## Doyle (North) Stumpage Prices

<table>
<thead>
<tr>
<th>Veneer</th>
<th>High</th>
<th>Low</th>
<th>Avg.</th>
<th>Last Qtr.</th>
<th>Last Yr.</th>
<th>Vol.</th>
<th># of Rpts.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Walnut, Black</td>
<td>$5,430</td>
<td>$1,050</td>
<td>$3,155</td>
<td>$3,155</td>
<td>$2,445</td>
<td>26 Doyle - MBFMBF</td>
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<tr>
<td>White oak (group)</td>
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<td>$860</td>
<td>$1,225</td>
<td>-</td>
<td>-</td>
<td>11 Doyle - MBF</td>
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</table>

## Sawlogs

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
<th>Avg.</th>
<th>Last Qtr.</th>
<th>Last Yr.</th>
<th>Vol.</th>
<th># of Rpts.</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Ash</td>
<td>$260</td>
<td>$30</td>
<td>$105</td>
<td>$95</td>
<td>-</td>
<td>23 Doyle - MBF</td>
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<tr>
<td>Hard Maple</td>
<td>$290</td>
<td>$30</td>
<td>$130</td>
<td>$90</td>
<td>-</td>
<td>9 Doyle - MBF</td>
<td>5</td>
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<tr>
<td>Hickory</td>
<td>$290</td>
<td>$30</td>
<td>$95</td>
<td>$95</td>
<td>$85</td>
<td>110 Doyle - MBF</td>
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<tr>
<td>Mixed Hardwoods</td>
<td>$315</td>
<td>$50</td>
<td>$155</td>
<td>$145</td>
<td>$85</td>
<td>642 Doyle - MBF</td>
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</tr>
<tr>
<td>Oak (mixed species)</td>
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<td>$35</td>
<td>$195</td>
<td>$155</td>
<td>$140</td>
<td>1,280 Doyle - MBF</td>
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<tr>
<td>Post Oak</td>
<td>$220</td>
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<td>$170</td>
<td>$70</td>
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<tr>
<td>Red oak (group)</td>
<td>$560</td>
<td>$50</td>
<td>$110</td>
<td>$120</td>
<td>$100</td>
<td>949 Doyle - MBF</td>
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</tr>
<tr>
<td>Soft Maple</td>
<td>$210</td>
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<td>$185</td>
<td>$190</td>
<td>$200</td>
<td>402 Doyle - MBF</td>
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</tr>
<tr>
<td>Walnut, Black</td>
<td>$2,000</td>
<td>$450</td>
<td>$1,375</td>
<td>$1,325</td>
<td>$745</td>
<td>208 Doyle - MBF</td>
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<tr>
<td>White oak (group)</td>
<td>$360</td>
<td>$100</td>
<td>$205</td>
<td>$210</td>
<td>$185</td>
<td>1,639 Doyle - MBF</td>
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</table>

## Stave Logs

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
<th>Avg.</th>
<th>Last Qtr.</th>
<th>Last Yr.</th>
<th>Vol.</th>
<th># of Rpts.</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>White oak (group)</td>
<td>$550</td>
<td>$150</td>
<td>$340</td>
<td>$240</td>
<td>-</td>
<td>61 Doyle - MBF</td>
<td>9</td>
<td></td>
</tr>
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</table>

## International (South) Stumpage Prices

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
<th>Avg.</th>
<th>Last Qtr.</th>
<th>Last Yr.</th>
<th>Vol.</th>
<th># of Rpts.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hickory</td>
<td>$250</td>
<td>$50</td>
<td>$165</td>
<td>$170</td>
<td>$165</td>
<td>226 Int. - MBF</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Mixed Hardwoods</td>
<td>$365</td>
<td>$80</td>
<td>$195</td>
<td>$225</td>
<td>$190</td>
<td>3,052 Int. - MBF</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Oak (mixed species)</td>
<td>$250</td>
<td>$70</td>
<td>$160</td>
<td>$175</td>
<td>$125</td>
<td>2,633 Int. - MBF</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Post Oak</td>
<td>$160</td>
<td>$40</td>
<td>$125</td>
<td>$125</td>
<td>$90</td>
<td>77 Int. - MBF</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Red oak (group)</td>
<td>$325</td>
<td>$160</td>
<td>$245</td>
<td>$240</td>
<td>$200</td>
<td>4,811 Int. - MBF</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Shortleaf Pine</td>
<td>$250</td>
<td>$55</td>
<td>$130</td>
<td>$125</td>
<td>$165</td>
<td>112 Int. - MBF</td>
<td>10</td>
<td></td>
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<tr>
<td>Walnut, Black</td>
<td>$890</td>
<td>$125</td>
<td>$680</td>
<td>$680</td>
<td>$225</td>
<td>28 Int. - MBF</td>
<td>3</td>
<td></td>
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<tr>
<td>White oak (group)</td>
<td>$325</td>
<td>$125</td>
<td>$230</td>
<td>$230</td>
<td>$180</td>
<td>626 Int. - MBF</td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>
As a service to our readers prices (non-salvage) are also reported on a per board foot (BF) basis. To convert from BF to MBF (prices or volume), multiply by 1,000.

### Doyle (North) Stumpage Prices per BF

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
<th>Avg.</th>
<th>Last Qtr.</th>
<th>Last Yr.</th>
<th>Vol.</th>
<th># of Rpts.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Veneer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walnut, Black</td>
<td>$5.43</td>
<td>$1.05</td>
<td>$3.16</td>
<td>$3.16</td>
<td>$2.44</td>
<td>26 Doyle - BF</td>
<td>6</td>
</tr>
<tr>
<td>White oak (group)</td>
<td>$1.50</td>
<td>86¢</td>
<td>$1.23</td>
<td>-</td>
<td>-</td>
<td>11 Doyle - BF</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sawlogs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ash</td>
<td>26¢</td>
<td>3¢</td>
<td>10¢</td>
<td>10¢</td>
<td>-</td>
<td>23 Doyle - BF</td>
<td>5</td>
</tr>
<tr>
<td>Hard Maple</td>
<td>29¢</td>
<td>3¢</td>
<td>13¢</td>
<td>9¢</td>
<td>-</td>
<td>9 Doyle - BF</td>
<td>5</td>
</tr>
<tr>
<td>Hickory</td>
<td>29¢</td>
<td>3¢</td>
<td>10¢</td>
<td>9¢</td>
<td>8¢</td>
<td>110 Doyle - BF</td>
<td>12</td>
</tr>
<tr>
<td>Mixed Hardwoods</td>
<td>31¢</td>
<td>5¢</td>
<td>16¢</td>
<td>15¢</td>
<td>8¢</td>
<td>642 Doyle - BF</td>
<td>22</td>
</tr>
<tr>
<td>Oak (mixed species)</td>
<td>31¢</td>
<td>3¢</td>
<td>19¢</td>
<td>16¢</td>
<td>14¢</td>
<td>1,280 Doyle - BF</td>
<td>14</td>
</tr>
<tr>
<td>Post Oak</td>
<td>22¢</td>
<td>9¢</td>
<td>14¢</td>
<td>17¢</td>
<td>7¢</td>
<td>21 Doyle - BF</td>
<td>7</td>
</tr>
<tr>
<td>Red oak (group)</td>
<td>56¢</td>
<td>5¢</td>
<td>11¢</td>
<td>12¢</td>
<td>10¢</td>
<td>949 Doyle - BF</td>
<td>22</td>
</tr>
<tr>
<td>Soft Maple</td>
<td>21¢</td>
<td>12¢</td>
<td>19¢</td>
<td>19¢</td>
<td>20¢</td>
<td>402 Doyle - BF</td>
<td>7</td>
</tr>
<tr>
<td>Walnut, Black</td>
<td>$2.00</td>
<td>45¢</td>
<td>$1.37</td>
<td>$1.33</td>
<td>75¢</td>
<td>208 Doyle - BF</td>
<td>19</td>
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<tr>
<td>White oak (group)</td>
<td>36¢</td>
<td>10¢</td>
<td>21¢</td>
<td>21¢</td>
<td>18¢</td>
<td>1,639 Doyle - BF</td>
<td>21</td>
</tr>
<tr>
<td><strong>Stave Logs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White oak (group)</td>
<td>55¢</td>
<td>15¢</td>
<td>34¢</td>
<td>24¢</td>
<td>-</td>
<td>61 Doyle - BF</td>
<td>9</td>
</tr>
</tbody>
</table>

### International (South) Stumpage Prices per BF

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
<th>Avg.</th>
<th>Last Qtr.</th>
<th>Last Yr.</th>
<th>Vol.</th>
<th># of Rpts.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sawlogs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hickory</td>
<td>25¢</td>
<td>5¢</td>
<td>17¢</td>
<td>17¢</td>
<td>16¢</td>
<td>226 Int. - BF</td>
<td>18</td>
</tr>
<tr>
<td>Mixed Hardwoods</td>
<td>37¢</td>
<td>8¢</td>
<td>20¢</td>
<td>22¢</td>
<td>19¢</td>
<td>3,052 Int. - BF</td>
<td>12</td>
</tr>
<tr>
<td>Oak (mixed species)</td>
<td>25¢</td>
<td>7¢</td>
<td>16¢</td>
<td>18¢</td>
<td>12¢</td>
<td>2,633 Int. - BF</td>
<td>23</td>
</tr>
<tr>
<td>Post Oak</td>
<td>16¢</td>
<td>4¢</td>
<td>12¢</td>
<td>12¢</td>
<td>9¢</td>
<td>77 Int. - BF</td>
<td>9</td>
</tr>
<tr>
<td>Red oak (group)</td>
<td>32¢</td>
<td>16¢</td>
<td>25¢</td>
<td>24¢</td>
<td>20¢</td>
<td>4,811 Int. - BF</td>
<td>19</td>
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<tr>
<td>Shortleaf Pine</td>
<td>25¢</td>
<td>6¢</td>
<td>13¢</td>
<td>12¢</td>
<td>16¢</td>
<td>112 Int. - BF</td>
<td>10</td>
</tr>
<tr>
<td>Walnut, Black</td>
<td>89¢</td>
<td>13¢</td>
<td>68¢</td>
<td>68¢</td>
<td>22¢</td>
<td>28 Int. - BF</td>
<td>3</td>
</tr>
<tr>
<td>White oak (group)</td>
<td>32¢</td>
<td>12¢</td>
<td>23¢</td>
<td>23¢</td>
<td>18¢</td>
<td>626 Int. - BF</td>
<td>19</td>
</tr>
</tbody>
</table>
Published timber prices are based on a rolling average of reports received over the last four issues - that is, one year. Refer to the column headed “# of Rpts.” to get a gauge of how accurate the average prices may be. (“# of Rpts.” refers to the number of sales including a particular species and may sum to more than the number of sales.) Changes since last quarter and last year should be read with caution as the number of reports varies each year and quarter. This report can only be used as a general guide for determining market value of timber. General market and economic conditions, as well as local considerations such as accessibility, terrain, sale size, and tree size and quality also affect the price paid.

Please see the map on page 7 for a definition of reporting regions.

All prices and volumes are reported in either International ¼” MBF Scale or Doyle MBF, depending on the region of the state.

To convert volume from Int.-MBF to Doyle MBF, divide by 1.2. To convert prices from Int.-MBF to Doyle MBF, multiply by 1.2.

To convert from MBF to BF (prices or volume), divide by 1,000.

Foresters reported stumpage prices resulting from 102 timber sales containing 19,407 MBF located throughout the state. There were 68 reports from Private lands and 34 reports from MDC lands. There were 75 reports from MDC foresters and 27 reports from Consultant foresters. We would particularly like to thank these Consulting Foresters: Mr.’s Lohmann, Meyers, Suchland, Yarnell, Kinerk, Lumb, Cunningham, Dwyer and Enyart.

**Editor’s Note**

We’ve made some changes with this issue of the Missouri Department of Conservation’s Timber Price Trends. Due to a slow economy, and the voluntary nature of timber sales reporting in Missouri, the number of reports we receive has fallen off in recent years. This has meant that some average prices were based on very few reports! With his issues, we begin calculating average prices based on a rolling dataset of all reports from the past 12 months, with the oldest reports dropping out as new ones come in. This should provide more reports to back up each average price, as well as removing some artificial volatility from the numbers.

We have also reduced the number of reporting regions from 3 to 2 (North and South), again upping the number of reports that go into each published price. And each region will report prices in their “native” scale (Doyle or International) with no “Statewide” attempt to merge the two.

We would like to thank the members of MOFRAC who helped with this change in direction, as well as the Missouri Consulting Foresters Association and the Missouri Department of Conservation, both of whom have taken “steps” to encourage more reporting from their members and employees.

Remember that one of the most valuable sources for information on log and timber markets is the local Missouri Department of Conservation Resource Forester or your Consulting Forester. Contact the nearest Forest District office for up-to-date, local advice. The Missouri Department of Conservation's Forestry Division, (573) 751-4115, will be happy to provide you with the name and address of the Resource Forester or MDC Regional Office nearest to you. You can locate a Consulting Forester by visiting the Mo. Consulting Forester's Association web site at: [www.missouriforesters.com](http://www.missouriforesters.com) or by visiting the Private Land Assistance page of the MDC website [http://mdc.mo.gov/landown/](http://mdc.mo.gov/landown/) and clicking on the “Conservation Assistance Contractors” link.

Tom Treiman and Jason Jensen, Editors
Prices remain strong for nearly every species of wood across the state. This is good news for landowners thinking of selling timber. One of the problems that I’m seeing and hearing from mills throughout the state is that they have never rebuilt log inventories dating back to late winter and early spring. In the southern portion of the state we also saw record rainfall and flooding in August. That was definitely not typical August weather in Missouri. As a result log inventories are very low at many mills. The economic downturn, along with the demographics of our logging industry has also created a shortage of loggers in some parts of the state. This is resulting in mills having a very hard time rebuilding log inventories. Fall is not a good time of the year to be low on logs. Mills trying to rebuild inventory have created intense competition for standing timber especially in the southern portion of the state. Competition combined with improving markets, makes it a good time for landowners to consider selling timber. Prices for this quarter have been stable or slightly increasing for most species and product classes compared to the last quarter. Foresters are reporting higher than expected prices on nearly all sales. Foresters have also reported prices at or above levels before the economic downturn in 2009 as the result of demand and competition.

In the southern part of the state tie markets remain strong. Flooring markets are good as well which has resulted in higher demand for pallet grade lumber. Prices for pallet lumber haven’t necessarily increased along with the higher demand however. As a result pallet grade logs and lumber still remain lower than they need to be for anyone from the landowner to the logger to the mill to make much profit.

Stave quality white oak prices remain good especially due to low log inventories. The stave industry has expanded their buying further from their mills to compensate for low inventories and high demands for barrels. I’ve also heard that good ash is bringing good money as well.

In northern portions of the state, demand for red oak lumber has finally picked back up again. That is good news since the red oak market has been very supressed in this portion of the state for the last several years. White oak and walnut markets remain strong as well.
Forest Products Laboratory played key role in solving Lindbergh kidnapping

“The Sixteenth Rail” by Schrager

The memory of an aunt’s oversized scrapbook and its cache of newspaper clippings about the Lindbergh kidnapping is still vivid. Homemade paste made from flour and water, held the newsprint to the pages, making the scrapbook bulky to handle.

My first view of those precious pages came before I could read. Sadly, that scrapbook was left behind when the family moved from Minnesota.

The kidnap victim was the 20-month-old son of Charles A. Lindbergh, who was famous for making the first solo flight across the Atlantic. The baby had been taken from his second story nursery and murdered.

Remembering that scrapbook, it’s not surprising I was eager to read Adam Schrager’s new book about the kidnapping that took place on March 1, 1932.

In The Sixteenth Rail, Schrager writes how, at the baby’s birth, he became an instant celebrity, with press reports about him being written “in greater detail than if the youngster had been heir to the throne.”

Left behind at the crime scene was a ransom note, a chisel, a wooden dowel and a three-section (16-rail) homemade wooden ladder. The ladder was the most important piece of evidence.

The book details many coincidences. For instance, years earlier Lindbergh and wood expert Arthur Koehler had earned UW-Madison degrees on the same date on the same stage. Lindbergh, who had flunked out of the university, received an honorary degree after his history-making flight. Koehler was there to receive his master’s degree in forestry.

Another coincidence is that the superintendent of the New Jersey State Police was Colonel H. Normal Schwarzkopf, father of the Gulf War’s Stormin’ Norman.

Schwarzkopf appealed to the public to cooperate with police and report any sightings of unfamiliar infants in their neighborhoods.

The Federal Kidnapping Act was passed the month after the kidnapping and was signed into law by President Hoover, who also “offered New Jersey authorities the support and assistance of the FBI.”

Soon those authorities, using that promised assistance, sent small pieces of wood that were chipped from the ladder to the FPL for identification. Those pieces landed on the desk of Arthur Koehler.

Koehler, who headed the section of Silvicultural (forestry) Relations at the Forest Products Laboratory (FPL), Madison, had grown up on a farm near Manitowoc. His dad’s passion was carpentry and it was natural for his son to likewise enjoy the same woodworking hobby.

After earning his bachelor’s degree from the University of Michigan, Koehler went to work for the U.S. Forest Service as an “assistant in the study of the cellular structure of wood.”

His work started in the Wood Anatomy unit at FPL in 1914; eventually he headed a new division, Wood Technology. From this position Koehler often served as an expert witness in court cases.
When the FPL received those small pieces of wood from the ladder, Koehler was told to drop whatever he was doing and identify the wood as soon as possible. He also was told not to tell anyone what he was doing.

It took Koehler less than a week to identify the seven wood samples. The steps and sides of the ladder were Douglas fir and Ponderosa pine, from western woods; there also was yellow pine from the south.

Next, Schwarzkopf hired Koehler to come east and examine the ladder itself. Now, nearly a year after the crime, Koehler joined the investigation. In four days, he presented his report, complete with diagrams. Only the sixteenth rail was puzzling.

Thus, starting the search for the origin of the different woods used in the ladder. During his search, Koehler sent out 40,000 circulars to lumber mills all across the country asking for their help in tracing the wood.

While the wood identification work was going on, an alert gas station attendant had written down the license plate number of the car whose driver had paid for his purchase with one of the ransom bills. The bill numbers had been carefully noted when the ransom was paid.

The car was traced to Bruno Richard Hauptmann who lived in the Bronx.

The story of how Koehler traced the different woods and the surprise discovery about the wood in Rail sixteen reads like one of today’s best detective novels.

Koehler’s detailed testimony at the trial and the book’s descriptions of the jury members make for fascinating reading.

As I read the book, I could not help but think how the investigation, into both the wood and the ransom money, was effectively conducted without the benefit of today’s computer technology.

Communication among the investigators was conducted by the U.S. Postal Service, the telegraph and the telephone.

Schrager’s book takes the reader to the trial during the questioning of Koehler whose succinct responses led a famous writer of that day to refer to his performance on the witness stand as “putting Sherlock Holmes in the shade.”

The publisher of this book is Fulcrum Publishing in Colorado.

Economic Contribution: The Manufacturing of Forest Products
Posted on August 27, 2013 by Suz-Anne Kinney

Forest2Market recently completed an economic impact study for the National Alliance of Forest Owners. The study quantifies the contribution that forestry-related industries make to state, regional and national economies. The following map identifies the regions that were the subject of the study.
The largest number of timberland acres can be found in the South, which is made up of 13 states. The Northwest has less than half as much as the South. Between 80-90 percent of timberland in the South, Appalachia and the Northeast is privately owned. In the Midwest, 65 percent is privately owned. The Northwest is the only region in which the majority of the timberland is publicly owned; just 36 percent is privately owned.

One of the factors we quantified in the study was the extent to which the manufacture of forest products—including lumber, panels, wood pellets, paper, packaging and furniture—contributes to the economy. In 2010,
that contribution totaled nearly $100 billion annually. (It should be noted that 2010 was hardly a banner year for demand for forest products; new residential construction in the US remained around recession lows.) The following table shows the total value of all manufacturing shipments. End products made from timber represented 6.68 percent of all the manufacturing that occurred in the US in 2010.

<table>
<thead>
<tr>
<th>Area</th>
<th>All Timberland</th>
<th>Forest Products Manufacturing</th>
<th>Forest Products Manufacturing as % of Total Manufacturing</th>
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</thead>
<tbody>
<tr>
<td>US (32 States)</td>
<td>$97,610,000,000</td>
<td>6.68%</td>
<td></td>
</tr>
<tr>
<td>South (13 States)</td>
<td>$44,490,000,000</td>
<td>7.53%</td>
<td></td>
</tr>
<tr>
<td>Appalachia (5 States)</td>
<td>$13,889,000,000</td>
<td>7.30%</td>
<td></td>
</tr>
<tr>
<td>Northeast (4 States)</td>
<td>$4,957,000,000</td>
<td>6.14%</td>
<td></td>
</tr>
<tr>
<td>Northwest (5 States)</td>
<td>$13,442,000,000</td>
<td>4.28%</td>
<td></td>
</tr>
<tr>
<td>Midwest (5 States)</td>
<td>$20,832,000,000</td>
<td>7.28%</td>
<td></td>
</tr>
</tbody>
</table>

The following figure shows the breakdown of manufacturing shipments for each region by ownership type. The South’s privately owned timberland represents the bulk of forest products manufacturing in the US; end products made from timber are 7.16 percent of the region’s total manufacturing.

The following table shows the gulf between the contribution made by private and public timberland. Nationwide, end products made from timber that originates on publicly-owned land are less than 1 percent of total manufacturing. By contrast, end products sourced from privately-owned timberland represent 5.71 percent of all manufacturing. Of the total contribution to manufacturing, end products sourced from private timberland is more than 85 percent of the total.
How to Correctly Construct a Waterbar

The first push on a water bar should extend beyond the upper edge of the skid trail. The skidder should be articulated to provide the correct 30 degree angle for the water bar. The skidder should pull up to within 2-3 feet of the correct location for the waterbar. To start construction, put down pressure on the skidder blade, lifting the front wheels off the ground. Ease the skidder forward 2-3 feet to create a water bar.

Loose dirt should not be pushed into a pile to create a water bar. A correctly built water bar should consist of a shallow trench in the trail with dirt piled behind it.

<table>
<thead>
<tr>
<th>Area</th>
<th>Privately-Owned Timberland</th>
<th>Publicly-Owned Timberland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Forest Products Manufacturing</td>
<td>Forest Products Manufacturing as % of Total Manufacturing</td>
</tr>
<tr>
<td>US (52 States)</td>
<td>$83,459,005,631</td>
<td>5.71%</td>
</tr>
<tr>
<td>South (13 States)</td>
<td>$42,300,593,659</td>
<td>7.16%</td>
</tr>
<tr>
<td>Appalachia (5 States)</td>
<td>$10,953,213,104</td>
<td>5.76%</td>
</tr>
<tr>
<td>Northeast (4 States)</td>
<td>$3,939,291,528</td>
<td>4.88%</td>
</tr>
<tr>
<td>Northwest (5 States)</td>
<td>$10,914,265,252</td>
<td>3.47%</td>
</tr>
<tr>
<td>Midwest (5 States)</td>
<td>$15,351,642,089</td>
<td>5.37%</td>
</tr>
</tbody>
</table>
The skidder will need to reposition and push a minimum of four different times to correctly complete the construction of a waterbar. Pictured here is the second push.

The skidder is currently completing the third push. Notice that the waterbar extends beyond the lower end of the skid trail preventing water from running back into the skid trail.

Properly constructed waterbars should drain rather than damming or pooling water up. A waterbar should serve as a diversion rather than a dam. Water should divert off the skid trail when it hits the waterbar.
The fourth push creates an outlet for the water. Water should be diverted into undisturbed forest leaf litter. The leaf litter can then filter the sediment and disperse the water before it enters a stream.

A completed, correctly built waterbar can be constructed in approximately 2 minutes. It should extend beyond both sides of the skid trail. The waterbar should be angled at 30-45° and should drain into undisturbed leaf litter.

<table>
<thead>
<tr>
<th>Slope %</th>
<th>Distance Between Waterbars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>400</td>
</tr>
<tr>
<td>2</td>
<td>245</td>
</tr>
<tr>
<td>5</td>
<td>125</td>
</tr>
<tr>
<td>10</td>
<td>78</td>
</tr>
<tr>
<td>15</td>
<td>58</td>
</tr>
<tr>
<td>20</td>
<td>47</td>
</tr>
<tr>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>40</td>
<td>29</td>
</tr>
</tbody>
</table>

Water bars are built at specific intervals depending on the skid trail gradient.
Turmoil in the Middle East creates a lumber buying buffet for China

By: David Stallcop – Vanport International, Inc

Traditionally one of the main shipping destinations for Russian and European low grade lumber, Egypt’s Arab Spring, and the subsequent turmoil and chaos that have affected the country, has reduced lumber imports into the port of Alexandria to less than a third of what they were only a few years ago. Syria was also a major destination for low grade lumber until the current civil war overtook the country. Can you imagine going into a bank in Damascus or Alexandria and asking for a loan to buy lumber? It just isn’t happening. A tremendous amount of commerce is being put on hold in that entire region because of uncertainty and fear.

Russia alone was shipping close to 4 million cubic meters of lumber annually into Egypt. This year that volume may be a little less than 1.5 million cubic meters if the current trends hold true.

I have had many industry colleagues ask why Egypt consumes so much lumber. My answer, based on my travels in the region and through conversations with traders in these markets is that Egypt has traditionally been a shipping point to trans load lumber throughout the Middle East and Northern Africa. With many dozens of respected, trusted import distributors and trans loaders, and decades of experience and connections, Egypt now has only a handful that have survived the chaos and turmoil of the past few years.

Other countries with main shipping ports such as the United Arab Emirates, Pakistan and Slovenia are trying to fill the vacuum of Egypt’s declining lumber trade in the region. However, building a strong business relationship over new sales routes take time. You can visit the ports of Dubai, Karachi and Koper today where you can see lumber for use in reels, concrete forming, pallet, crating materials, and general construction from pretty much every major sawmill in Scandinavia, Central and Eastern Europe and Russia.

The total volume of lumber being sold into the region as a whole however is down dramatically.

What you are seeing now are sawmills or groups of sawmills which used to ship entire break bulk vessels to Egypt now shipping dramatically less into the region overall and looking to China as an alternative market. Russian sawmills are now making headway into China as well. American and Canadian lumber suppliers are visiting customers in China and finding that they are suddenly competing against Russian and European lumber products.

The only issue that is holding Chinese buyers from increasing their purchases out of Europe is the fact that transit times compared to North American suppliers are 2 to 3 times longer and there are few common sizes produced in Europe. In North America there are 5 main sizes of 2 inch dimension lumber. Chinese buyers have figured out how to use these in a myriad of applications. In Europe, some mills produce hundreds of different sizes because there is no building standard. Every city or region in Europe uses different sized lumber for different construction applications. So, it would take some creativity on the side of the Chinese buyers to reinvent how they use wood fiber from what they have become accustomed to using out of North America.

Some in the industry have asked me, “what if the Middle East stabilizes — will the Russians and Europeans switch back to selling into that region again?” Absolutely, but it also depends a lot on price. If the Chinese buyers can figure out how to use the different sizes of lumber found in Europe and are willing to pay for that fiber then the Europeans may be able to keep a following and their newfound customers in China may be able to pay more than lumber out of North America.

In my opinion though, it all depends on quality and price and the recovery the Chinese buyers can get out of that fiber supply. The buyers in China are very savvy. They even take into consideration which species wear down their saws the fastest. As an example, a sawmill in the US Pacific Northwest may have to change their saws halfway through a shift when running Douglas-fir, but with hemlock they can make it through an entire shift before they need to change the saws. Chinese buyers have figured this out themselves as well. As they become more savvy about the multiple species and grades as well of sizes available to them,
they will over time become more selective and will pay for what they want. The days of China buying any species and any grade of lumber as long as it is cheap are a memory soon to be forgotten.

One last note to ponder, if and/or when the lumber “super cycle” hits, China may have no other option to satiate their demand for wood fiber than to look to Europe and Russia for additional lumber supply. In my humble opinion, from what I have observed and researched, when we reach 1.2 million housing starts the US will need 100% of the volume of lumber that is heading to China out of North America. The Chinese buyers will have no other option but to look elsewhere for lumber supplies as well as many switching to importing logs and sawing them themselves, changing from lumber import distributors to sawmill distributors. Will North American sawmills continue to try to stay in the export markets to stay diversified for when the next market correction occurs? Or as domestic demand increases will they look at export markets as only spot based sales markets?

With the rising demand and a robust market, woody biomass production can become a way to sustain working forests. “Strong markets for forest products keep working forests working, providing essential environmental and economic benefits to society,” says Gretchen Schaefer, vice president of communications for the National Alliance of Forest Owners.

“In addition to the standards the forestry industry has in place,” Ginther says, “pellet producers ensure that their product is sustainable and emissions are low during sourcing, production and transport. Every step from the forest to the furnace is environmentally friendly.”

By demonstrating sustainable pellet production and forestry management, the woody biomass industry can only strengthen its role in the energy marketplace. Ginther says although current laws, such as the Clean Water Act and Clean Air Act, are already ensuring sustainable methods are used, many USIPA producers are also certified by internationally recognized forest certification programs, such as the Forest Stewardship Council, Green Gold Label and the Sustainable Forestry Initiative.

Demonstrating Sustainability

At the core of the SFI system are 14 principles, including: provisions for forest productivity and health, protection of water resources and biological diversity, managing aesthetics and recreation, protection of any
ecologically or culturally special sites, compliance with applicable laws and regulations, public involvement in sustainable forestry, and more.

**Forest Management Planning**

Expanding upon those principles are 20 objectives that use indicators or performance measures to show compliance. Under Forest Management Planning, for example, the indicators include documents showing a long-term resource analysis, periodic forest inventory, land classification and soils inventory, recommended sustainable harvest levels and a review of nontimber issues such as recreation or tourism. The planning objectives also call for documentation of annual harvest trends and a method to calculate growth and yield, plus a system to recalculate planned harvests that can account for productivity changes due to factors such as long-term drought, fertilization, climate change, land ownership changes or improved data. Reforestation, best management practices, use of trained loggers, water quality monitoring, and more, are also detailed.

In the 123-page document, the SFI also lays out a chain-of-custody system to track wood fiber through the stages of production, enabling the use of material from certified and uncertified forest and specifying how to calculate certified content percentages. The appendices offer additional resources, plus specifications on how to use the label and seal that come with SFI certification.

“The SFI standard and the requirements apply regardless of the final product that is produced from that forest, whether it’s building materials, pellets or paper,” says Nadine Block, SFI vice president of government affairs.

To certify sustainable forest products, SFI utilizes third-party audits to assess a land owner’s forest management practices or a company’s supply chain. The process begins with submitting a participation application to SFI. If approved, SFI then contacts one of 10 certification entities to begin the audit. The forest owner must demonstrate that the SFI’s principles and objectives have been implemented into his operation. To determine SFI standard conformance, the auditor examines operating procedures and other forestry practice materials, monitors field performance onsite, interviews employees and contractors and contacts other interested parties such as government agencies, community groups and conservation organizations. If a minor nonconformity is discovered, a conformance certificate can be issued, but only after the lead auditor approves an action plan to address the issue within a set time not to exceed a year. More serious infractions result in the denial of the conformance certificate until approved corrective action has been implemented and a possible site revisit completed.

**Maintaining Certification**

If a site is approved, the certified participant provides SFI with a summary report from the auditor to post on the company’s website for public review. The audit report includes a description of the audit process, a general description of the participant’s forest land and manufacturing operations, name of the certification body, date the audit was conducted, summary of the findings and the certification decision. To maintain certification, SFI requires participants to complete annual surveillance audits in addition to recertification every three years.

Although the process may sound intimidating to some producers, the benefits may have a strong impact on its business and customers. For instance, during the audit, a certifying auditor might be able to validate more than one standard, saving both time and money for the producer.

One challenge in demonstrating sustainable wood procurement and production may lie with smaller, private forest owners. Steven Meyers, procurement manager for Fram Renewable Fuels LLC, says less than 20 percent of forest land in the Southeast is certified. Of that percentage, a notable portion is held by large forestry companies, he says, whereas small land owners may not have the market incentive or capital to become certified.

“There really needs to be something done at the state level,” Meyers says. Some states have even addressed the issue by developing certification programs for small private land owners at low cost and providing the manpower to run the program, he says.
By promoting sustainable forest practices through certification standards and working together, pellet producers may see themselves in a beneficial position to address growing demand and sustainability concerns from their international and domestic customers. “Our standard is in a good position to help pellet manufacturers demonstrate their sustainability and demonstrate how they are meeting European sustainability requirements,” Block says. “What we’ve seen is a lot of pellet manufacturers are certified to the SFI standard and that is being driven primarily by demand from Europe.”

UK, EU Approval

“The United Kingdom and European Union recognize that bioenergy is a vital part of the energy mix that is helping them meet its climate change commitments and renewable energy targets,” Ginther says. Wood pellets are the only readily available renewable energy alternative capable of providing consistent energy to meet consumer demands. It is a complementary technology intended to work alongside other energy sources like wind and solar to balance the grid. “It is with this in mind that the regulatory bodies in the U.K. and EU approach the use of wood pellets. While we can’t predict what the future holds, European regulators have expressed to us they are comfortable with the U.S. regulations, laws and oversight that govern our forests—they are some of the most robust internationally. We expect the industry to continue to grow and thrive in the coming years.”

Looking toward Europe’s expanding markets; the U.S. pellet industry got some good news in August when the U.K. Department of Energy & Climate Change released its report addressing feedstock sustainability requirements for power producers to meet the country’s renewables obligation using solid biomass and biogas fuel sources. The response was crafted using input from 73 respondents, including Sustainable Forestry Initiative Inc., the U.S. Industrial Pellet Association and Drax Power Ltd. It indicates the DECC still considers biomass an attractive fossil fuel replacement and addresses the government’s desire to manage sustainability concerns in addition to curtailing greenhouse gas emissions.

The new DECC criteria, to be finalized later this year, are based on the U.K. timber procurement policy (UK-TPP), considered by forest industry respondents to be a better concept to follow than the current system that focuses more on sustainable agriculture than forest land use. Additionally, the UK-TPP already recognizes certification strategies that meet its principles and builds upon existing U.K. guidelines to promote consistency, while avoiding costs for both wood producers and customers. The DECC states the policy’s criteria can be met by using certified wood from an approved forest that has been approved by the Forest Stewardship Council or the Program for the Endorsement of Forest Certification methods, or the equivalent. DECC also responded to calls for policy stability, and says there will be no unilateral changes to the policy until 2027, although it reserves the option to make changes as biomass power generation improves after April 2019 or to comply with EU or international regulations.

MLB funded FPL research reduces broken baseball bats by 50%

August 3, 2013 (npr.org)—As the 2013 Major League Baseball (MLB) season slides into the All-Star break, U.S. Department of Agriculture Secretary Tom Vilsack announced the results of innovative research by the U.S. Forest Service, and funded by MLB, that will result in significantly fewer shattered baseball bats. Testing and analyzing thousands of shattered Major League bats, U.S. Forest Service researchers at the Forest Products Laboratory (FPL) developed changes in manufacturing that decreased the rate of shattered maple bats by more than 50 percent since 2008. While the popularity of maple bats is greater today than ever before, the number of shattered bats continues to decline. “Since 2008, the U.S. Forest Service has worked with Major League Baseball to help make America’s pastime safer,” said U.S. Forest Service Chief Tom Tidwell. “I’m proud that our collective ‘wood grain trust’ has made recommendations resulting in a significant drop in shattered bats, making the game safer for players as well as for fans.”
Housing Markets

The housing market continues to marginally improve – although in the past months there have been some “hiccups” in certain subsectors. Reviewing current data, several sectors appear to be stagnating and in these same sectors, the data is less than 50 percent of their respective long-run averages. Once again, the near-term outlook on the U.S. housing market remains unchanged – there are potentially several negative macro-factors or headwinds at this point in time for a robust housing recovery based on historical long-term averages.

Why?

1) Government debt

2) European recession, China slow-down

3) Weak domestic demand

4) A lack of well-paying jobs,

5) A sluggish economy

6) Declining real median annual household incomes,

7) Strict home loan lending standards, and

8) New banking regulations.

Master Logger Certification

The logger plays a critical role in the harvesting of your timber sale. The Master Logger Certification (MLC) program can make your choice of selecting a logger easier. The MLC program can help provide piece of mind for the landowner. Master Loggers are professional, properly trained, and meet the highest standards placed on the industry today. The MLC program is a performance based program that recognizes both training and experience. To find a Master Logger in your area visit the following website:

http://www.moforest.org/MLC/mlldirectory.html

Professional Timber Harvester

The Professional Timber Harvester (PTH) program provides four levels of chainsaw safety training and provides instruction on use and implementation of “best management practices” and forest management. PTH trained loggers possess the knowledge to harvest your timber while insuring that your residual trees, soil, and property are properly cared for. To locate a PTH trained logger in your area visit the following website:

http://www.moforest.org/loggersindex.php

Missouri Timber Price Trends tracks market prices for Stumpage. Reports on the Stumpage Market are received from Missouri Department of Conservation Resource Foresters and private consulting foresters. Stumpage refers to timber sold on the stump and does not reflect delivered mill prices. These reports should serve as a general guide to track stumpage prices. Landowners should not use this report to replace a timber inventory and marketing assistance as methods of conducting a sale. Missouri Department of Conservation Resource Foresters will be able to provide information on current, local market conditions. Details of all private sales and delivered prices are kept confidential.
CENTRAL REGIONAL OFFICE .......... 573/815-7901
3500 E. Gans Rd., Columbia 65201
Susan Trotel DeWitt, Regional Supervisor x 3478

CALIFORNIA OFFICE
410C W. Buchanan St., California 65018 ...... 573/796-0286
CAMDENTON OFFICE
783 Thunder Mtn. Rd., Camden 65020 ...... 573/346-2210
FULTON OFFICE – NRCS Office
4549 State Rd. H, Fulton 65251 ............. 573/592-1400
LINN OFFICE - USDA Service Center
1315 E. Main St., Linn 65051 ............. 573/897-3797

KANSAS CITY REGIONAL OFFICE .......... 816/525-0300
12405 SE Ransont Rd., Lee's Summit 64062
Mark Nelson, Regional Supervisor x 1239

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PO Box 368, Clinton 64735 .............. 816/885-1819
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4750 Troost, Kansas City 64110 ........ 816/759-7305
SEDALIA OFFICE
2000 S. Limit, Sedalia 65030 ........... 660/530-5500

NORTHEAST REGIONAL OFFICE .......... 660/785-2424
3500 S. Baltimore, Kirkville 63501
Danny Hartwig, Regional Supervisor x 6516

HANNIBAL OFFICE ....................... 653 Clinic Rd., Hannibal 63401 ........ 573/248-2530
KAOHOKA OFFICE
RR 1 Box 16A, 63445 ............. 660/727-2955 x 117
MACON OFFICE – Mark Twain Water Quality
2108 US Hwy. 63 Suite D, 63552 ........ 660/385-6359 x 128
UNIONVILLE OFFICE
29898 US Hwy. 136, 63565 ........ 660/947-2439 x 106

NORTHWEST REGIONAL OFFICE .......... 816/271-3111
701 James McCarthy Dr., St. Joseph 64507
Bryan Gragg, Regional Supervisor x 1438

ALBANY OFFICE
508 E. Hwy., 136, Albany 64402 ....... 660/726-3746
CHILlicothe OFFICE
15368 LIV 2386, Chillicothe 64601 .... 660/646-6122

OZARK REGIONAL OFFICE .......... 417/255-9561
551 Joe Jones Blvd, West Plains MO 65775
Gary Oakley, District Supervisor x 224

AVA OFFICE
HCR 71 Box 46, Ava 65608 ............. 417/883-3628
DONIPAN OFFICE
Route 8 Box 8118, Doniphan 63935 .... 573/996-2557
EMINENCE OFFICE
HCR 1 Box 177K, Eminence 65466 .... 573/226-3616
Terry Thompson, District Supervisor x 223
HOUSTON OFFICE
1020 Hwy. 63N, Houston 65483 ....... 417/967-3385
ROLLA OFFICE
12655 State Route Y, Rolla 65401 .... 573/368-2225
SALEM OFFICE
1715 West Highway 32, Salem, 65560 .... 573/729-3182
VAN BUREN OFFICE
PO Box 850, Van Buren 63665 ........ 573/323-8515

SOUTHEAST REGIONAL OFFICE .......... 573/290-5730
2302 County Park Rd., Cape Girardeau 63701
Joe Garvey, Regional Supervisor x 4420

ELLINGTON OFFICE
2929 County Road 618, 63638 ............ 573/663-7130
FARMINGTON OFFICE
812 Progress Dr., Farmington 63640 ...... 573/756-6488
FREDERICKTOWN OFFICE
1151 Madison 212, Fredericktown, 63645 .... 573/783-5468
IRONTON OFFICE
57 County Road 103A, 63650 .......... 573/330-6550
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Route 5 Box 129, Marble Hill 63764 ...... 573/238-2321
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PO Box 131, New Madrid 63869 .......... 573/748-5134
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2206 W. St. Joseph, Perryville 63775 .... 573/547-4537
PIEDMONT OFFICE
Route 4 Box 1002, Piedmont 63957 ...... 573/223-4525
Pivot Rodwell, District Supervisor x 222
POPLAR BLUFF OFFICE
107 Magazine Lane, Poplar Bluff 63901 .... 573/840-9788

SOUTHWEST REGIONAL OFFICE .......... 417/895-6881
2630 N. Mayfair Avenue, Springfield 65803
Rod Tucker, Regional Supervisor x 1530
BOLivar OFFICE
412 S. Killingsworth, Bolivar 65613 ........ 417/326-5189
BRANSON OFFICE
226 Claremont Dr., Branson 65616 ........ 417/334-3324
CASSVILLE OFFICE
PO Box 607, Cassville 65625 ............. 417/847-5949
Joplin OFFICE
201 W. Riviera Dr. Ste. B, Joplin 64804 .... 417/629-3423
LEBANON OFFICE
2350 S. Jefferson, Lebanon 65536 ........ 417/532-7612
NEOSHO OFFICE
1510 Business Hwy. 49, Neosho 64850 .... 417/451-4158
Nate Forbes, District Supervisor x 222

ST. LOUIS REGIONAL OFFICE .......... 636/300-1953
2360 Hwy. D, St. Charles 63304
Cathy deJong, Regional Supervisor x 4129
POWDER VALLEY NATURE CENTER
11715 Cragwold Rd., Kirkwood 63122 ....... 314/301-1506
ROCKWOODS OFFICE
2751 Glencoe Rd., Wildwood 63038 ....... 636/458-2236
Gus Raeker, District Supervisor x 227
MERAMEC WORK STATION
3220 S. Hwy., 185, Sullivan 63080 .... 636/458-3335
WARRENTON OFFICE
PO Box 157, Warrenton 63383 .......... 636/456-3368

GEORGE O. WHITE NURSERY .......... 573/674-3229
14027 Shafer Rd., Licking 65542
George Clark, x 226

RURAL FOREST FIRE EQUIPMENT 417/532-7904
2352 S. Jefferson, Lebanon 65536
Excess Property Coordinator, x 222

CONSERVATION RESEARCH .......... 573/815-7901
3500 E. Gans Rd., Columbia 65201
Rob Lawrence, Forest Entomologist ........ x 3946
Simeon Wright, Forest Pathologist ........ x 3947
Tom Treiman Resource Scientist ........ x 3930
Forest Systems Field Station ................. 417/255-9561
MOFEP Field Office, Randy Jensen .... 573/663-7130