and implemented MREC-POL-001 Sustainability Policy that provides guidance to demonstrate the Company is committed to adhering to all applicable Federal, State and local laws and regulations. This policy also requires the avoidance of sourcing wood fiber from illegally harvested wood.</p> <p>Fiber Purchase Agreements executed with suppliers contain language requirements of meeting applicable laws and regulations and not knowingly purchasing illegally harvested wood. MREC-PROC-001 Chain of Custody Procedures and MREC-PROC-002 Due Diligence Procedures provide guidance on the purchase of feedstock to ensure it is legally sourced and in compliance with EUTR legality requirements.</p> <p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 1: Illegally harvested wood to be “low risk”. MREC-DOC-005 FSC Controlled Wood Risk Assessment supports this low risk assessment through the listing of various applicable laws showcasing the rule of law and public agency governance.</p>
Means of Verification	Fiber Purchase Agreements, Federal & State laws
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-PROC-001 Chain of Custody Procedures • MREC-PROC-002 Due Diligence Procedures • MREC-DOC-005 FSC Controlled Wood Risk Assessment • FSC US Controlled Wood National Risk Assessment (US NRA)
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.4.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting, are complete and up to date.
Finding	<p>The Company has implemented appropriate control systems and procedures to verify that payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting, are complete and up to date. MREC-POL-001 Sustainability Policy states the Company will abide by all laws and regulations, including those laws associated with taxes and harvesting rights. Severance taxes are paid by the Company for feedstock. The Company will pay this tax per state regulations.</p> <p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 1: Illegally harvested wood to be “low risk”. Indicators 1.5 Payment of royalties and harvesting fees, 1.6 Value added taxes and other sales taxes and 1.7 Income and profit taxes are all determined to be “low risk”.</p> <p>Furthermore, Transparency International has identified no issues with corruption bribery or other illegal activities with the US having a Corruptions Perceptions Index score of 71 in 2018. AHEC Legality Study determined the Company’s supply area is a low risk for illegal activity. The World Bank ranked the US in the top 90th percentile in the Rule of Law category (91.83 / 100 in 2017).</p>
Means of Verification	Tax payment records, Fiber Purchase Agreements
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • Tax payments • FSC US Controlled Wood National Risk Assessment (US NRA) • MREC-POL-001 Sustainability Policy
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.5.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is supplied in compliance with the requirements of CITES.
Finding	The Company has implemented appropriate control systems and procedures to verify that feedstock is supplied in compliance with the requirements of CITES. Based on review of the CITES list it is determined that there are no species used in Company operations that are included in the CITES list.
Means of Verification	List of species used by Company located in MREC-DOC-004 Chain of Custody Product Group List and CITES list located in MREC-DOC-005 FSC Controlled Wood Risk Assessment
Evidence Reviewed	<ul style="list-style-type: none"> • MREC-DOC-004 Chain of Custody Product Group List • MREC-DOC-005 FSC Controlled Wood Risk Assessment
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
1.6.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that feedstock is not sourced from areas where there are violations of traditional or civil rights.
Finding	<p>MREC-POL-001 Sustainability Policy states the Company will abide by all laws and regulations, including those laws associated with traditional and civil rights.</p> <p>Harvesting in the supply basin presents a low risk of violation of traditional, civil and collective rights based on the following factors: (1) There is no UN Security Council ban on timber exports from the country concerned; (2) The country or district is not designated a source of conflict timber (e.g. USAID Type 1 conflict timber); (3) There are recognized and equitable processes in place to resolve conflicts of substantial magnitude pertaining to traditional rights including use rights, cultural interests or traditional cultural identity in the district concerned; and (4) There is no evidence of violation of the ILO Convention 169 on Indigenous and Tribal Peoples taking place in the forest areas in the district concerned.</p> <p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 2: Wood harvested in violation of traditional and human rights to be “low risk”.</p>
Means of Verification	MREC-POL-001 Sustainability Policy, FSC US Controlled Wood National Risk Assessment (US NRA)
Evidence Reviewed	<ul style="list-style-type: none"> • MREC-POL-001 Sustainability Policy • MREC-DOC-005 FSC Controlled Wood Risk Assessment • FSC US Controlled Wood National Risk Assessment (US NRA)
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation values are identified and mapped.
Finding	<p>The Company's MREC-DOC-005 FSC Controlled Wood Risk Assessment identified and mapped the presence or absence of the following high conservation value areas within its supply base. The FSC US Controlled Wood National Risk Assessment (US NRA) was the basis for the identification and mapping of areas with high conservation value (HCV). The US NRA consulted with and applied recommendations from over 200 conservation groups and databases including, but not limited to, Protected Areas Database of the United States (PAD-US), International Union for the Conservation of Nature (IUCN), The Nature Conservancy, NatureServe, & USFS Inventoried Roadless Areas to map these HCVs.</p> <p>In addition to the US NRA, the company used World Wildlife Fund (WWF) eco-regions and Critical Ecosystem Partnership Fund biodiversity hotspots to identify and map HCV areas.</p> <p>The Company determined its feedstock supply area based on the secondary feedstock the facility is receiving. The company has expanded its identification and mapping of high conservation value areas (HCVs) by mapping HCV by supplier. These supplier HCV maps collectively define the overall supply area for the company. These more detailed supplier maps utilize the conservation measures from the FSC Controlled Wood US National Risk Assessment (US NRA) where HCVs of "specified risk" have been identified. These supplier maps are used in conjunction with MREC-DOC-012 Secondary Supplier Audit Checklist to annually review each supplier's supply area, areas of "specified risk" that are identified in their supply areas and mitigation measures being implemented to reduce "specified risk" to "low risk". MREC-DOC-005 FSC Controlled Wood Risk Assessment identifies and maps HCVs with "specified risk" designations.</p>
Means of Verification	Maps included in MREC-DOC-005 FSC Controlled Wood Risk Assessment and MREC-DOC-012 Secondary Supplier Audit Checklist
Evidence Reviewed	<ul style="list-style-type: none"> • MREC-DOC-005 FSC Controlled Wood Risk Assessment • MREC-DOC-012 Secondary Supplier Audit Checklist • FSC US Controlled Wood National Risk Assessment (US NRA) https://us.fsc.org/en-us/certification/controlled-wood/fsc-us-controlled-wood-national-risk-assessment-us-nra • Protected Areas Database of the United States (PAD-US) https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/protected-areas • International Union for the Conservation of Nature (IUCN) https://www.iucn.org/ • The Nature Conservancy https://www.nature.org/en-us/ • NatureServe http://explorer.natureserve.org/ • World Wildlife Fund (WWF) https://www.worldwildlife.org/biome-categories/terrestrial-ecoregions • Critical Ecosystem Partnership Fund https://www.cepf.net/our-work/biodiversity-hotspots/north-american-coastal-plain

Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.1.2	The Biomass Producer has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.
Finding	<p>MREC has implemented the US NRA for its supply area. MREC has determined the following categories of controlled wood as “low risk”:</p> <ul style="list-style-type: none"> • Category 1: Illegally harvested wood; • Category 2: Wood harvested in violation of traditional and human rights; • Category 5: Wood from forests in which genetically modified trees are planted. <p>MREC has determined there may be areas within its supply area that are considered “specified risk” to the following categories of controlled wood:</p> <ul style="list-style-type: none"> • Category 3: Wood from forests where high conservation values are threatened by management activities; <ul style="list-style-type: none"> ○ HCV1 – Central Appalachian Critical Biodiversity Area (CBA); ○ HCV1 – Southern Appalachian CBA; ○ HCV3 – Late Successional Bottomland Hardwoods; ○ HCV3 – Mesophytic Cove Sites; ○ HCV3 - Natural Longleaf Pine Systems; • Category 4: Wood from forests being converted to plantations or non-forest use. <p>MREC has mapped these “specified risk” areas by supplier/sub-supplier and will implement, as needed, adequate control measures to either avoid or to mitigate specified risk related to origin and/or risk related to mixing with non-eligible inputs in the supply chain.</p> <p><u>Central Appalachian CBA</u> The Central Appalachian CBA is located within 52 counties in 3 states in the northeastern portion of the MREC supply area. One (1) supplier provides wood fiber to MREC source from counties within this CBA. Nineteen (19) sub-suppliers providing wood fiber to MREJ source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).</p> <p>This CBA corresponds with the higher elevation portions of WWF’s ‘Appalachian Mixed Mesophytic Forest’ area, one of their Global 200 biodiversity areas. The broadleaf forests and aquatic habitats drive the region’s biodiversity. The forests are significant in the diversity of different forest types that occur and within them the large number of different tree species that occur, along with incredibly diverse understories and associated wildlife species. The geologic history, change in elevation, and diverse topography and climate have resulted in a very large number of microhabitats within the region – each with a unique biodiversity.</p> <p>Identified Threats: <u>Mixed Mesophytic Forests</u> - The priority threats to the forests as a whole include: climate change, pollution from mining, new highways and utility rights-of-way, ORV recreation and overpopulation of deer. <u>Aquatic Habitats</u> - Hydrologic alteration partially due to forestry practices and conversion from hardwood forests to non-native planted pine, reduced water quality</p>

partially due to loss of near-stream forested habitat and sedimentation associated with forestry practices and lack of Best Management Practice (BMP) implementation, and severe erosion of river banks.

Southern Appalachian CBA

The Southern Appalachian CBA is located within 35 counties in 2 states within the MREC supply area. All suppliers and their sub-suppliers provide wood fiber to MREC source from counties within this CBA which is considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Biodiversity values in the southern Appalachians include aquatic habitats, glades, and montane longleaf pine. Alabama is recognized as having the greatest number of freshwater species of mollusks and fish in the United States, and many of these species have very restricted distributions and specialized habitat requirements that make them highly vulnerable to extinction. The Cahaba River watershed is the center of the biodiversity hotspot, but the biodiversity area includes other smaller watercourses as well. Aquatic habitats driving this concentration of biodiversity include lakes, rivers, streams, bogs, swamps, ephemeral pools, fens, seeps, swamp forests and wet meadows. Other drivers of biodiversity include glades and montane longleaf pine. Bibb County Glades (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. These are open habitats that are dominated by upland herbaceous plant species. There is typically an absence of a tree canopy on glades, resulting in large amounts of sunlight and heat on the surface. Montane longleaf pine habitats occur in steep rolling topography historically maintained by fire, mostly outside of or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community.

Identified Threats:

Aquatic Habitats - Numerous sources of information identify threats from forest management activities, particularly non-point source pollution in aquatic habitats, and disturbance to riparian zones.

Glades - Threats include grazing, non-native species, quarrying, root-digging, plant and animal collecting, removal of large rocks for landscaping, urban development, plowing for fire breaks, use as logging decks (resulting in soil/vegetation disturbance and soil erosion), conversion to other land uses, and ORV damage.

Montane Longleaf Pine - Biodiversity values can be adversely affected by forest management activities via conversion of longleaf to other pine types, and the use of management techniques, including herbicide application that have the potential to inhibit native understory communities.

Late Successional Bottomland Hardwoods

Late Successional Bottomland Hardwoods (LSBH) are located within 9 counties in 2 states in the southern-most portion of the MREC supply area. Two (2) sub-suppliers providing hardwood wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Much of the original bottomland hardwood in the US was cleared for agriculture, particularly in the Mississippi valley, and much of the remainder was mismanaged leaving very few intact examples. Bottomland Hardwoods are periodically inundated, floodplain forests, where the entire ecosystem is driven by hydrology. Late successional stands are not defined by the species, as much as by the structural composition (e.g., more stratification) and existence of large wood debris, including standing hollow trees – these changes occur at about 80 years in most Bottomland Hardwood types and perhaps a little later in cypress swamps.

Identified threats include development, hydrologic changes (droughts, water withdraws, ditching), incompatible forest management, pollution, fragmentation, invasive species and economic drivers that alter forest management goals.

Mesophytic Cove Sites

Mesophytic Cove Sites is located within 40 counties in 3 states in the northeastern portion of the MREC supply area. Twenty (20) sub-suppliers providing wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Mesophytic cove sites are highly diverse, closed-canopy hardwood forest occurring on sheltered sites at low- to moderate-elevation (1,000-3,600 ft), and sometimes higher. They tend to occur in large patches on concave slopes that accumulate nutrients and moisture. They are characterized by high species diversity and a complex forest structure. The ground level flora in particular has high species richness, often with abundant spring ephemerals. Rich cove forests have very fertile soils with a diverse herb layer containing few shrubs. Acidic cove forests are less fertile than rich coves, but otherwise similar.

Identified Threats to this forest type are invasive species and conversion to other uses. Threats also include incompatible forest management that results in alterations to the structure and composition of the forest or conversion to other forest types (white pine), climate change, chronic deer herbivory, harvesting of herbs and pollution.

Native Longleaf Pine Systems

Native Longleaf Pine Systems (NLPS) are located in 12 counties in 2 states throughout the MREC supply area. Fourteen (14) sub-suppliers providing wood fiber to MREC source from counties that have been identified as containing native longleaf systems resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

NLPS were once one of the most widespread forest types in the US but were reduced to less than 5% of their original range, becoming one of the rarest forest systems in the world. This historical reduction was driven by suppression of fire and conversion to other forest types. These forest systems are associated with high animal and plant diversity, including many rare, threatened and endangered species such as the Red-cockaded Woodpecker, Bachman’s Sparrow, Gopher Tortoise, Eastern Indigo Snake, and Flatwoods Salamander.

“Native” in this instance refers to existing longleaf pine that is on a site that has historically been maintained as longleaf pine. Longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine do not apply under this definition. “Native” does not imply a particular regeneration method; these stands may be either planted or naturally regenerated.

Identified threats include altered stand structure (due to lack of fire), conversion to other forest types, conversion to other land uses, habitat disturbance (including management techniques that inhibit native understory communities which may include herbicide application), and fragmentation.

IUCN Centre for Plant Diversity

The Centres of Plant Diversity (CPD) is a program established by the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF). The CPD identifies global areas with high concentrations of plant diversity or centers of plant endemism.

CPD NA23, contains endemic plants associated with granite outcrops within the Piedmont of Alabama, Georgia, and South Carolina. Granite outcrops are indicators for one of the IUCN Centre of Plant Diversity sites. Weathering of soils over granite bedrock exposes the bedrock at the surface. Once exposed, the granite bedrock is called a granite outcrop, granite outcrops are another name for exposed granite bedrock. A high percentage (33%) of plants associated with these rock outcrops are endemics. A handful of rare species are known to occupy high quality granite outcrops and their occurrences indicate the locations

	<p>of granite outcrops. They are pool sprite (<i>Minuartia uniflora</i>), black-spored quillwort (<i>Isoetes melanospora</i>), mat-forming quillwort (<i>Isoetes tegetiformans</i>), and harperella (<i>Ptilimnium nodosum</i>).</p> <p>CPD NA25 sites contain endemic plants associated with ultramafic rock outcrops that give rise to serpentine soils within the Piedmont of Alabama, Georgia, and South Carolina. Serpentine flora are restricted to soils derived from serpentine rock outcrops found in association with ultramafic rock. NA25 is restricted to the Piedmont physiographic province. Serpentine soils, associated with ultramafic bedrock, formed along a linear boundary between ancient continents. Serpentine soils have relatively higher levels of heavy metals (cadmium and nickel) and lower levels of calcium than other soils. Therefore, are toxic to most plants. Clays in serpentine soils have a high affinity for water, more so than other clays, making less water available to plants. Plants found in this CPD are specialists. They are adapted to the harsh conditions created by these soils and cannot survive outside of this habitat, making them obligate endemics to serpentine soils. As already stated, most plants cannot live in this environment.</p> <p>Identified threats include using these areas for harvesting decks or landings.</p> <p><u>World Resources Institute (WRI) / Global Forest Watch Frontier Forests</u></p> <p>There are no WRI Frontier Forests in the lower 48 states which means that there are no WRI frontier forests in the GBLLC wood basin (Figure 11).</p> <p><u>World Wildlife Fund (WWF). Global 200 Ecoregions</u></p> <ol style="list-style-type: none"> 1. Appalachian & Mixed Mesophytic Forests (# 69 in the WWF Global 200) <p>The Appalachian and Mixed Mesophytic Forests is Number 69 of the Global 200 is ranked vulnerable (Figure 12). Although this risk assessment address only those Global 200 ranked critical/endangered, it is important to look at the two sub-ecoregions that make up Number 69. One of the subecoregions, the Appalachian Mixed Mesophytic Forests (NA0402), is ranked critical/endangered and is therefore significant at the national level. The other sub-ecoregion, Appalachian-Blue Ridge Forests (NA0403), intersects the District. However, since it is ranked vulnerable, it does not require evaluation.</p> <ol style="list-style-type: none"> 2. Southeastern Coniferous & Broadleaf Forests (# 75 in the WWF Global 200) <p>The WWF's Global 200 Ecoregions build a framework for describing the most important areas of biodiversity on the planet. The Global 200 encompass almost 50% of life on earth. These 200 areas are places that conservation groups target and discuss with forest products companies about the loss of global, forest biodiversity.</p> <p>The southern third of the MREC supply area is in the Southeastern Coniferous & Broadleaf Forests which has a conservation status of endangered/critical. It is significant at a global scale, but this <i>global</i> ecoregion (#75) is subdivided into two smaller endangered/critical terrestrial ecoregions (Figure 13). These scaled-down subdivisions have significance at the national level.</p> <ul style="list-style-type: none"> • The Southeastern mixed forests (NA0413) • The Southeastern conifer forests (NA0529) <p>This is a highly degraded ecoregion with more than 99% of the original habitat having been converted to other uses. Settlers within the ecoregion logged and then cleared the land for agriculture. The ecoregion overlaps and is synonymous with the Piedmont physiographic province along the Atlantic Slope and the rest falls into the Coastal Plain on the Gulf Coast. WWF reports that there is little habitat left to conserve in this critical/endangered ecoregion. There are multiple examples of protected areas within this ecoregion.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> • Company reviews the FSC US Controlled Wood National Risk Assessment (US NRA) and MREC-DOC-005 FSC Controlled Wood Risk Assessment at least annually to verify status of US NRA or to address any changes identified since the previous year. This review is a part of the company's annual Due Diligence System review.

	<ul style="list-style-type: none"> MREC-DOC-012 Secondary Supplier Audit Checklists – Company’s sole supplier is audited by company at least annually to verify: <ul style="list-style-type: none"> The supplier and its sub-suppliers are aware of the mitigation measures implemented for FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company’s MREC-DOC-005 FSC Controlled Wood Risk Assessment. Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company’s MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.
Evidence Reviewed	<ul style="list-style-type: none"> MREC-DOC-002 Training Record MREC-DOC-005 FSC Controlled Wood Risk Assessment MREC-DOC-012 Secondary Supplier Audit Checklist FSC US Controlled Wood National Risk Assessment (US NRA) https://us.fsc.org/en-us/certification/controlled-wood/fsc-us-controlled-wood-national-risk-assessment-us-nra International Union for the Conservation of Nature (IUCN) https://www.iucn.org/ World Resources Institute / Global Forest Watch https://www.wri.org/our-work/project/global-forest-watch World Wildlife Fund (WWF) https://www.worldwildlife.org/biome-categories/terrestrial-ecoregions
Risk Rating	<input type="checkbox"/> Low Risk <input checked="" type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	<p><u>Central Appalachian CBA</u> Mitigation Measures:</p> <ol style="list-style-type: none"> MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC’s certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting. Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Central Appalachian CBA. The desired outcome of this measure is to communicate to MREC the ecological importance of the Central Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk. <u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes,

and practices that will prevent siltation. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters, and loggers in increasing and improving BMP implementation that focuses on aquatic biodiversity conservation within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.

Plan to Measure Effectiveness: Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

Southern Appalachian CBA

Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Mark Hughes, PhD, owner of Biological Integrity, LLC attended the Southeast Region meeting on July 31, 2018 in Atlanta, GA. Hughes actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc., and Mark Hughes, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.

The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach measure will be documented annually using MREC-DOC-012 Secondary Supplier Audit Checklists.

	<p>The desired outcome of these communications is engaging landowners, foresters, and loggers in increasing and improving BMP implementation that focuses on aquatic biodiversity conservation within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p> <p>3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.</p> <p><u>Plan to Measure Effectiveness:</u> Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.</p> <p><u>Late Successional Bottomland Hardwoods</u> Mitigation Measures:</p> <p>1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.</p> <p>Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for Late Successional Bottomland Hardwoods (LSBH).</p> <p>The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.</p> <p>2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits & values of LSBH, threats from forest management activities & related loss of values, and opportunities for conservation through management that restores or maintains LSBH and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>The desired outcome of these communications is engaging landowners, foresters, and loggers in conservation of LSBH within the specified risk area and MREC's supply area.</p>
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	<p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p> <p>3. Engage with and/or provide monetary or in-kind resources to conservation organizations or similar entities that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of LSBH, with a goal of long-term conservation of this forest type within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed.</p> <p><u>Mesophytic Cove Sites</u> Mitigation Measures:</p> <p>1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.</p> <p>Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.</p> <p>The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.</p> <p>2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits and values of Mesophytic Cove Sites, how to identify them in the field, threats from incompatible forest management activities, and opportunities for conservation through management that enhances these sites and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>The desired outcome of these communications is engaging landowners, foresters, and loggers in conservation of Mesophytic Cove Sites within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education</p>
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materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

Native Longleaf Pine Systems

Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the NLPS.

The desired outcome of this measure is to communicate to MREC the ecological importance of NLPS and provide the necessary educational materials to ensure the suppliers who source wood fiber from these areas are knowledgeable of the identified threats to NLPS and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the social benefits and values of NLPS, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains NLPS and reduces or eliminates these threats. Communications should recognize the importance of the forest understory and fire to NLPS. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters and loggers in conservation of NLPS within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. MREC will engage with and/or provide monetary or in-kind resources to conservation organizations such as the Longleaf Alliance that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of NLPS, with a goal of long-term conservation of this system within the specified risk area and the MREC's supply area.

The desired outcome of this mitigation measure is to implement on-the-ground forest management activities that improve restoration or maintenance of NLPS, and thereby mitigate the risk of sourcing materials from sites where NLPS in the specified risk area are threatened by forest management activities.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed.

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	<p>Mitigation Measures:</p> <ol style="list-style-type: none"> MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the values of granite outcrops, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains granite outcrops and reduces or eliminates these threats. Communications should recognize the importance of granite outcrops. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists. <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p>
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	Indicator
2.1.3	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008.
Finding	<p><u>FSC US Controlled Wood National Risk Assessment (US NRA)</u></p> <p><u>Category 4: Forestland Conversion</u></p> <p>The US NRA has identified the forested portions of 53 counties across the FSC US Southeast and Pacific Coast Regions as areas where there is a risk greater than “low” receiving forest materials from forest conversions. Companies that wish to use non-certified materials from the identified areas are required to either avoid sourcing from specific sites where forest conversion is occurring, or to implement mitigation actions that reduce the risk of sourcing from these sites. There are six counties identified in Georgia that are located within the company’s supply area – MREC-DOC-005 FSC Controlled Wood Risk Assessment that represent a higher than “low” risk for conversion.</p> <p>The Company is developing & implementing Fiber Purchase Agreements with its applicable feedstock suppliers that:</p> <ol style="list-style-type: none"> mitigate the risk that material supplied originates from forest areas converted into plantation or non-forest use; or assure that if some conversion has occurred, that material supplied originates from limited and legal sources of conversion (e.g., conversion that results in conservation benefits, publicly approved changes in zoning in urban areas, etc.) and does not come from sources where the conversion threatens High Conservation Values. <p>Production plantation forests are defined as forests of exotic species that have been planted or seeded by human intervention and that are under intensive stand management, are fast growing, and subject to short rotations (e.g. poplar, acacia or eucalyptus plantations).</p>
Means of Verification	Feedstock purchase contracts, MREC-DOC-012 Secondary Supplier Audit Checklists
Evidence Reviewed	<ul style="list-style-type: none"> Fiber Purchase Agreements FSC US Controlled Wood National Risk Assessment (US NRA) MREC-DOC-002 Training Record MREC-DOC-005 FSC Controlled Wood Risk Assessment MREC-DOC-012 Secondary Supplier Audit Checklists

Risk Rating	<input type="checkbox"/> Low Risk <input checked="" type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	<p><u>FSC US Controlled Wood National Risk Assessment (US NRA)</u> <u>Category 4: Forestland Conversion</u> Mitigation Measures:</p> <ol style="list-style-type: none"> 1. The Company is developing and implementing binding written agreements with its applicable feedstock suppliers that: <ol style="list-style-type: none"> a. mitigate the risk that material supplied originates from forest areas converted into plantation or non-forest use; or b. assure that if some conversion has occurred, that material supplied originates from limited and legal sources of conversion (e.g., conversion that results in conservation benefits, publicly approved changes in zoning in urban areas, etc.) and does not come from sources where the conversion threatens High Conservation Values. <p><u>Plan to Measure Effectiveness:</u> The Company will annually review Fiber Supply Agreements to ensure agreements contain applicable requirements.</p> 2. The Company has committed to improving the education and awareness of this ecoregion through the representation of company at FSC Controlled Wood Regional Meetings held in 2018. Information from these regional meetings on forestland conversion was reviewed by company personnel. <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on forestland conversion to review any updates or changes on forestland conversion. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.</p> 3. The Company reviews this educational information with its suppliers who source wood fiber from these counties to educate the suppliers, their loggers and landowners on the social benefits of keeping forests as forests, and the value enhancing alternatives to conversion and opportunities for the maintenance of forests. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists. <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on forestland conversion. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p> 4. The Company will maintain membership in the Alabama Forestry Association to keep abreast of forestry issues within the Company’s supply area.

	Indicator
2.2.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is sourced from forests where there is appropriate assessment of impacts, and planning, implementation and monitoring to minimise them.
Finding	<p>The Company requires compliance with Best Management Practices (BMP) for the feedstock purchased through its Fiber Purchase Agreements with its suppliers.</p> <p>The Company verifies the sourcing of feedstock with its suppliers & sub-suppliers through its secondary supplier annual audit program. This verification reviews each supplier’s & sub-supplier’s supply area, areas of “specified risk” for areas with high conservation value (HCV) that are identified in their supply areas and mitigation measures being implemented to reduce “specified risk” to “low risk”. The Company has developed and is using specific supplier maps detailing the supplier’s & sub-supplier’s supply area and HCV areas. Annual supplier audits also verify supplier’s certification status, BMP compliance, logger training and overall environmental compliance. Annual audits are documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>DeKalb Forest Products, the company’s sole supplier, requires their sub-suppliers and loggers to maintain SFI State Implementation Committee (SIC) logger training. This training educates loggers on BMPs, threatened & endangered species and biodiversity. The Company has access to SIC logger training databases to verify logger training. DeKalb Forest Products conducts on-site BMP compliance audits to monitor BMP compliance on their direct wood purchases.</p> <p>State forestry agencies conduct BMP compliance checks randomly or upon request by stakeholders. State BMP compliance reports are available for review by the Company.</p>
Means of Verification	<ul style="list-style-type: none"> • Fiber Purchase Agreements – Signed agreements verify suppliers comply with state BMPs & all loggers are maintaining their SIC logger training requirement • MREC-DOC-012 Secondary Supplier Audit Checklists – Company’s sole supplier is audited by company at least once a year to verify: <ul style="list-style-type: none"> ○ Certification status of supplier ○ Logger Training status & % trained of sub-suppliers ○ BMP compliance and/or regulatory violations of supplier & sub-suppliers • Company reviews the most current and available state BMP compliance reports annually
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-DOC-012 Secondary Supplier Audit Checklists • Alabama Professional Logging Manager https://www.alaforestry.org/page/PLMGeneral • Georgia Master Timber Harvester http://gamth.org/ • Mississippi Professional Logging Manager http://logged.msstate.edu/ • Tennessee Master Logger http://www.tnforestry.com/files/1131/masterloggerdb.cfm • Alabama Annual BMP Reports http://www.forestry.alabama.gov/Pages/Management/BMP_Practices.aspx • Results of Georgia’s 2017 Silvicultural Best Management Practices Implementation and Compliance Survey http://www.gfc.state.ga.us/forest-management/water-quality/bmps/BMP%20Survey%202017%20Results%20Report%20Final%20Corrected%20by%20Scott%20Jan112018%20410pm.pdf • 2016 BMP Implementation Survey: Mississippi’s BMP Implementation Monitoring Program

	https://www.mfc.ms.gov/sites/default/files/2016_BMP_%20Implementation_Survey_V3.pdf <ul style="list-style-type: none"> Implementstion of Forestry Best Management Practices in Tennessee (2017) https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPimpl2017.pdf
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.2.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is sourced from forests where management maintains or improves soil quality (CPET S5b).
Finding	<p>State forestry Best Management Practices (BMP) set forth guidelines for maintaining and/or improving soil quality. MREC-POL-001 Sustainability Policy states the Company requires BMP compliance with the harvesting of all wood fiber it receives. Fiber Purchase Agreements require BMP compliance. The Company verifies BMP compliance as part of its annual supplier audits. BMP compliance is documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>DeKalb Forest Products, the company’s sole supplier, requires their sub-suppliers and loggers to maintain SFI State Implementation Committee (SIC) logger training. This training educates loggers on BMPs, threatened & endangered species and biodiversity. The Company has access to SIC logger training databases to verify logger training. DeKalb Forest Products conducts on-site BMP compliance audits to monitor BMP compliance on their direct wood purchases.</p> <p>State forestry agencies conduct BMP compliance checks randomly or upon request by stakeholders. State BMP compliance reports are available for review by the Company.</p> <p>Soil maps covering the supply basin are available as a resource to suppliers to assist in planning fiber harvest in a way that does not harm soil quality.</p>
Means of Verification	<ul style="list-style-type: none"> Fiber Purchase Agreements – Signed agreements verify suppliers comply with state BMPs & all loggers are maintaining their SIC logger training requirement MREC-DOC-012 Secondary Supplier Audit Checklists – Company’s sole supplier is audited by company at least once a year to verify: <ul style="list-style-type: none"> Certification status of supplier Logger Training status & % trained of sub-suppliers BMP compliance and/or regulatory violations of supplier & sub-suppliers Company reviews the most current and available state BMP compliance reports annually
Evidence Reviewed	<ul style="list-style-type: none"> Fiber Purchase Agreements MREC-POL-001 Sustainability Policy MREC-DOC-012 Secondary Supplier Audit Checklists Alabama Professional Logging Manager https://www.alaforestry.org/page/PLMGeneral Georgia Master Timber Harvester http://gamth.org/ Mississippi Professional Logging Manager http://logged.msstate.edu/

	<ul style="list-style-type: none"> • Tennessee Master Logger http://www.tnforestry.com/files/1131/masterloggerdb.cfm • Alabama Annual BMP Reports http://www.forestry.alabama.gov/Pages/Management/BMP_Practices.aspx • Results of Georgia’s 2017 Silvicultural Best Management Practices Implementation and Compliance Survey http://www.gfc.state.ga.us/forest-management/water-quality/bmps/BMP%20Survey%202017%20Results%20Report%20Final%20Corrected%20by%20Scott%20Jan112018%20410pm.pdf • 2016 BMP Implementation Survey: Mississippi’s BMP Implementation Monitoring Program https://www.mfc.ms.gov/sites/default/files/2016_BMP_%20Implementation_Survey_V3.pdf • Implementstion of Forestry Best Management Practices in Tennessee (2017) https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPimpl2017.pdf • USGS Soils Map Database https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.2.3	The Biomass Producer has implemented appropriate control systems and procedures to ensure that key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b).
Finding	<p>MREC has implemented the US NRA for its supply area. MREC has determined the following categories of controlled wood as “low risk”:</p> <ul style="list-style-type: none"> • Category 1: Illegally harvested wood; • Category 2: Wood harvested in violation of traditional and human rights; • Category 5: Wood from forests in which genetically modified trees are planted. <p>MREC has determined there may be areas within its supply area that are considered “specified risk” to the following categories of controlled wood:</p> <ul style="list-style-type: none"> • Category 3: Wood from forests where high conservation values are threatened by management activities; <ul style="list-style-type: none"> ○ HCV1 – Central Appalachian Critical Biodiversity Area (CBA); ○ HCV1 – Southern Appalachian CBA; ○ HCV3 – Late Successional Bottomland Hardwoods; ○ HCV3 – Mesophytic Cove Sites; ○ HCV3 - Natural Longleaf Pine Systems; • Category 4: Wood from forests being converted to plantations or non-forest use. <p>MREC has mapped these “specified risk” areas by supplier/sub-supplier and will implement, as needed, adequate control measures to either avoid or to mitigate specified risk related to origin and/or risk related to mixing with non-eligible inputs in the supply chain.</p> <p><u>Central Appalachian CBA</u></p>

The Central Appalachian CBA is located within 52 counties in 3 states in the northeastern portion of the MREC supply area. One (1) supplier provides wood fiber to MREC source from counties within this CBA. Nineteen (19) sub-suppliers providing wood fiber to MREJ source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

This CBA corresponds with the higher elevation portions of WWF’s ‘Appalachian Mixed Mesophytic Forest’ area, one of their Global 200 biodiversity areas. The broadleaf forests and aquatic habitats drive the region’s biodiversity. The forests are significant in the diversity of different forest types that occur and within them the large number of different tree species that occur, along with incredibly diverse understories and associated wildlife species. The geologic history, change in elevation, and diverse topography and climate have resulted in a very large number of microhabitats within the region – each with a unique biodiversity.

Identified Threats:

Mixed Mesophytic Forests - The priority threats to the forests as a whole include: climate change, pollution from mining, new highways and utility rights-of-way, ORV recreation and overpopulation of deer.

Aquatic Habitats - Hydrologic alteration partially due to forestry practices and conversion from hardwood forests to non-native planted pine, reduced water quality partially due to loss of near-stream forested habitat and sedimentation associated with forestry practices and lack of Best Management Practice (BMP) implementation, and severe erosion of river banks.

Southern Appalachian CBA

The Southern Appalachian CBA is located within 35 counties in 2 states within the MREC supply area. All suppliers and their sub-suppliers provide wood fiber to MREC source from counties within this CBA which is considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Biodiversity values in the southern Appalachians include aquatic habitats, glades, and montane longleaf pine. Alabama is recognized as having the greatest number of freshwater species of mollusks and fish in the United States, and many of these species have very restricted distributions and specialized habitat requirements that make them highly vulnerable to extinction. The Cahaba River watershed is the center of the biodiversity hotspot, but the biodiversity area includes other smaller watercourses as well. Aquatic habitats driving this concentration of biodiversity include lakes, rivers, streams, bogs, swamps, ephemeral pools, fens, seeps, swamp forests and wet meadows. Other drivers of biodiversity include glades and montane longleaf pine. Bibb County Glades (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. These are open habitats that are dominated by upland herbaceous plant species. There is typically an absence of a tree canopy on glades, resulting in large amounts of sunlight and heat on the surface. Montane longleaf pine habitats occur in steep rolling topography historically maintained by fire, mostly outside of or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community.

Identified Threats:

Aquatic Habitats - Numerous sources of information identify threats from forest management activities, particularly non-point source pollution in aquatic habitats, and disturbance to riparian zones.

Glades - Threats include grazing, non-native species, quarrying, root-digging, plant and animal collecting, removal of large rocks for landscaping, urban development, plowing for fire breaks, use as logging decks (resulting in soil/vegetation disturbance and soil erosion), conversion to other land uses, and ORV damage.

	<p><u>Montane Longleaf Pine</u> - Biodiversity values can be adversely affected by forest management activities via conversion of longleaf to other pine types, and the use of management techniques, including herbicide application that have the potential to inhibit native understory communities.</p> <p><u>Late Successional Bottomland Hardwoods</u> Late Successional Bottomland Hardwoods (LSBH) are located within 9 counties in 2 states in the southern-most portion of the MREC supply area. Two (2) sub-suppliers providing hardwood wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).</p> <p>Much of the original bottomland hardwood in the US was cleared for agriculture, particularly in the Mississippi valley, and much of the remainder was mismanaged leaving very few intact examples. Bottomland Hardwoods are periodically inundated, floodplain forests, where the entire ecosystem is driven by hydrology. Late successional stands are not defined by the species, as much as by the structural composition (e.g., more stratification) and existence of large wood debris, including standing hollow trees – these changes occur at about 80 years in most Bottomland Hardwood types and perhaps a little later in cypress swamps.</p> <p>Identified threats include development, hydrologic changes (droughts, water withdraws, ditching), incompatible forest management, pollution, fragmentation, invasive species and economic drivers that alter forest management goals.</p> <p><u>Mesophytic Cove Sites</u> Mesophytic Cove Sites is located within 40 counties in 3 states in the northeastern portion of the MREC supply area. Twenty (20) sub-suppliers providing wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).</p> <p>Mesophytic cove sites are highly diverse, closed-canopy hardwood forest occurring on sheltered sites at low- to moderate-elevation (1,000-3,600 ft), and sometimes higher. They tend to occur in large patches on concave slopes that accumulate nutrients and moisture. They are characterized by high species diversity and a complex forest structure. The ground level flora in particular has high species richness, often with abundant spring ephemerals. Rich cove forests have very fertile soils with a diverse herb layer containing few shrubs. Acidic cove forests are less fertile than rich coves, but otherwise similar.</p> <p>Identified Threats to this forest type are invasive species and conversion to other uses. Threats also include incompatible forest management that results in alterations to the structure and composition of the forest or conversion to other forest types (white pine), climate change, chronic deer herbivory, harvesting of herbs and pollution.</p> <p><u>Native Longleaf Pine Systems</u> Native Longleaf Pine Systems (NLPS) are located in 12 counties in 2 states throughout the MREC supply area. Fourteen (14) sub-suppliers providing wood fiber to MREC source from counties that have been identified as containing native longleaf systems resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).</p> <p>NLPS were once one of the most widespread forest types in the US but were reduced to less than 5% of their original range, becoming one of the rarest forest systems in the world. This historical reduction was driven by suppression of fire and conversion to other forest types. These forest systems are associated with high animal and plant diversity, including many rare, threatened and endangered species such as the Red-cockaded</p>
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Woodpecker, Bachman’s Sparrow, Gopher Tortoise, Eastern Indigo Snake, and Flatwoods Salamander.

“Native” in this instance refers to existing longleaf pine that is on a site that has historically been maintained as longleaf pine. Longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine do not apply under this definition. “Native” does not imply a particular regeneration method; these stands may be either planted or naturally regenerated.

Identified threats include altered stand structure (due to lack of fire), conversion to other forest types, conversion to other land uses, habitat disturbance (including management techniques that inhibit native understory communities which may include herbicide application), and fragmentation.

IUCN Centre for Plant Diversity

The Centres of Plant Diversity (CPD) is a program established by the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF). The CPD identifies global areas with high concentrations of plant diversity or centers of plant endemism.

CPD NA23, contains endemic plants associated with granite outcrops within the Piedmont of Alabama, Georgia, and South Carolina. Granite outcrops are indicators for one of the IUCN Centre of Plant Diversity sites. Weathering of soils over granite bedrock exposes the bedrock at the surface. Once exposed, the granite bedrock is called a granite outcrop, granite outcrops are another name for exposed granite bedrock. A high percentage (33%) of plants associated with these rock outcrops are endemics. A handful of rare species are known to occupy high quality granite outcrops and their occurrences indicate the locations of granite outcrops. They are pool sprite (*Minuartia uniflora*), black-spored quillwort (*Isoetes melanospora*), mat-forming quillwort (*Isoetes tegetiformans*), and harperella (*Ptilimnium nodosum*).

CPD NA25 sites contain endemic plants associated with ultramafic rock outcrops that give rise to serpentine soils within the Piedmont of Alabama, Georgia, and South Carolina. Serpentine flora are restricted to soils derived from serpentine rock outcrops found in association with ultramafic rock. NA25 is restricted to the Piedmont physiographic province. Serpentine soils, associated with ultramafic bedrock, formed along a linear boundary between ancient continents. Serpentine soils have relatively higher levels of heavy metals (cadmium and nickel) and lower levels of calcium than other soils. Therefore, are toxic to most plants. Clays in serpentine soils have a high affinity for water, more so than other clays, making less water available to plants. Plants found in this CPD are specialists. They are adapted to the harsh conditions created by these soils and cannot survive outside of this habitat, making them obligate endemics to serpentine soils. As already stated, most plants cannot live in this environment.

Identified threats include using these areas for harvesting decks or landings.

World Resources Institute (WRI) / Global Forest Watch Frontier Forests

There are no WRI Frontier Forests in the lower 48 states which means that there are no WRI frontier forests in the GBLLC wood basin (Figure 11).

World Wildlife Fund (WWF), Global 200 Ecoregions

3. Appalachian & Mixed Mesophytic Forests (# 69 in the WWF Global 200)

The Appalachian and Mixed Mesophytic Forests is Number 69 of the Global 200 is ranked vulnerable (Figure 12). Although this risk assessment address only those Global 200 ranked critical/endangered, it is important to look at the two sub-ecoregions that make up Number 69. One of the subecoregions, the Appalachian Mixed Mesophytic Forests (NA0402), is ranked critical/endangered and is therefore significant at the national level. The other sub-ecoregion, Appalachian-Blue Ridge Forests (NA0403), intersects the District. However, since it is ranked vulnerable, it does not require evaluation.

	<p>4. Southeastern Coniferous & Broadleaf Forests (# 75 in the WWF Global 200)</p> <p>The WWF's Global 200 Ecoregions build a framework for describing the most important areas of biodiversity on the planet. The Global 200 encompass almost 50% of life on earth. These 200 areas are places that conservation groups target and discuss with forest products companies about the loss of global, forest biodiversity.</p> <p>The southern third of the MREC supply area is in the Southeastern Coniferous & Broadleaf Forests which has a conservation status of endangered/critical. It is significant at a global scale, but this <i>global</i> ecoregion (#75) is subdivided into two smaller endangered/critical terrestrial ecoregions (Figure 13). These scaled-down subdivisions have significance at the national level.</p> <ul style="list-style-type: none"> • The Southeastern mixed forests (NA0413) • The Southeastern conifer forests (NA0529) <p>This is a highly degraded ecoregion with more than 99% of the original habitat having been converted to other uses. Settlers within the ecoregion logged and then cleared the land for agriculture. The ecoregion overlaps and is synonymous with the Piedmont physiographic province along the Atlantic Slope and the rest falls into the Coastal Plain on the Gulf Coast. WWF reports that there is little habitat left to conserve in this critical/endangered ecoregion. There are multiple examples of protected areas within this ecoregion.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> • Company reviews the FSC US Controlled Wood National Risk Assessment (US NRA) and MREC-DOC-005 FSC Controlled Wood Risk Assessment at least annually to verify status of US NRA or to address any changes identified since the previous year. This review is a part of the company's annual Due Diligence System review. • MREC-DOC-012 Secondary Supplier Audit Checklists – Company's sole supplier is audited by company at least annually to verify: <ul style="list-style-type: none"> ○ The supplier and its sub-suppliers are aware of the mitigation measures implemented for FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment. • Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.
<p>Evidence Reviewed</p>	<ul style="list-style-type: none"> • MREC-DOC-002 Training Record • MREC-DOC-005 FSC Controlled Wood Risk Assessment • MREC-DOC-012 Secondary Supplier Audit Checklist • FSC US Controlled Wood National Risk Assessment (US NRA) https://us.fsc.org/en-us/certification/controlled-wood/fsc-us-controlled-wood-national-risk-assessment-us-nra • International Union for the Conservation of Nature (IUCN) https://www.iucn.org/ • World Resources Institute / Global Forest Watch https://www.wri.org/our-work/project/global-forest-watch • World Wildlife Fund (WWF) • https://www.worldwildlife.org/biome-categories/terrestrial-ecoregions
<p>Risk Rating</p>	<p><input type="checkbox"/> Low Risk <input checked="" type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA</p>
<p>Comment or Mitigation Measure</p>	<p><u>Central Appalachian CBA</u> Mitigation Measures:</p>

	<p>1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.</p> <p>Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Central Appalachian CBA.</p> <p>The desired outcome of this measure is to communicate to MREC the ecological importance of the Central Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.</p> <p>2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>The desired outcome of these communications is engaging landowners, foresters, and loggers in increasing and improving BMP implementation that focuses on aquatic biodiversity conservation within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p> <p>3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.</p> <p><u>Plan to Measure Effectiveness:</u> Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.</p> <p><u>Southern Appalachian CBA</u> Mitigation Measures:</p> <p>1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with</p>
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Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Mark Hughes, PhD, owner of Biological Integrity, LLC attended the Southeast Region meeting on July 31, 2018 in Atlanta, GA. Hughes actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc., and Mark Hughes, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.

The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach measure will be documented annually using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters, and loggers in increasing and improving BMP implementation that focuses on aquatic biodiversity conservation within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.

Plan to Measure Effectiveness: Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

Late Successional Bottomland Hardwoods Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional

meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for Late Successional Bottomland Hardwoods (LSBH).

The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits & values of LSBH, threats from forest management activities & related loss of values, and opportunities for conservation through management that restores or maintains LSBH and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters, and loggers in conservation of LSBH within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. Engage with and/or provide monetary or in-kind resources to conservation organizations or similar entities that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of LSBH, with a goal of long-term conservation of this forest type within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed.

Mesophytic Cove Sites
Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings

with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.

The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits and values of Mesophytic Cove Sites, how to identify them in the field, threats from incompatible forest management activities, and opportunities for conservation through management that enhances these sites and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters, and loggers in conservation of Mesophytic Cove Sites within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

Native Longleaf Pine Systems

Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the NLPS.

The desired outcome of this measure is to communicate to MREC the ecological importance of NLPS and provide the necessary educational materials to ensure the suppliers who source wood fiber from these areas are knowledgeable of the identified threats to NLPS and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the social benefits and values of NLPS, threats from forest management and related loss of

values, and opportunities for conservation through management that restores or maintains NLPS and reduces or eliminates these threats. Communications should recognize the importance of the forest understory and fire to NLPS. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters and loggers in conservation of NLPS within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. MREC will engage with and/or provide monetary or in-kind resources to conservation organizations such as the Longleaf Alliance that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of NLPS, with a goal of long-term conservation of this system within the specified risk area and the MREC's supply area.

The desired outcome of this mitigation measure is to implement on-the-ground forest management activities that improve restoration or maintenance of NLPS, and thereby mitigate the risk of sourcing materials from sites where NLPS in the specified risk area are threatened by forest management activities.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed.

IUCN Centre for Plant Diversity
Mitigation Measures:

1. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the values of granite outcrops, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains granite outcrops and reduces or eliminates these threats. Communications should recognize the importance of granite outcrops. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	The Protected Areas Database of the United States (PAD-US) is the official inventory of public parks and other protected open space. The spatial data in PAD-US represents public lands held in trust by thousands of national, state and regional/local governments, as well as non-profit conservation organizations. Protected Areas account for 7.92% of the area with the supply areas and are protected from uncontrolled forest management.
Means of Verification	<ul style="list-style-type: none"> • Company reviews the FSC US Controlled Wood National Risk Assessment (US NRA) and MREC-DOC-005 FSC Controlled Wood Risk Assessment at least annually to verify status of US NRA or to address any changes identified since the previous year. This review is a part of the company’s annual Due Diligence System review. • MREC-DOC-012 Secondary Supplier Audit Checklists – Company’s sole supplier is audited by company at least annually to verify: <ul style="list-style-type: none"> ○ The supplier and its sub-suppliers are aware of the mitigation measures implemented for FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company’s MREC-DOC-005 FSC Controlled Wood Risk Assessment.
Evidence Reviewed	<ul style="list-style-type: none"> • MREC-DOC-005 FSC Controlled Wood Risk Assessment • MREC-DOC-012 Secondary Supplier Audit Checklists • FSC US Controlled Wood National Risk Assessment (US NRA) https://us.fsc.org/en-us/certification/controlled-wood/fsc-us-controlled-wood-national-risk-assessment-us-nra • Protected Areas Database of the United States (PAD-US) https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/protected-areas
Risk Rating	<input type="checkbox"/> Low Risk <input checked="" type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	<p>MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of protected areas, and opportunities for conservation easements. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of protected areas, and opportunities for conservation easements. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p>

	Indicator
2.2.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the process of residue removal minimises harm to ecosystems.
Finding	<p>The Company has appropriate control systems and procedures to ensure residue removals are minimized in harming the ecosystem. State forestry Best Management Practices (BMP) address wood and residue utilization. MREC-POL-001 Sustainability Policy states the Company requires BMP compliance with the harvesting of all wood fiber it receives. Fiber Purchase Agreements require BMP compliance. The Company verifies BMP compliance as part of its annual supplier audits. BMP compliance is documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>DeKalb Forest Products, the company’s sole supplier, requires their sub-suppliers and loggers to maintain SFI State Implementation Committee (SIC) logger training. This training educates loggers on BMPs, threatened & endangered species and biodiversity. The Company has access to SIC logger training databases to verify logger training. DeKalb Forest Products conducts on-site BMP compliance audits to monitor BMP compliance on their direct wood purchases.</p> <p>State forestry agencies conduct BMP compliance checks randomly or upon request by stakeholders. State BMP compliance reports are available for review by the Company.</p> <p>The Company is in the process of distributing “Forest Biomass Retention and Harvesting Guidelines for the Southeast” from the Forest Guild to be used as a tool to ensure biomass removal minimizes the harm to ecosystems. MREC-DOC-012 Secondary Supplier Audit Checklists will document forest biomass retention literature distribution.</p>
Means of Verification	Fiber Purchase Agreements, MREC-DOC-012 Secondary Supplier Audit Checklists
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-DOC-012 Secondary Supplier Audit Checklists • Alabama Professional Logging Manager https://www.alaforestry.org/page/PLMGeneral • Georgia Master Timber Harvester http://gamth.org/ • Mississippi Professional Logging Manager http://logged.msstate.edu/ • Tennessee Master Logger http://www.tnforestry.com/files/1131/masterloggerdb.cfm • Alabama Annual BMP Reports http://www.forestry.alabama.gov/Pages/Management/BMP_Practices.aspx • Results of Georgia’s 2017 Silvicultural Best Management Practices Implementation and Compliance Survey http://www.gfc.state.ga.us/forest-management/water-quality/bmps/BMP%20Survey%202017%20Results%20Report%20Final%20Corrected%20by%20Scott%20Jan112018%20410pm.pdf • 2016 BMP Implementation Survey: Mississippi’s BMP Implementation Monitoring Program https://www.mfc.ms.gov/sites/default/files/2016_BMP_%20Implementation_Survey_V3.pdf • Implementation of Forestry Best Management Practices in Tennessee (2017) https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPimpl2017.pdf
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA

Comment or Mitigation Measure	
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Indicator	
2.2.6	The Biomass Producer has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised (CPET S5b).
Finding	<p>State forestry Best Management Practices (BMP) set forth guidelines for maintaining and/or improving soil quality. MREC-POL-001 Sustainability Policy states the Company requires BMP compliance with the harvesting of all wood fiber it receives. Fiber Purchase Agreements require BMP compliance. The Company verifies BMP compliance as part of its annual supplier audits. BMP compliance is documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>DeKalb Forest Products, the company's sole supplier, requires their sub-suppliers and loggers to maintain SFI State Implementation Committee (SIC) logger training. This training educates loggers on BMPs, threatened & endangered species and biodiversity. The Company has access to SIC logger training databases to verify logger training. DeKalb Forest Products conducts on-site BMP compliance audits to monitor BMP compliance on their direct wood purchases.</p> <p>State forestry agencies conduct BMP compliance checks randomly or upon request by stakeholders. State BMP compliance reports are available for review by the Company.</p> <p>Soil maps covering the supply basin are available as a resource to suppliers to assist in planning fiber harvest in a way that does not harm soil quality.</p>
Means of Verification	Fiber Purchase Agreements, MREC-DOC-012 Secondary Supplier Audit Checklists
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-DOC-012 Secondary Supplier Audit Checklists • Alabama Professional Logging Manager https://www.alaforestry.org/page/PLMGeneral • Georgia Master Timber Harvester http://gamth.org/ • Mississippi Professional Logging Manager http://logged.msstate.edu/ • Tennessee Master Logger http://www.tnforestry.com/files/1131/masterloggerdb.cfm • Alabama Annual BMP Reports http://www.forestry.alabama.gov/Pages/Management/BMP_Practices.aspx • Results of Georgia's 2017 Silvicultural Best Management Practices Implementation and Compliance Survey http://www.gfc.state.ga.us/forest-management/water-quality/bmps/BMP%20Survey%202017%20Results%20Report%20Final%20Corrected%20by%20Scott%20Jan112018%20410pm.pdf • 2016 BMP Implementation Survey: Mississippi's BMP Implementation Monitoring Program https://www.mfc.ms.gov/sites/default/files/2016_BMP_%20Implementation_Survey_V3.pdf • Implementation of Forestry Best Management Practices in Tennessee (2017)

	https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPimpl2017.pdf <ul style="list-style-type: none"> USGS Soils Map Database https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.2.7	The Biomass Producer has implemented appropriate control systems and procedures for verifying that air quality is not adversely affected by forest management activities.
Finding	<p>While the Company only receives secondary feedstock and does not conduct forest management activities (prescribed burning) that directly impacts air quality, state laws and regulations require people wanting to burn piles and/or forest residues to request a burning permit. All permits are managed by the state forestry agency. In addition, states issue burn permits based on state smoke management guidelines.</p> <p>State forestry agency State Forest Plans and Annual Reports state forest activities such as prescribed burning have mixed impacts on the forests. While smoke from prescribed burning can lower air quality temporarily, the lack of burning has a direct negative impact of longleaf pine ecosystems.</p>
Means of Verification	Employee interviews, state Smoke Management guidelines, state prescribed burning laws, state Forest Action Plans
Evidence Reviewed	<ul style="list-style-type: none"> Alabama Burn Law http://www.forestry.alabama.gov/Pages/Informational/Legal/Burn_Law.aspx Georgia Burn Permit Law O.C.G.A. 12-6-90 Georgia Prescribed Burning Act O.C.G.A. 12-6-145 to O.C.G.A. 12-6-149 http://www.gfc.state.ga.us/forest-management/prescribed-fire/prescribed-fire-legislation/index.cfm Georgia’s Smoke Management Plan https://epd.georgia.gov/air/prescribed-fire-smoke-management-plan Mississippi Open Burning Law https://www.mdeq.ms.gov/wp-content/uploads/2018/11/Air-Regs-Chapter-1-Air-Emission-Regulations-Amended-May-24-2018.pdf Mississippi Forestry Commission Voluntary Smoke Management Guidelines https://www.mfc.ms.gov/sites/default/files/Voluntary_Smoke_Management_Guidelines_2012_2.pdf Tennessee Open Burning https://www.tn.gov/environment/program-areas/apc-air-pollution-control-home/apc/open-burning.html Alabama Forest Action Plan http://www.forestry.alabama.gov/Pages/Management/Forest_Action_Plan.aspx Georgia Forest Action Plan http://www.gfc.state.ga.us/about-us/strategic-plan/georgia-statewide-forest-resources-assessment-and-strategy/index.cfm Mississippi Forest Action Plan https://www.mfc.ms.gov/forest-action-plan Tennessee Forest Action Plan

	https://www.tn.gov/agriculture/forests/protection/ag-forests-action-plan.html
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.2.8	The Biomass Producer has implemented appropriate control systems and procedures for verifying that there is controlled and appropriate use of chemicals, and that Integrated Pest Management (IPM) is implemented wherever possible in forest management activities (CPET S5c).
Finding	<p>The Company only receives secondary feedstock and does not conduct forest management activities which use forest chemicals or is directly involved with Integrated Pest Management (IPM).</p> <p>MREC-POL-001 Sustainability Policy states the Company will abide by all laws and regulations, including those laws associated with the environment. Fiber Purchase Agreements require suppliers to abide all applicable laws and regulations.</p> <p>Within the US, chemical use on forestlands is regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The US Environmental Protection Agency (EPA) has responsibility for implementing and enforcing FIFRA. All chemicals use in forest management activities must be EPA registered and applicators must follow guidelines prescribed for each chemical’s application.</p> <p>The Company is a member of the Alabama Forestry Association. This participation allows the Company to stay abreast of environmental legislation and provides opportunities to engage forest landowners in best forestry management practices.</p>
Means of Verification	Employee interviews, Fiber Purchase Agreements
Evidence Reviewed	Fiber Purchase Agreements MREC-POL-001 Sustainability Policy
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.2.9	The Biomass Producer has implemented appropriate control systems and procedures for verifying that methods of waste disposal minimise negative impacts on forest ecosystems (CPET S5d).
Finding	<p>State and Federal laws, such as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), are in place to protect from oil spills and hazardous substance releases. Access to these laws is available to Company personnel as referenced in the Appendix within MREC-DOC-005 FSC Controlled Wood Risk Assessment.</p> <p>MREC-POL-001 Sustainability Policy states the Company will abide by all laws and regulations, including those laws associated with the environment. Fiber Purchase Agreements require suppliers to abide all applicable laws and regulations and requires compliance to state forestry Best Management Practices (BMP).</p> <p>MREC-DOC-012 Secondary Supplier Audit Checklist documents supplier BMP compliance and/or regulatory violations.</p>
Means of Verification	Fiber Purchase Agreements, MREC-DOC-012 Secondary Supplier Audit Checklists
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-DOC-005 FSC Controlled Wood Risk Assessment • MREC-DOC-012 Secondary Supplier Audit Checklists
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.3.1	Analysis shows that feedstock harvesting does not exceed the long-term production capacity of the forest, avoids significant negative impacts on forest productivity and ensures long-term economic viability. Harvest levels are justified by inventory and growth data.
Finding	<p>Harvest levels for the supply base in AL, GA, MS & TN do not exceed growth according to USDA Forest Service forest inventory data. Forest Service annual growth & removals data for the most current year (AL-2018; GA, MS-2017; TN-2015) show a positive average rate of growth to removals of 2.26 for all wood. This annual growth to removals rate is 2.95 for pine & 1.70 for hardwood.</p> <p>USDA Forest Service State of Forest Reports for the four states show growth to removals ratios of 1.77 (AL), 2.37 (GA), 2.70 (MS) & 4.29 (TN) for all wood.</p>
Means of Verification	USDA Forest Service FIA data
Evidence Reviewed	<ul style="list-style-type: none"> • Forests of Alabama, 2018 https://www.srs.fs.usda.gov/pubs/ru/ru_srs180.pdf • Forests of Georgia, 2017 https://www.srs.fs.usda.gov/pubs/ru/ru_srs183.pdf

	<ul style="list-style-type: none"> • Forests of Mississippi, 2017 https://www.fs.usda.gov/treearch/pubs/58128 • Forest of Tennessee, 2015 https://www.srs.fs.usda.gov/pubs/ru/ru_srs189.pdf
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.3.2	Adequate training is provided for all personnel, including employees and contractors (CPET S6d).
Finding	<p>Company personnel have been trained on SBP standards. This training is recorded on MREC-DOC-002 Training Record.</p> <p>DeKalb Forest Products, the company’s sole supplier, requires their sub-suppliers and loggers to maintain SFI State Implementation Committee (SIC) logger training. This training educates loggers on BMPs, threatened & endangered species and biodiversity. The Company has access to SIC logger training databases to verify logger training. The Company verifies logger training as part of its annual supplier audits. Logger training is documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p>
Means of Verification	<ul style="list-style-type: none"> • Training records • MREC-DOC-012 Secondary Supplier Audit Checklist – Company’s sole supplier is audited by company at least once a year to verify: <ul style="list-style-type: none"> ○ Certification status of supplier ○ Logger Training status & % trained of sub-suppliers
Evidence Reviewed	<ul style="list-style-type: none"> • MREC-DOC-002 Training Record • MREC-DOC-012 Secondary Supplier Audit Checklist • Alabama Professional Logging Manager https://www.alaforestry.org/page/PLMGeneral • Georgia Master Timber Harvester http://gamth.org/ • Mississippi Professional Logging Manager http://logged.msstate.edu/ • Tennessee Master Logger http://www.tnforestry.com/files/1131/masterloggerdb.cfm
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.3.3	Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.
Finding	<p>In addition to the 23 jobs associated with the pellet mill, the Company has created another market for wood residuals. This additional market only adds to a forest products industry that is a leading industry and employer in AL and GA.</p> <p>According to recent economic studies, forestry is a \$18.5 billion industry in AL (2016), a \$21.3 billion industry in GA (2017) and a \$24.3 billion industry in TN (2015). Forestry and its related jobs accounted for over 65,400 jobs in AL, 53,900 jobs in GA & 101,337 jobs in TN.</p>
Means of Verification	Economic studies, Employee interviews
Evidence Reviewed	<ul style="list-style-type: none"> Economic Contributions of Alabama Agriculture and Forestry http://www.decision-innovation.com/webres/File/docs/AL-AECS/170619_FINAL%20Alabama%20Ag%20%26%20Forestry%20Economic%20Contribution%20Study.pdf Economic Benefits of the Forest Industry in Georgia: 2017 http://www.gfc.state.ga.us/utilization/economic-impacts/2017%20Forestry%20Impact%20Report%20Web.pdf TN AgStats 2015: Economic Contributions of Agriculture and Forestry in Tennessee https://www.forestryimpacts.net/reports/tennessee/BiAnnual2017.pdf
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.4.1	<p>The Biomass Producer has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).</p>
Finding	<p>MREC has implemented the US NRA for its supply area. MREC has determined the following categories of controlled wood as “low risk”:</p> <ul style="list-style-type: none"> • Category 1: Illegally harvested wood; • Category 2: Wood harvested in violation of traditional and human rights; • Category 5: Wood from forests in which genetically modified trees are planted. <p>MREC has determined there may be areas within its supply area that are considered “specified risk” to the following categories of controlled wood:</p> <ul style="list-style-type: none"> • Category 3: Wood from forests where high conservation values are threatened by management activities; <ul style="list-style-type: none"> ○ HCV1 – Central Appalachian Critical Biodiversity Area (CBA); ○ HCV1 – Southern Appalachian CBA; ○ HCV3 – Late Successional Bottomland Hardwoods; ○ HCV3 – Mesophytic Cove Sites; ○ HCV3 - Natural Longleaf Pine Systems; • Category 4: Wood from forests being converted to plantations or non-forest use. <p>MREC has mapped these “specified risk” areas by supplier/sub-supplier and will implement, as needed, adequate control measures to either avoid or to mitigate specified risk related to origin and/or risk related to mixing with non-eligible inputs in the supply chain.</p> <p><u>Central Appalachian CBA</u> The Central Appalachian CBA is located within 52 counties in 3 states in the northeastern portion of the MREC supply area. One (1) supplier provides wood fiber to MREC source from counties within this CBA. Nineteen (19) sub-suppliers providing wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).</p> <p>This CBA corresponds with the higher elevation portions of WWF’s ‘Appalachian Mixed Mesophytic Forest’ area, one of their Global 200 biodiversity areas. The broadleaf forests and aquatic habitats drive the region’s biodiversity. The forests are significant in the diversity of different forest types that occur and within them the large number of different tree species that occur, along with incredibly diverse understories and associated wildlife species. The geologic history, change in elevation, and diverse topography and climate have resulted in a very large number of microhabitats within the region – each with a unique biodiversity.</p> <p>Identified Threats: <u>Mixed Mesophytic Forests</u> - The priority threats to the forests as a whole include: climate change, pollution from mining, new highways and utility rights-of-way, ORV recreation and overpopulation of deer. <u>Aquatic Habitats</u> - Hydrologic alteration partially due to forestry practices and conversion from hardwood forests to non-native planted pine, reduced water quality partially due to loss of near-stream forested habitat and sedimentation associated with forestry practices and lack of Best Management Practice (BMP) implementation, and severe erosion of river banks.</p> <p><u>Southern Appalachian CBA</u> The Southern Appalachian CBA is located within 35 counties in 2 states within the MREC supply area. All suppliers and their sub-suppliers provide wood fiber to MREC source</p>

from counties within this CBA which is considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Biodiversity values in the southern Appalachians include aquatic habitats, glades, and montane longleaf pine. Alabama is recognized as having the greatest number of freshwater species of mollusks and fish in the United States, and many of these species have very restricted distributions and specialized habitat requirements that make them highly vulnerable to extinction. The Cahaba River watershed is the center of the biodiversity hotspot, but the biodiversity area includes other smaller watercourses as well. Aquatic habitats driving this concentration of biodiversity include lakes, rivers, streams, bogs, swamps, ephemeral pools, fens, seeps, swamp forests and wet meadows. Other drivers of biodiversity include glades and montane longleaf pine. Bibb County Glades (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. These are open habitats that are dominated by upland herbaceous plant species. There is typically an absence of a tree canopy on glades, resulting in large amounts of sunlight and heat on the surface. Montane longleaf pine habitats occur in steep rolling topography historically maintained by fire, mostly outside of or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community.

Identified Threats:

Aquatic Habitats - Numerous sources of information identify threats from forest management activities, particularly non-point source pollution in aquatic habitats, and disturbance to riparian zones.

Glades - Threats include grazing, non-native species, quarrying, root-digging, plant and animal collecting, removal of large rocks for landscaping, urban development, plowing for fire breaks, use as logging decks (resulting in soil/vegetation disturbance and soil erosion), conversion to other land uses, and ORV damage.

Montane Longleaf Pine - Biodiversity values can be adversely affected by forest management activities via conversion of longleaf to other pine types, and the use of management techniques, including herbicide application that have the potential to inhibit native understory communities.

Late Successional Bottomland Hardwoods

Late Successional Bottomland Hardwoods (LSBH) are located within 9 counties in 2 states in the southern-most portion of the MREC supply area. Two (2) sub-suppliers providing hardwood wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Much of the original bottomland hardwood in the US was cleared for agriculture, particularly in the Mississippi valley, and much of the remainder was mismanaged leaving very few intact examples. Bottomland Hardwoods are periodically inundated, floodplain forests, where the entire ecosystem is driven by hydrology. Late successional stands are not defined by the species, as much as by the structural composition (e.g., more stratification) and existence of large wood debris, including standing hollow trees – these changes occur at about 80 years in most Bottomland Hardwood types and perhaps a little later in cypress swamps.

Identified threats include development, hydrologic changes (droughts, water withdraws, ditching), incompatible forest management, pollution, fragmentation, invasive species and economic drivers that alter forest management goals.

Mesophytic Cove Sites

Mesophytic Cove Sites is located within 40 counties in 3 states in the northeastern portion of the MREC supply area. Twenty (20) sub-suppliers providing wood fiber to MREC source from counties considered to be “specified risk” within this CBA resulting in a low

level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

Mesophytic cove sites are highly diverse, closed-canopy hardwood forest occurring on sheltered sites at low- to moderate-elevation (1,000-3,600 ft), and sometimes higher. They tend to occur in large patches on concave slopes that accumulate nutrients and moisture. They are characterized by high species diversity and a complex forest structure. The ground level flora in particular has high species richness, often with abundant spring ephemerals. Rich cove forests have very fertile soils with a diverse herb layer containing few shrubs. Acidic cove forests are less fertile than rich coves, but otherwise similar.

Identified Threats to this forest type are invasive species and conversion to other uses. Threats also include incompatible forest management that results in alterations to the structure and composition of the forest or conversion to other forest types (white pine), climate change, chronic deer herbivory, harvesting of herbs and pollution.

Native Longleaf Pine Systems

Native Longleaf Pine Systems (NLPS) are located in 12 counties in 2 states throughout the MREC supply area. Fourteen (14) sub-suppliers providing wood fiber to MREC source from counties that have been identified as containing native longleaf systems resulting in a low level of mitigation required (FSC US Controlled Wood Regional Meeting Report SOUTHEAST & MISSISSIPPI ALLUVIAL VALLEY REGIONS: Atlanta, GA – July 31, 2018; page 11).

NLPS were once one of the most widespread forest types in the US but were reduced to less than 5% of their original range, becoming one of the rarest forest systems in the world. This historical reduction was driven by suppression of fire and conversion to other forest types. These forest systems are associated with high animal and plant diversity, including many rare, threatened and endangered species such as the Red-cockaded Woodpecker, Bachman’s Sparrow, Gopher Tortoise, Eastern Indigo Snake, and Flatwoods Salamander.

“Native” in this instance refers to existing longleaf pine that is on a site that has historically been maintained as longleaf pine. Longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine do not apply under this definition. “Native” does not imply a particular regeneration method; these stands may be either planted or naturally regenerated.

Identified threats include altered stand structure (due to lack of fire), conversion to other forest types, conversion to other land uses, habitat disturbance (including management techniques that inhibit native understory communities which may include herbicide application), and fragmentation.

IUCN Centre for Plant Diversity

The Centres of Plant Diversity (CPD) is a program established by the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF). The CPD identifies global areas with high concentrations of plant diversity or centers of plant endemism.

CPD NA23, contains endemic plants associated with granite outcrops within the Piedmont of Alabama, Georgia, and South Carolina. Granite outcrops are indicators for one of the IUCN Centre of Plant Diversity sites. Weathering of soils over granite bedrock exposes the bedrock at the surface. Once exposed, the granite bedrock is called a granite outcrop, granite outcrops are another name for exposed granite bedrock. A high percentage (33%) of plants associated with these rock outcrops are endemics. A handful of rare species are known to occupy high quality granite outcrops and their occurrences indicate the locations of granite outcrops. They are pool sprite (*Minuartia uniflora*), black-spored quillwort (*Isoetes melanospora*), mat-forming quillwort (*Isoetes tegetiformans*), and harperella (*Ptilimnium nodosum*).

	<p>CPD NA25 sites contain endemic plants associated with ultramafic rock outcrops that give rise to serpentine soils within the Piedmont of Alabama, Georgia, and South Carolina. Serpentine flora are restricted to soils derived from serpentine rock outcrops found in association with ultramafic rock. NA25 is restricted to the Piedmont physiographic province. Serpentine soils, associated with ultramafic bedrock, formed along a linear boundary between ancient continents. Serpentine soils have relatively higher levels of heavy metals (cadmium and nickel) and lower levels of calcium than other soils. Therefore, are toxic to most plants. Clays in serpentine soils have a high affinity for water, more so than other clays, making less water available to plants. Plants found in this CPD are specialists. They are adapted to the harsh conditions created by these soils and cannot survive outside of this habitat, making them obligate endemics to serpentine soils. As already stated, most plants cannot live in this environment.</p> <p>Identified threats include using these areas for harvesting decks or landings.</p> <p><u>World Resources Institute (WRI) / Global Forest Watch Frontier Forests</u></p> <p>There are no WRI Frontier Forests in the lower 48 states which means that there are no WRI frontier forests in the GBLLC wood basin (Figure 11).</p> <p><u>World Wildlife Fund (WWF), Global 200 Ecoregions</u></p> <p>5. Appalachian & Mixed Mesophytic Forests (# 69 in the WWF Global 200)</p> <p>The Appalachian and Mixed Mesophytic Forests is Number 69 of the Global 200 is ranked vulnerable (Figure 12). Although this risk assessment address only those Global 200 ranked critical/endangered, it is important to look at the two sub-ecoregions that make up Number 69. One of the subecoregions, the Appalachian Mixed Mesophytic Forests (NA0402), is ranked critical/endangered and is therefore significant at the national level. The other sub-ecoregion, Appalachian-Blue Ridge Forests (NA0403), intersects the District. However, since it is ranked vulnerable, it does not require evaluation.</p> <p>6. Southeastern Coniferous & Broadleaf Forests (# 75 in the WWF Global 200)</p> <p>The WWF's Global 200 Ecoregions build a framework for describing the most important areas of biodiversity on the planet. The Global 200 encompass almost 50% of life on earth. These 200 areas are places that conservation groups target and discuss with forest products companies about the loss of global, forest biodiversity.</p> <p>The southern third of the MREC supply area is in the Southeastern Coniferous & Broadleaf Forests which has a conservation status of endangered/critical. It is significant at a global scale, but this <i>global</i> ecoregion (#75) is subdivided into two smaller endangered/critical terrestrial ecoregions (Figure 13). These scaled-down subdivisions have significance at the national level.</p> <ul style="list-style-type: none"> • The Southeastern mixed forests (NA0413) • The Southeastern conifer forests (NA0529) <p>This is a highly degraded ecoregion with more than 99% of the original habitat having been converted to other uses. Settlers within the ecoregion logged and then cleared the land for agriculture. The ecoregion overlaps and is synonymous with the Piedmont physiographic province along the Atlantic Slope and the rest falls into the Coastal Plain on the Gulf Coast. WWF reports that there is little habitat left to conserve in this critical/endangered ecoregion. There are multiple examples of protected areas within this ecoregion.</p>
<p>Means of Verification</p>	<ul style="list-style-type: none"> • Company reviews the FSC US Controlled Wood National Risk Assessment (US NRA) and MREC-DOC-005 FSC Controlled Wood Risk Assessment at least annually to verify status of US NRA or to address any changes identified since the previous year. This review is a part of the company's annual Due Diligence System review. • MREC-DOC-012 Secondary Supplier Audit Checklists – Company's sole supplier is audited by company at least annually to verify:

	<ul style="list-style-type: none"> ○ The supplier and its sub-suppliers are aware of the mitigation measures implemented for FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment. • Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.
<p>Evidence Reviewed</p>	<ul style="list-style-type: none"> • MREC-DOC-002 Training Record • MREC-DOC-005 FSC Controlled Wood Risk Assessment • MREC-DOC-012 Secondary Supplier Audit Checklist • FSC US Controlled Wood National Risk Assessment (US NRA) https://us.fsc.org/en-us/certification/controlled-wood/fsc-us-controlled-wood-national-risk-assessment-us-nra • International Union for the Conservation of Nature (IUCN) https://www.iucn.org/ • World Resources Institute / Global Forest Watch https://www.wri.org/our-work/project/global-forest-watch • World Wildlife Fund (WWF) https://www.worldwildlife.org/biome-categories/terrestrial-ecoregions
<p>Risk Rating</p>	<p><input type="checkbox"/> Low Risk <input checked="" type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA</p>
<p>Comment or Mitigation Measure</p>	<p><u>Central Appalachian CBA</u> Mitigation Measures:</p> <ol style="list-style-type: none"> 1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting. Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Central Appalachian CBA. The desired outcome of this measure is to communicate to MREC the ecological importance of the Central Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk. <u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record. 2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach

	<p>measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>The desired outcome of these communications is engaging landowners, foresters, and loggers in increasing and improving BMP implementation that focuses on aquatic biodiversity conservation within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p> <p>3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.</p> <p><u>Plan to Measure Effectiveness:</u> Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.</p> <p><u>Southern Appalachian CBA</u> Mitigation Measures:</p> <p>1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Mark Hughes, PhD, owner of Biological Integrity, LLC attended the Southeast Region meeting on July 31, 2018 in Atlanta, GA. Hughes actively participated in the discussion of mitigating measures for the HCVs during this meeting.</p> <p>Gary Boyd, Greener Options, Inc., and Mark Hughes, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.</p> <p>The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.</p> <p>2. MREC will work with suppliers who source wood fiber from this area to educate the suppliers, their loggers and landowners on the conservation values of aquatic biodiversity, threats from poorly implemented forest management activities, and opportunities for conservation through management practices that reduce or eliminate these threats, including but not limited to forest management activities on steep slopes, and practices that will prevent siltation. This education and outreach</p>
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measure will be documented annually using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters, and loggers in increasing and improving BMP implementation that focuses on aquatic biodiversity conservation within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. MREC will engage with and/or provide monetary or in-kind resources to conservation partnerships, organizations or similar entities that are supporting or promoting programs/projects to develop new or augment existing programs within the specified risk area and the MREC's supply area that will: a) result in increased and improved implementation of BMPs with a focus on aquatic biodiversity conservation; and/or b) result in increased access to incentive programs for landowners who restore, maintain or enhance forests in a way that will conserve aquatic biodiversity.

Plan to Measure Effectiveness: Company annually reviews the results of partnerships developed and implemented with conservation organizations addressing FSC Controlled Wood specified risk areas and other areas of high conservation value identified within the company's MREC-DOC-005 FSC Controlled Wood Risk Assessment as mitigation measures.

Late Successional Bottomland Hardwoods

Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for Late Successional Bottomland Hardwoods (LSBH).

The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits & values of LSBH, threats from forest management activities & related loss of values, and opportunities for conservation through management that restores or maintains LSBH and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

	<p>The desired outcome of these communications is engaging landowners, foresters, and loggers in conservation of LSBH within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p> <p>3. Engage with and/or provide monetary or in-kind resources to conservation organizations or similar entities that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of LSBH, with a goal of long-term conservation of this forest type within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed.</p> <p><u>Mesophytic Cove Sites</u> Mitigation Measures:</p> <p>1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.</p> <p>Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the Southern Appalachian CBA.</p> <p>The desired outcome of this measure is to communicate to MREC the ecological importance of the Southern Appalachian CBA and provide the necessary educational materials to ensure the suppliers who source wood fiber from this area are knowledgeable of the identified threats to the CBA and understand the various measures that should be implemented to minimize the risk.</p> <p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.</p> <p>2. MREC will work with suppliers who source wood fiber from these forest types to educate the suppliers, their loggers and landowners and communicate the social benefits and values of Mesophytic Cove Sites, how to identify them in the field, threats from incompatible forest management activities, and opportunities for conservation through management that enhances these sites and reduces or eliminates these threats. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>The desired outcome of these communications is engaging landowners, foresters, and loggers in conservation of Mesophytic Cove Sites within the specified risk area and MREC's supply area.</p> <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the</p>
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conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

Native Longleaf Pine Systems

Mitigation Measures:

1. MREC has contracted with Greener Options, Inc. to assist in the development and implementation of MREC's certification programs. Greener Options, Inc. working with Biological Integrity, LLC attended the three FSC US Controlled Wood Regional meeting held in 2018. Gary Boyd attended the Appalachian Region meeting on July 19, 2018 in Asheville, NC. Boyd actively participated in the discussion of mitigating measures for the HCVs during this meeting.

Gary Boyd, Greener Options, Inc. and Mark Hughes, PhD, Biological Integrity, LLC have reviewed the FSC US Controlled Wood Regional Meeting final report findings with MREC specifically on recommended mitigation measures for the NLPS.

The desired outcome of this measure is to communicate to MREC the ecological importance of NLPS and provide the necessary educational materials to ensure the suppliers who source wood fiber from these areas are knowledgeable of the identified threats to NLPS and understand the various measures that should be implemented to minimize the risk.

Plan to Measure Effectiveness: Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed. Annual review will be documented on MREC-DOC-002 Training Record.

2. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the social benefits and values of NLPS, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains NLPS and reduces or eliminates these threats. Communications should recognize the importance of the forest understory and fire to NLPS. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists.

The desired outcome of these communications is engaging landowners, foresters and loggers in conservation of NLPS within the specified risk area and MREC's supply area.

Plan to Measure Effectiveness: The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.

3. MREC will engage with and/or provide monetary or in-kind resources to conservation organizations such as the Longleaf Alliance that are facilitating active, on-the-ground implementation of management activities to restore or maintain existing examples of NLPS, with a goal of long-term conservation of this system within the specified risk area and the MREC's supply area.

The desired outcome of this mitigation measure is to implement on-the-ground forest management activities that improve restoration or maintenance of NLPS, and thereby mitigate the risk of sourcing materials from sites where NLPS in the specified risk area are threatened by forest management activities.

	<p><u>Plan to Measure Effectiveness:</u> Consultant will have an annual review with the company on the high conservation value areas to review any updates or changes on the specified risk areas. Any new data or information related to threats or improvement actions through partnerships will be reviewed.</p> <p><u>IUCN Centre for Plant Diversity</u> Mitigation Measures:</p> <ol style="list-style-type: none"> 1. MREC will work with suppliers who source wood fiber from these areas to communicate and educate suppliers, their loggers and landowners on the values of granite outcrops, threats from forest management and related loss of values, and opportunities for conservation through management that restores or maintains granite outcrops and reduces or eliminates these threats. Communications should recognize the importance of granite outcrops. This education and outreach measure will be documented using MREC-DOC-012 Secondary Supplier Audit Checklists. <p><u>Plan to Measure Effectiveness:</u> The Company will meet with the sole supplier annually to verify the supplier has educated their suppliers, loggers & landowners on the conservation values of the specified risk. This annual audit will be documented using MREC-DOC-012 Secondary Supplier Audit Checklist. Supplier maps, education materials and other pertinent information will be provided to the supplier to be passed on to their suppliers, loggers and landowners.</p>
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	Indicator
2.4.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately (CPET S7b).
Finding	<p>The Company only receives secondary & tertiary feedstock and does not conduct forest management activities that manage fires, pests and diseases.</p> <p>The company through its participation in the Alabama Forestry Association will stay abreast of forest health issues. The Company will also work with state forestry agencies, as needed, to address issues of forest health.</p> <p>The AL Forestry Commission in its 2018 Annual Report stated there were 1,038 wildfires burning 11,309 acres for the fiscal year. As part of hazard mitigation, total prescribed fire in AL involved 12,601 burns on 944,176 acres. A total of 299 southern pine beetle spots were detected that infested 8,013 pines. More than half of these infestations were located on National Forests in the state.</p> <p>The GA Forestry Commission in its 2016 Annual Report stated there were 2,415 wildfires burning 9,970 acres for the fiscal year. GFC stated 2016 was lowest acreage burned since 1957. GFC foresters incorporated insect, disease, or invasive species advice into 361 management cases involving 9,012 acres for the year.</p> <p>The MS Forestry Commission in its 2018 Annual Report stated they responded to and suppressed 796 wildfires that burned 11,204 acres in FY18. MFC also assisted in prescribed burning 25,564 acres on public & private lands. Through MFC's Invasive Species Plan they addressed the detection, identification, information, control, and abatement of six species of concern that impact the forest resources of Mississippi. A total of 86 landowners were inspected for invasive species with 831 infested spots Treated covering 253 acres.</p> <p>The TN Forestry Commission in its 2018 Annual Report stated they responded to 583 wildfires that burned 5,837 acres, compared to 74,816 acres in FY 2017. They detected no major southern pine beetle (SPB) activity despite increasing populations reported in some areas of the southeast U.S. pine belt.</p>

Means of Verification	Employee interviews, Alabama Forestry Association membership
Evidence Reviewed	<ul style="list-style-type: none"> AL Forestry Commission Annual Report, 2018 http://www.forestry.alabama.gov/Pages/Other/Forms/Annual_Reports/Annual_Report_2018.pdf GA Forestry Commission Annual Report, 2016 http://www.gfc.state.ga.us/resources/publications/2016%20Annual%20Report.pdf MS Forestry Commission Annual Report, 2018 https://www.mfc.ms.gov/sites/default/files/MFC%202018%20Annual%20Report%20Web%20Compressed.pdf TN Forestry Commission Annual Report, 2018 https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/2018_TFC_report_web.pdf
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.4.3	The Biomass Producer has implemented appropriate control systems and procedures for verifying that there is adequate protection of the forest from unauthorised activities, such as illegal logging, mining and encroachment (CPETS7c).
Finding	<p>There are appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Company’s supply area. Illegal harvesting is prohibited by state laws. In most states the timber buyers and/or harvesting companies have to be licensed in order to conduct their business. Evidence indicates that major violations are prosecuted and legal liability is enforced. There is no evidence suggesting that illegal logging is a wide scale problem in the United States (US).</p> <p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 1: Illegally harvested wood to be “low risk”. MREC-DOC-005 FSC Controlled Wood Risk Assessment supports this low risk assessment through the listing of various applicable laws showcasing the rule of law and public agency governance.</p>
Means of Verification	Fiber Purchase Agreements, State laws, MREC-DOC-005 FSC Controlled Wood Risk Assessment
Evidence Reviewed	<ul style="list-style-type: none"> Fiber Purchase Agreements FSC US Controlled Wood National Risk Assessment (US NRA) MREC-DOC-005 FSC Controlled Wood Risk Assessment State laws addressing illegal logging and wood theft are as follows: <i>Alabama Laws</i> ALA. CODE 1975 § 9-13-62 awards double damages for a trespass that is committed <i>knowingly and intentionally.</i> Article 3 - Regulations as to Cutting, Removal, Purchase, etc., of Forest Products § 9-13-60 Unauthorized cutting, removal, transportation, etc., of timber or other forest products

	<p>§ 9-13-61 Charges in affidavits, information or indictments under article; proof of title, etc.</p> <p>§ 9-13-62 Liability</p> <p>§ 9-13-63 Record of purchases, etc., of manufactured or semi-manufactured forest products; provision of false information to purchasers, etc.; failure to maintain record, etc.</p> <p>§ 9-13-64 Powers of State Forestry Commission employees as to enforcement of article, etc.</p> <p>§ 9-13-65 Disposition of fines</p> <p>Article 9 - Timber Theft Equipment Condemnation</p> <p>§ 9-13-220 Short title</p> <p>§ 9-13-221 Seizure of vehicle and equipment upon arrest for certain criminal violations; delivery to district forester</p> <p>§ 9-13-222 Report of seizure to district attorney</p> <p>§ 9-13-223 Report to district attorney after conviction of person for theft of timber or lumber</p> <p>§ 9-13-224 Notice to creditors; institution of condemnation proceedings; legal title to equipment</p> <p>§ 9-13-225 Forfeiture of equipment upon judgment; costs of proceedings; State Forester to keep records</p> <p>§ 9-13-226 Use of proceeds from sale of equipment; award and distribution determined by State Forester</p> <p>§ 9-13-227 Provisions cumulative</p> <p>Logging Notice Act - Act 12-0257</p> <p><u>Georgia Laws</u></p> <p>House Bill - HB 790 (A BILL TO BE ENTITLED AN ACT) Signed by Governor: April 29, 2014 Effective Date: July 1, 2014 Provides additional enforcement authority to Georgia Forestry Commission investigators In cases involving the unauthorized cutting or cutting and carrying away of timber from the property of another damages shall be awarded in accordance with GA. CODE ANN. § 51-12-50. Amends GA. CODE ANN. § 51-12-50 whereas damages shall be: (1) Treble the fair market value of the trees cut as they stood; (2) Treble the diminished fair market value of any trees incidentally harmed; (3) Costs of reasonable reforestation activities related to the plaintiff's injury; and (4) Attorney fees and expenses of litigation. When defendant is a willful trespasser, plaintiff may receive punitive damages. Amends GA. CODE ANN. § 12-6-23 relating to wood load ticket required for wood removal, so as to require purchasers to provide the proper tickets to sellers of timber within 20 days GA Codes Title 12 Forest Resources and other Plant Life Article 1 – Forestry Resources GA. CODE § 12-6-23 - Wood load ticket required for wood removal; form; exceptions GA. CODE § 12-6-24 - Notice of timber harvesting operations</p> <p><u>Mississippi Laws</u></p> <p>The Mississippi Agriculture Theft Bureau, Penalties</p> <ul style="list-style-type: none"> ◆ Does not change existing law for timber trespass. ◆ Makes the payment of restitution to victims of timber theft (landowners) mandatory. The restitution amount will be the fair market value of the timber at the time of the loss, and also includes costs incurred by the victim as a result of the commission of the crime, such as court costs, expert and appraisal fees, and attorney's fees. <p>http://msforestry.net/pdf/timbertheftbill.pdf</p> <p>MISSISSIPPI CODE OF 1972</p> <p>§ 69-29-1. Mississippi Agricultural and Livestock Theft Bureau established</p>
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	<p>§ 69-29-1. (h) To investigate, prevent, apprehend and arrest those persons anywhere in the state who are violating any of the laws administered by the Department of Agriculture and Commerce including, but not limited to, timber theft.</p> <p>http://www.mscode.com/free/statutes/69/029/0001.htm</p> <p><u>Tennessee Laws</u></p> <p>TCA 43-28-312 Cutting timber from property of another – Civil liability.</p> <p>(a) (1) Civil liability for the negligent cutting of timber from the property of another shall be in an amount double that of the current market value of the timber.</p> <p>http://www.utextension.utk.edu/publications/spfiles/SP595.pdf</p>
Risk Rating	<p><input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA</p>
Comment or Mitigation Measure	

	Indicator
2.5.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest are identified, documented and respected (CPET S9).
Finding	<p>MREC-POL-001 Sustainability Policy states the Company will abide by all laws and regulations, including those laws associated with traditional and civil rights.</p> <p>Harvesting in the supply basin presents a low risk of violation of traditional, civil and collective rights based on the following factors: (1) There is no UN Security Council ban on timber exports from the country concerned; (2) The country or district is not designated a source of conflict timber (e.g. USAID Type 1 conflict timber); (3) There are recognized and equitable processes in place to resolve conflicts of substantial magnitude pertaining to traditional rights including use rights, cultural interests or traditional cultural identity in the district concerned; and (4) There is no evidence of violation of the ILO Convention 169 on Indigenous and Tribal Peoples taking place in the forest areas in the district concerned.</p> <p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 2: Wood harvested in violation of traditional and human rights to be “low risk”.</p>
Means of Verification	MREC-POL-001 Sustainability Policy, FSC US Controlled Wood National Risk Assessment (US NRA), Stakeholder consultation correspondence
Evidence Reviewed	<ul style="list-style-type: none"> • Stakeholder consultation correspondence • MREC-POL-001 Sustainability Policy • MREC-DOC-005 FSC Controlled Wood Risk Assessment • FSC US Controlled Wood National Risk Assessment (US NRA)
Risk Rating	<p><input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA</p>
Comment or Mitigation Measure	

	Indicator
2.5.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that production of feedstock does not endanger food, water supply or subsistence means of communities, where the use of this specific feedstock or water is essential for the fulfillment of basic needs.
Finding	<p>State forestry Best Management Practices (BMP) set forth guidelines for maintaining and/or improving soil quality. MREC-POL-001 Sustainability Policy states the Company requires BMP compliance with the harvesting of all wood fiber it receives. Fiber Purchase Agreements require BMP compliance. The Company verifies BMP compliance as part of its annual supplier audits. BMP compliance is documented using MREC-DOC-012 Secondary Supplier Audit Checklists.</p> <p>DeKalb Forest Products, the company’s sole supplier, requires their sub-suppliers and loggers to maintain SFI State Implementation Committee (SIC) logger training. This training educates loggers on BMPs, threatened & endangered species and biodiversity. The Company has access to SIC logger training databases to verify logger training. DeKalb Forest Products conducts on-site BMP compliance audits to monitor BMP compliance on their direct wood purchases.</p> <p>State forestry agencies conduct BMP compliance checks randomly or upon request by stakeholders. State BMP compliance reports are available for review by the Company.</p> <p>Soil maps covering the supply basin are available as a resource to suppliers to assist in planning fiber harvest in a way that does not harm soil quality.</p>
Means of Verification	<ul style="list-style-type: none"> • Fiber Purchase Agreements – Signed agreements verify suppliers comply with state BMPs & all loggers are maintaining their SIC logger training requirement • MREC-DOC-012 Secondary Supplier Audit Checklists – Company’s sole supplier is audited by company at least once a year to verify: <ul style="list-style-type: none"> ○ Certification status of supplier ○ Logger Training status & % trained of sub-suppliers ○ BMP compliance and/or regulatory violations of supplier & sub-suppliers • Company reviews the most current and available state BMP compliance reports annually
Evidence Reviewed	<ul style="list-style-type: none"> • Fiber Purchase Agreements • MREC-POL-001 Sustainability Policy • MREC-DOC-012 Secondary Supplier Audit Checklists • Alabama Professional Logging Manager https://www.alaforestry.org/page/PLMGeneral • Georgia Master Timber Harvester http://gamth.org/ • Mississippi Professional Logging Manager http://logged.msstate.edu/ • Tennessee Master Logger http://www.tnforestry.com/files/1131/masterloggerdb.cfm • Alabama Annual BMP Reports http://www.forestry.alabama.gov/Pages/Management/BMP_Practices.aspx • Results of Georgia’s 2017 Silvicultural Best Management Practices Implementation and Compliance Survey http://www.gfc.state.ga.us/forest-management/water-quality/bmps/BMP%20Survey%202017%20Results%20Report%20Final%20Corrected%20by%20Scott%20Jan112018%20410pm.pdf • 2016 BMP Implementation Survey: Mississippi’s BMP Implementation Monitoring Program https://www.mfc.ms.gov/sites/default/files/2016_BMP_%20Implementation_Survey_V3.pdf

	<ul style="list-style-type: none"> • Implementation of Forestry Best Management Practices in Tennessee (2017) https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPimpl2017.pdf • USGS Soils Map Database https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.6.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions.
Finding	<p>The Company has complaint mechanisms in place MREC-PROC-001 Chain of Custody Procedures and MREC-PROC-002 Due Diligence Procedures. These procedures provide guidance on when and how the Company respond to grievances and complaints. The complaints procedures is as follows:</p> <ol style="list-style-type: none"> 1. Individual complaints regarding fiber sourcing may be filed with MREC by mailing written complaints with specific reference to the Controlled Wood Standard variance to: <p style="margin-left: 40px;">Mike Walker Mohegan Renewable Energy - Crossville 79 Greenway Drive Crossville AL 35962</p> 2. When complaints related to the MREC Due Diligence System are received, the complaint is recorded in MREC-DOC-007 FSC Controlled Wood Complaints Log. A detailed description of the complaint will be recorded in MREC-DOC-006 FSC Controlled Wood Complaints Report. 3. Within two (2) weeks of receipt of the complaint, stakeholders will be notified of MREC complaint procedures and complainants will be sent a response acknowledging receipt of complaint. 4. MREC will conduct a preliminary assessment to determine whether evidence provided in a complaint is or is not substantial, by assessing the evidence provided against the risk of using material from unacceptable sources. Following a preliminary MREC assessment of evidence provided, complainants will be contacted for dialogue to resolve substantiated complaints before further action is taken. 5. Substantiated complaints will be forward to the certifying body and FSC National Office within two (2) weeks of receipt of the complaint, outlining steps to be taken to resolve the complaint and precautionary approaches to sourcing while the complaint is pending. 6. Field evidence, sourcing records, and supplier documentation will be reviewed within two months to verify complaints deemed to be substantial. Steps to include review of Tract Information sheets to confirm District of Origin for current deliveries and stepped up intensity of BMP audits to assess field compliance with Controlled Wood expectations. 7. Corrective actions will be developed to correct the circumstances leading to substantiated and verified complaints.

	<p>8. Corrective actions will be communicated and implemented with relevant suppliers. If corrective actions are not accepted or cannot be implemented, relevant materials and/or suppliers will be excluded from delivering to MREC until corrective actions are implemented and confirmed.</p> <p>9. Verification of implementation of the corrective actions will be achieved through tract visits, supplier discussions and document review.</p> <p>10. MREC will inform the complainant, the certification body, and the relevant FSC National Office of the results of the complaint and any actions taken towards its resolution, and for maintaining copies of relevant correspondence.</p> <p>11. All correspondence will be recorded and filed by the Management Representative.</p>
Means of Verification	MREC-PROC-001 Chain of Custody Procedures, MREC-PROC-002 Due Diligence Procedures
Evidence Reviewed	MREC-PROC-001 Chain of Custody Procedures MREC-PROC-002 Due Diligence Procedures
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.7.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that Freedom of Association and the effective recognition of the right to collective bargaining are respected.
Finding	<p>The Company recognizes the right to collective bargaining and the Freedom of Association. The Company is FSC Chain of Custody certified and has signed the Self Declaration which demonstrates support of FSC Policy FSC-POL-01-004, Policy for the Association of Organizations with FSC.</p> <p>Federal laws in the United States are codified in both the National Labor Relations Act of 1935 and OSHA protect workers’ rights to collective bargaining. AL & GA are “Right to Work” states.</p>
Means of Verification	Employee interviews, FSC Self Declaration, Federal Laws
Evidence Reviewed	<ul style="list-style-type: none"> FSC Self Declaration National Labor Relations Act https://www.nlr.gov/how-we-work/national-labor-relations-act Occupational Safety and Health Administration (OSHA) https://www.osha.gov/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.7.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using any form of compulsory labour.
Finding	The United States Federal Constitution 13 th Amendment provides “Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction”. Further, benefiting from compulsory labor in the United States is a federal crime punishable by up to 20 years in prison. The Company also has policies on workers rights, discrimination, etc.
Means of Verification	Company employment policies, Employee interviews
Evidence Reviewed	<ul style="list-style-type: none"> • Employment Posters • Amendment XIII of the United States Constitution https://www.archivesfoundation.org/documents/13th-amendment/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.7.3	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is not supplied using child labour.
Finding	State and Federal laws, such as the Equal Employment Opportunity and OSHA, are in place to prohibit child labor.
Means of Verification	Review of Company employment policies, Employee interviews
Evidence Reviewed	<ul style="list-style-type: none"> • Employment Posters • US Department of Labor https://www.dol.gov/whd/childlabor.htm • AL Department of Labor https://labor.alabama.gov/uc/ChildLabor/child-labor.aspx • GA Department of Labor https://dol.georgia.gov/child-labor-and-minors-entertainment • TN Department of Labor https://www.tn.gov/workforce/employees/labor-laws/labor-laws-redirect/child-labor.html
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.7.4	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using labour which is discriminated against in respect of employment and occupation.
Finding	State and Federal laws, such as the Equal Employment Opportunity and OSHA, are in place to provide rights to workers.
Means of Verification	Employee interviews, Company Employee Handbook, Federal laws
Evidence Reviewed	<ul style="list-style-type: none"> • Company Employee Handbook • Employee Posters • U.S. Equal Employment Opportunity Commission https://www.eeoc.gov/eeoc/ • Occupational Safety and Health Administration (OSHA) https://www.osha.gov/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.7.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is supplied using labour where the pay and employment conditions are fair and meet, or exceed, minimum requirements.
Finding	State and Federal laws, such as the Equal Employment Opportunity and OSHA, are in place to ensure pay and employment conditions are fair.
Means of Verification	Employee interviews, Company Employee Handbook, Federal laws
Evidence Reviewed	<ul style="list-style-type: none"> • Company Employee Handbook • Employee Posters • U.S. Equal Employment Opportunity Commission https://www.eeoc.gov/eeoc/ • Occupational Safety and Health Administration (OSHA) https://www.osha.gov/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.8.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that appropriate safeguards are put in place to protect the health and safety of forest workers (CPET S12).
Finding	State and Federal laws, such as OSHA to ensure worker health and safety in the work place. The Company has policies on workers' health and safety. The Company has a health and safety program that is managed by dedicated personnel. This program includes the use of personal protective equipment and safety meetings.
Means of Verification	Training records, Employee interviews
Evidence Reviewed	<ul style="list-style-type: none"> • Training Records • Company Employee Handbook • Employee Posters • Occupational Safety and Health Administration (OSHA) https://www.osha.gov/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.9.1	Biomass is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.
Finding	USDA Forest Service FIA data on carbon storage for the Company's supply area was determined to be 589.695 billion short tons in 2008 (AL,GA,TN – 2008; MS-2009). In 2017-18 (AL – 2018; GA,MS – 2017; TN – 2015) the supply area was determined to have 740.166 billion short tons of carbon stock. This accounts for 150.471 billion short tons of more carbon storage (2.44% annual increase) in 8-10 years.
Means of Verification	USDA Forest Service FIA data
Evidence Reviewed	<ul style="list-style-type: none"> • Carbon Reports from USDA Forest Service Forest Inventory & Analysis website https://www.fia.fs.fed.us/tools-data/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.9.2	Analysis demonstrates that feedstock harvesting does not diminish the capability of the forest to act as an effective sink or store of carbon over the long term.
Finding	USDA Forest Service FIA data on carbon storage for the Company’s supply area was determined to be 589.695 billion short tons in 2008 (AL,GA,TN – 2008; MS-2009). In 2017-18 (AL – 2018; GA,MS – 2017; TN – 2015) the supply area was determined to have 740.166 billion short tons of carbon stock. This accounts for 150.471 billion short tons of more carbon storage (2.44% annual increase) in 8-10 years.
Means of Verification	USDA Forest Service FIA data
Evidence Reviewed	<ul style="list-style-type: none"> Carbon Reports from USDA Forest Service Forest Inventory & Analysis website https://www.fia.fs.fed.us/tools-data/
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	

	Indicator
2.10.1	Genetically modified trees are not used.
Finding	<p>The Company has implemented the FSC US Controlled Wood National Risk Assessment (US NRA) which has determined Controlled Wood Category 5: Wood harvested in violation of traditional and human rights to be “low risk”.</p> <p>There are no known operational plantings on GMO trees in the US.</p>
Means of Verification	FSC US Controlled Wood National Risk Assessment (US NRA)
Evidence Reviewed	FSC US Controlled Wood National Risk Assessment (US NRA)
Risk Rating	<input checked="" type="checkbox"/> Low Risk <input type="checkbox"/> Specified Risk <input type="checkbox"/> Unspecified Risk at RA
Comment or Mitigation Measure	