Preface

These Biomass Harvesting Guidelines are designed to be used in conjunction with the “traditional” Mississippi’s Best Management Practices in forestry, especially in the area of maintaining high water quality standards (MFC 2005) and in situations where woody material is removed than during traditional forestry operations. Introduction

While the current outlook for biomass use seems to be limited to primarily offshore markets, the current form of shipment has been that of pellets, with the vast majority being white pellets produced from clean chips. Projections have shown that the primary growth through 2010 in the pellet market coming from southeastern thin-

ings in pine plantations. The end use of this material is in large electrical power generation systems. If this type of use is eventually adopted by coal burning electrical plants in the United States, the critical feedstock source may be woody biomass for national, re-

Definition of Forest Woody Biomass

While the definition of woody biomass is extremely varied, for the context of this document and to simplify the description, forest woody biomass (FWM) will be defined, in general, as any renewable woody fiber obtained through maintenance and harvesting opera-

Table 1. Mississippi soils suitability classes for biomass harvesting to be used in the development of Mississippi Biomass Guidelines.

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Slightly Limiting</th>
<th>Moderately Limiting</th>
<th>Very Limiting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Depth (cm)</td>
<td>&gt; 120</td>
<td>30 - 120</td>
<td>&lt; 30</td>
</tr>
<tr>
<td>CEC (cmol/kg)</td>
<td>&gt; 10</td>
<td>5 - 10</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>% OM</td>
<td>&gt; 3</td>
<td>1 or &lt; 3</td>
<td></td>
</tr>
<tr>
<td>Available Water Capacity (cm)</td>
<td>&gt; 18</td>
<td>14 - 18</td>
<td>&lt; 14</td>
</tr>
<tr>
<td>Slope</td>
<td>&gt; 20%</td>
<td>20-35%</td>
<td>&lt; 35%</td>
</tr>
<tr>
<td>Thickness of A horizon (cm)</td>
<td>&gt; 8</td>
<td>4-8</td>
<td>&lt; 8</td>
</tr>
<tr>
<td>Site Index</td>
<td>&gt; 65.75</td>
<td>65-65.75</td>
<td>65</td>
</tr>
</tbody>
</table>

These guidelines must be reviewed no later than 3 years following the publication or prior to that time if sufficient literature shows that this number is no longer valid.

Examination of other states biomass BMPs or guidelines were extremely helpful and included those written for: Alabama, Indiana, Kentucky, Maryland, Massachusetts, Missouri, North Carolina, and South Carolina. In addition, guidelines drafted by the Forest Guild and the Southern Group of State Foresters provided valuable infor-

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Figure 1. Limitations of biomass removals, where Forest Woody Biomass Guidelines apply, based on soil/site properties and various soil characteristics. Visit bit.ly/SoilMap to view this map online.


Basic Recommendations for Biomass Harvesting

Acceptable

Removal of stumps or roots from any type of conventional or bio-

Removal of any muddy or under-

Removal of deadwood either from standing or on the Oregon, Washington, and Idaho. These guidelines are practices designed to prevent erosion, protect water quality, protect soil nutrients, protect wildlife habitat, and maintain soil quality standards (MFC 2008) and in situations where more woody

Acceptable Woody Material (FWM) and Fine Unac-

Forest Woody Biomass Guidelines Practices Overview:

Biomass Guidelines are designed to augment existing upland and wetland BMP’s where appropriate, based on specific situations described below.

Forest Woody Biomass Guidelines are NOT REQUIRED for the Following Activities:

1. Biomass harvested during a pre-commercial thinning operation.
2. Biomass harvested during a commercial thinning operation.
3. Biomass harvested as a result of a salvage operation following a natural disaster or insect infestation.

Forest Woody Biomass Guidelines ARE RECOMMENDED for the Following Activities:

1. Biomass harvested or residuals collected following a transitional harvest of a stand.
2. Transitional harvests using the entire above-ground portion of the tree from either natural stands or plantations.
3. Transitional harvests using the main stem of the tree in either natural stands or plantations.

Biomass harvests that should follow the Guidelines are limited to areas in the state that are well or moderately suitable as described by NRCS Harvest Equipment Operability Map. (Figure 1)

The Mississippi Soils Suitability map is based on soil characteristics. Visit bit.ly/SoilMap to view this map online.

Thickness of A horizon (cm) | > 8 | 4-8 | < 8 |
Site Index | > 65.75 | 65-65.75 | 65 |

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