Our industry relies heavily on Canadian softwood lumber supply and prices throughout 2010 and 2011. In this article, we take a closer look at an issue that has already significantly impacted our industry’s supply of softwood lumber: the Mountain Pine Beetle (MPB).

This “bark beetle” infects the bark of certain pine species—the lodgepole, jack, ponderosa and western white pine. Once it burrows into a tree’s bark, it cuts off its food supply and the tree is left to die. In the last five or so years, tremendous outbreaks of the beetle in British Columbia have infected thousands of acres of pine trees. While burrowing through the bark of the pine species, the MPB leaves behind a blue fungus stain that cuts off water and nutrient flow to the rest of the tree. The BC Ministry of Forestry reports that newly attacked trees turn red about one year after infestation, and can stay in this stage for two to four years before turning grey and losing their needles.

High Capacity Harvest

Despite being infested by the pine beetle, much of the affected lumber meets current grading standards for structural uses, according to the U.S. Department of Agriculture. Natural Resources Canada concurs2: “Canadian scientists have carefully studied and tested the properties of beetle-killed wood. The wood is structurally sound. It is as strong as non-beetle killed wood and is used in everything from framing in residential construction to furniture-making.”

Keep up with the harvest of beetle-killed trees not only salvages the wood, but it also may be the most effective way of preventing the beetle’s spread. Cutting stands of infested trees is one thing, keeping up with processing it is another. As you read this, many hectares of pine lay idle in forests all across British Columbia. As early as 2004, BC’s Ministry of Forests and Range authorized increased harvesting of infested forests. As early as 2004, BC’s Ministry of Forests and Range authorized increased cut level of up to 27 percent beyond allocations in infested forests. This catch is harvesting infested stands early to protect the remaining healthy trees.

To that end, the BC government has responded by allowing for increased harvesting of infested forests. As early as 2004, BC’s Ministry of Forests and Range authorized increased cut level of up to 27 percent beyond allocations in infested forests. This allows landowners to clear out dead trees while the timber is still viable for processing into structural lumber.

The concerns of CMs based on our conversations include:

- They have increased their scrutiny of incoming lumber to ensure that the quality is consistent.
- They are more focused on managing their cull rates so that lumber costs do not go out of control.
- They are looking at alternative sources of supply where quality and performance are more dependable.

The big concern is that there is not enough alternative supply to go around. They are aware that a swift rebound in housing starts (to one million units for instance) will exacerbate the supply problem.

### Surplus Now, Shortage Later?

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### Quality of Beetle-Killed Lumber

What happens to beetle-killed wood? The stock that isn’t suitable for commercial lumber grades is sold for paper, pulp or use in engineered wood products. The stock that has not been compromised ismill processed and graded as usual.

Component manufacturers in general have reported that lumber from mills processing beetle-killed wood has changed in terms of the quality they have to expect from SPF producing regions. This has raised their cut rates. The concerns of CMs based on our conversations include:

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### Table 1: North American Softwood Lumber Production. (Source: WAPFA, Council of Forest Industries-Canada)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total North America</th>
<th>U.S.</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>80.0</td>
<td>45.0</td>
<td>35.0</td>
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<tr>
<td>2007</td>
<td>80.0</td>
<td>45.0</td>
<td>35.0</td>
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<tr>
<td>2008</td>
<td>80.0</td>
<td>45.0</td>
<td>35.0</td>
</tr>
<tr>
<td>2009</td>
<td>80.0</td>
<td>45.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

### Table 2: U.S. Softwood Lumber Consumption (million board feet). (Source: WAPFA, Lumber Track, February 2010)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>12.0</td>
</tr>
<tr>
<td>2007</td>
<td>12.0</td>
</tr>
<tr>
<td>2008</td>
<td>12.0</td>
</tr>
</tbody>
</table>

### Table 3: U.S. Softwood Lumber Consumption (million board feet). (Source: BC Ministry of Forests and Range, April 2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
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<tbody>
<tr>
<td>2006</td>
<td>12.0</td>
</tr>
<tr>
<td>2007</td>
<td>12.0</td>
</tr>
<tr>
<td>2008</td>
<td>12.0</td>
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</tbody>
</table>

### Figure:

Cumulative Volume Killed on the Timber Harvesting Landbase

Softwood Lumber Supply

Continued from page 19

Any decline in the available supply from Canada will lead our industry to a net shortage of lumber, if the other lumber producing regions of North America (i.e., Eastern Canada, U.S. South and West) cannot make up the difference.

Though much of the beetle wood is usable for dimension lumber, a portion of infested timber is not salvageable. In these cases, the lumber may be suitable for OSB or other engineered wood production. Fiber is also being diverted for use in alternative products. (See sidebar on facing page for examples of new wood products.)

Impact of Beetle Epidemic in Canada, U.S., and U.S. West

| Region       | Million hectares | Million acres | Approx. board feet*
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia</td>
<td>14.5</td>
<td>39</td>
<td>117,000,000,000</td>
</tr>
<tr>
<td>Alberta</td>
<td>2</td>
<td>5</td>
<td>15,000,000,000</td>
</tr>
<tr>
<td>U.S. West</td>
<td>2.5</td>
<td>6</td>
<td>18,000,000,000</td>
</tr>
<tr>
<td>Total Affected Area</td>
<td>19</td>
<td>50</td>
<td>150,000,000,000</td>
</tr>
</tbody>
</table>

*Using 3,000 bd ft/ac as a rough estimate

The total affected area of BC is estimated at 14.5 million hectares, or 39 million acres. In a province where pine has traditionally accounted for roughly 30 percent of its annual lumber production, this is a significant area. The beetle’s spread to neighboring Alberta and the U.S. which puts an additional 8 million hectares (11 million acres) of forest at risk. (Source: Natural Resources Canada, 2010, See to Sky Story: Mountain Pine Beetle. www.gov.bc.ca/forestsyteamnews/forests3x3/bmp-dpp_e.pdf)

Bug Problem Makes Way for Innovative Products

Faceted with losing more than three-quarters of its pine supply in the next five years, the BC timber industry is developing alternative uses for its wood. For example, students in a University of BC graduate program cooked up a mix of concrete and chipped wood. ‘Beetlecrete’ looks like wood but has the strength and properties of concrete. The developers hope to market the building material in earthquake-prone areas. (Source: Hopper, Tristin. “Pine Beetle Wood Spurs Innovation.” BC Business, Feb. 3, 2010.)

The use of wood in bioenergy is also on the rise. In 2008, British Columbia launched its Bioenergy Strategy initiative to convert waste into clean energy. “There is an abundance of bioenergy opportunities, such as using biomass created out of the mountain pine beetle outbreak that can stimulate investment in the equipment, arrange for shipping, load the truck and remit the equipment at your facility. All this for one price. It is simple and cost effective. Give us a call today and we will form you of our upcoming auction.”

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