### Michigan Public Timber Markets, 2nd Quarter (January - March), FY 2015

**State forest data** – In the second quarter, volumes for all major species and products increased as did most prices. State Forest timber sale volume rose sharply in the 2<sup>nd</sup> quarter of FY 2015. All sold bid and non-bid species volume more than doubled from the 1<sup>st</sup> quarter volume of 131,507 cords to 309,866 cords (Bid species only volume rose from 106,712 to 281,937 cords). Sale volumes hit an all-time high of 368,864 cords in the 3<sup>rd</sup> quarter of FY 2014 – partly due to rebid sales from earlier quarters which had not attracted bids initially - before plunging back to 160,344 cords in the 4<sup>th</sup> quarter. The most current four quarters are shaping up to be very similar to the previous four quarters where the back-to-back 4<sup>th</sup> and 1<sup>st</sup> quarters have less than 300,000 in total sold volume, followed by the back-to-back 2<sup>nd</sup> and 3<sup>rd</sup> quarters having more than twice that amount (close to 600,000 cords). On this basis and to hit 900,000 cords for the year, the current 3<sup>rd</sup> quarter (April through June, 2015) should come close to or exceed 300,000 cords too.

The State Forest overall average timber price index continued upward, hitting a record level of \$64.32 per cord. Aspen pulpwood bid species sale volumes increased twice as much in the NLP as they did in the UP, from a 5-year low under 2,200 cords to almost 33,500 cords. The UP volume went from almost 13,800 cords to over 22,900 cords. The aspen pulpwood cord price was up in both peninsulas, with the UP price climbing from \$49.75 to \$57.39 per cord as the NLP price went from \$24.59 to \$33.74 per cord. Both peninsulas saw their red and jack pine pulpwood sale volumes increase sharply. The NLP red pine bid species volume went from 6,074 to 17,750 cords while the UP's went from 2,230 to 18,223 cords. NLP jack pine bid species volume went from 5,710 to 29,292 cords while the UP went from 972 to 12,837 cords. Pulpwood prices were also up across the board. UP red pine pulpwood prices went from \$94.50 to \$112 per cord while the NLP went from \$65.50 to \$79.60 per cord. Jack pine pulpwood sale prices went from \$67.55 to \$74.80 in the UP as they went from \$22.15 to \$34.10 per cord in the NLP. UP softwood pulpwood sale volume jumped from 7,860 to 18,226 cords while the price fell from \$47.79 to \$41.54 per cord. NLP Oak pulpwood sale volume jumped from 9,230 to 24,182 cords while the price more than doubled from \$17 to over \$36 per cord. Other hardwood pulpwood volume also more than doubled statewide, from 21,260 cords to 47,030 cords, at the same time its prices - which had remained the same for the previous three quarters - rose from \$33.90 to \$39.50 per cord. Statewide red pine sawtimber prices increased from \$209 to \$268 per mbf while volumes tripled from a low level of 3,185mbf last quarter to 9,600 mbf. UP sugar maple sawtimber prices dipped slightly to \$1054 per mbf at the same time the volume rose from 819 to 904mbf. NLP sugar maple sawtimber price rose from \$410 to \$513 per mbf as the volume increased from a low 96mbf up to 220mbf. NLP oak sawtimber jumped from 2.5mmbf to 5.3mmbf while prices dropped from \$334 to \$236 per mbf.

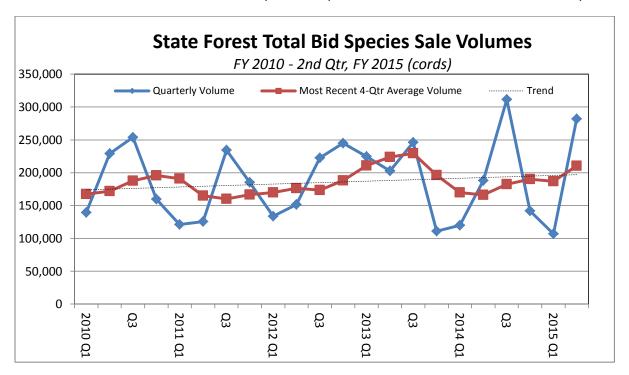
**Federal forest data** – The Ottawa sharply increased both pulpwood (from 6.2mmbf to 23mmbf) and sawtimber sale volume (from under 1mmbf to a record 5mmbf), while the Huron-Manistee and Hiawatha decreased their volumes. Hiawatha sawtimber volume was down from 3.5mmbf to 2.2mmbf and pulpwood volume fell from 8.25mmbf to 7.3mmbf while Huron-Manistee sawtimber volume fell from 3.3mmbf to 1.6mmbf and its pulpwood volume fell from 4.6mmbf to 2.63mmbf.

Ottawa's overall average sawtimber price dipped to \$341 per mbf while its overall pulpwood price rose to \$56 per mbf. Ottawa sugar maple sawtimber sale volume jumped from .5mmbf to over 2mmbf at the same time its price went from \$499 to \$533 per mbf. Its aspen pulpwood sale volume and price both jumped, from less than .3mmbf to over 5mmbf and from \$29 to \$70 per mbf. The "hardwood-other" pulpwood volume jumped from 5.6mmbf to 14.6mmbf while its price dropped from \$47 to \$38 per mbf. The Hiawatha's overall sawtimber price dipped from \$250 to \$190 per mbf as its red pine price fell back from \$253 to \$232, its "hardwood-other" price plummeted from \$414 to \$227, and its jack pine price dipped to \$150. Hiawatha aspen pulpwood sales have been declining; volume was 1mmbf with a price of \$36 per mbf. Jack pine pulpwood volume rose to 1mmbf as its price hit \$146 per mbf while red pine pulpwood volume declined to 1.3mmbf and its price increased to \$200 per mbf. The Huron-Manistee's prices dropped sharply with sawtimber going from \$109 to \$67 per mbf while pulpwood went from \$43.61 to \$26.75 per mbf. It had no aspen sawtimber or pulpwood sale volume this quarter and very little jack pine volume. Red pine sawtimber volume and prices fell (to .75mmbf and \$107 per mbf) while red pine pulpwood volume was 1.7mmbf and only \$35.40 per mbf.

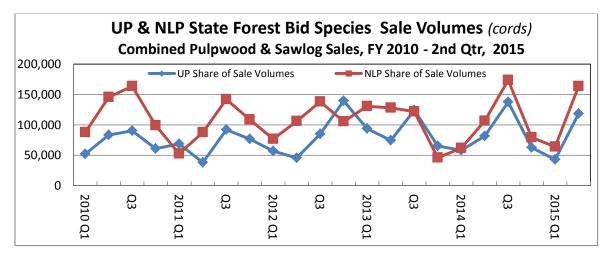
## State Forest Timber Sales for Major Species & Products

Quarter 1, FY 2010 – Quarter 2, FY 2015 Source: Michigan DNR, Forest Resources Division

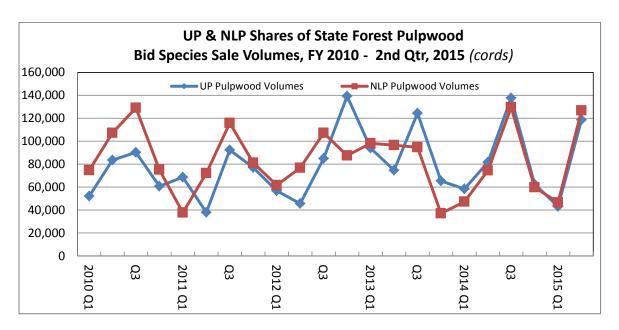
The State follows the federal fiscal year (October 1 through September 30). Graphs below use bid species volume and value data; total volumes and values are slightly more. The graphs often include a dotted trend line based upon data for the average of the most recent four quarters (labeled as "Most Recent 4-Qtr Average Volume" or "Avg4QtrVolWtdPrice"). This average eliminates variability in quarterly data due to seasonal issues and variation in quarterly sales. It takes volumes into account when averaging prices. It also may represent the values and volumes of stumpage that are available on the market better than the most recent quarter. Gaps in the blue line indicate no sales in the quarter.



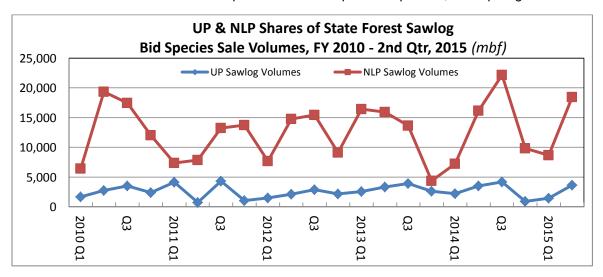
Sale Volume for bid species rose sharply in the second quarter after falling the previous two quarters. The current (2<sup>nd</sup>) quarter volume was just shy of 282,000 cords. Sales were expected to rebound from the previous two quarters' low levels. For over five years, the 4<sup>th</sup> and 1<sup>st</sup> quarters of every fiscal year have tended to account for less than one quarter of annual sales while the 2<sup>nd</sup> quarter accounts for slighty more than a quarter and the 3<sup>rd</sup> quarter accounts for almost one-third of sale volume. The highest quarterly level reached in the past five years was over 311,000 in the 3<sup>rd</sup> quarter of FY 2014. This record sale volume was in part due to a large number of rebid sales which were originally offered earlier, but did not attract bidders. The amount of swings in sales volumes from quarter to quarter appear to be getting larger. If past sale patterns hold, the coming 3<sup>rd</sup> quarter should also have relatively high sale volumes.



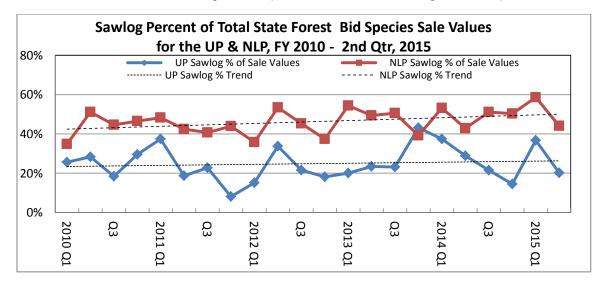
FY 2015 2<sup>nd</sup> quarter sale volumes increased appreciably in both the UP and NLP as the above graph indicates. The share of volume by peninsula has remained fairly stable for the past 5 quarters with the NLP having the larger portion.



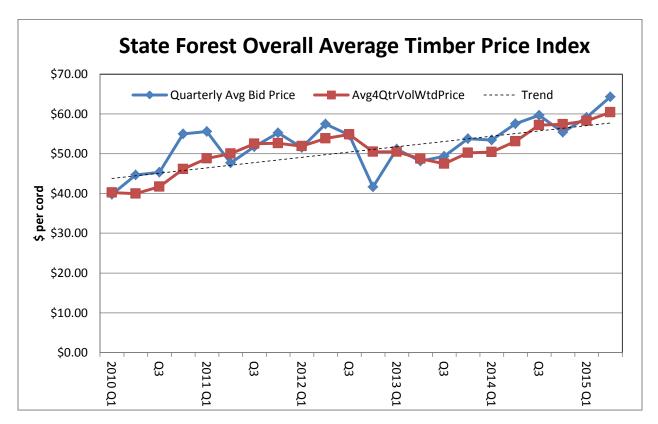
Pulpwood sale volume generally accounts for over 80% of total State Forest sale volume. The above graph indicates volumes have moved in tandem across the two peninsulas for the past five quarters, both spiking in the current quarter.



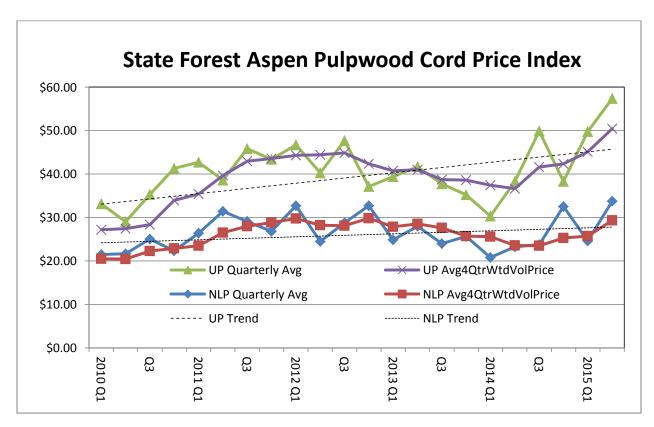
Both NLP and UP sawlog volume increased sharply in the 2<sup>nd</sup> quarter. The NLP generally accounts for more than 80% of State Forest sawlog volume (but closer to 70% of sawlog sale value).



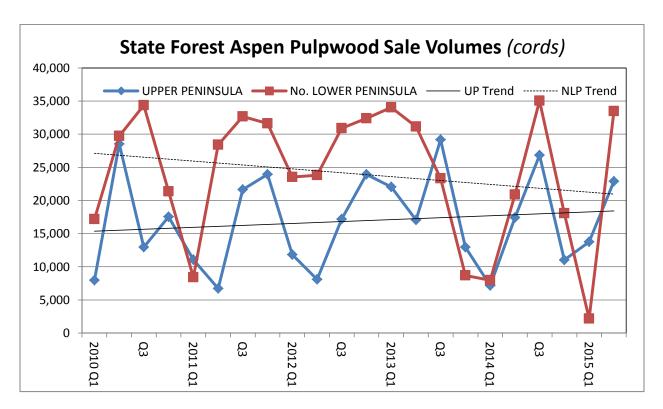
Both the UP and NLP sawlog percent of total bid species sale values fell in the 2<sup>nd</sup> quarter due to a surge in pulpwood sale values. A higher percent of the NLP's sale values come from sawlogs and its trendline is steeper than the UP.



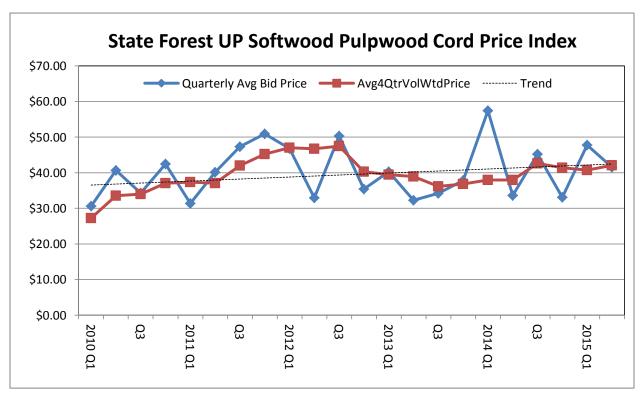
The overall average timber price index jumped to \$64.32 – a record level – in the 2<sup>nd</sup> quarter of FY 2015. It was \$59.16 in the previous quarter and had reached a previous high of \$59.66 per cord in the 3<sup>rd</sup> quarter of 2014. With a few exceptions (notably the 4<sup>th</sup> quarters of FY 2012 and FY 2014), prices have been increasing fairly steadily for the past five years.



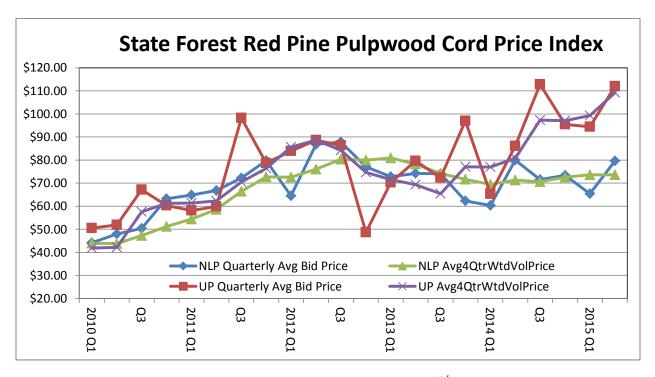
UP average Aspen pulpwood prices increased from \$49.75 per cord in the 1<sup>st</sup> quarter to a record level of \$57.39 per cord in the second quarter. Last fiscal year, they had gone from \$30 to \$38 per cord between the 1<sup>st</sup> and 2<sup>nd</sup> quarters and then jumped to \$50 in the 3<sup>rd</sup> quarter, but then fell back in the 4<sup>th</sup> quarter to \$38. The NLP aspen cord price also increased in the most recent quarter, from \$24.59 to \$33.74, thereby maintaining close to a \$25 price gap between the peninsulas.



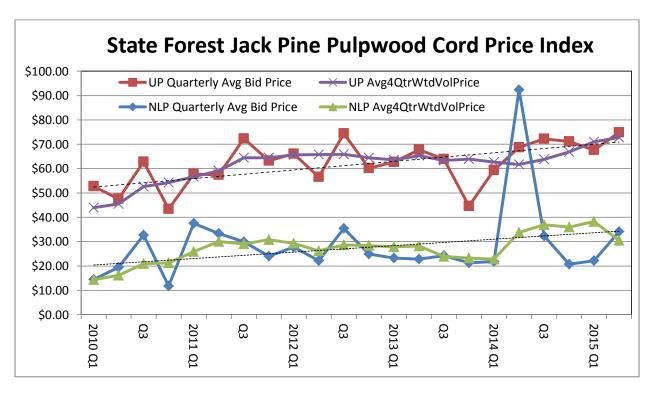
NLP aspen pulpwood has recently experienced dramatic swings in sale volumes. They fell sharply in the last two quarters to levels lower than they had been at any time in the past five-plus years, but sale volumes rebounded in the most recent quarter. Only 2,168 cords of aspen bid species volume was sold in the 1<sup>st</sup> quarter of FY 2015 in contrast to 33,472 cords in the most recent (2<sup>nd</sup>) quarter. The NLP has also been seeing a declining sale volume trend for aspen pulpwood. UP aspen sale volume swings have not been as dramatic as the NLP. Sale volume increased appreciably in the most recent quarter, from 13,761 cords to 22,909 cords. The UP has an increasing sale volume trend line.



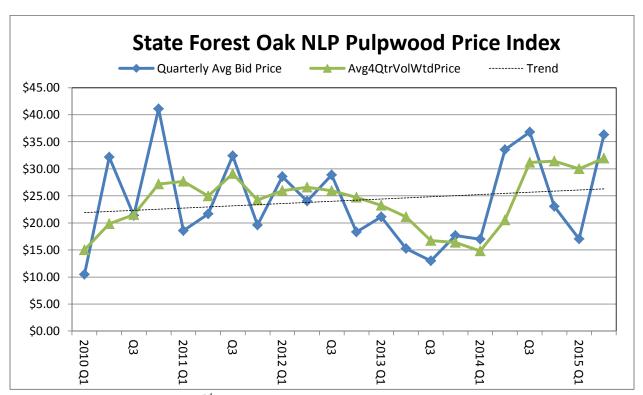
The UP accounts for the vast majority of what is sold as "softwood pulpwood." The 2<sup>nd</sup> quarter softwood pulpwood cord price fell from \$47.79 per cord in the 1<sup>st</sup> quarter down to \$41.54 while sale volumes jumped from 7,862 cords up to 18,226 for the same quarters. The UP softwood pulpwood sale volumes have recently been almost as erratic as NLP's aspen sale volumes. For FY 2014, quarterly cord volumes were 6,000, 12,000, a record level over 35,100, and 16,500.



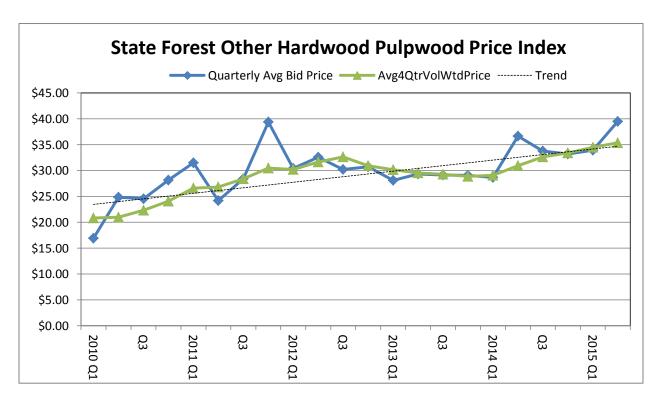
The NLP red pine pulpwood price rose from \$65.47 to \$79.60 per cord in the 2<sup>nd</sup> quarter while the UP price jumped from \$94.46 to \$111.96. The UP has had distinctly higher RP pulpwood prices than the NLP for four quarters now. UP red pine pulpwood prices rose sharply to almost \$113 per cord last fiscal year while the NLP prices remained more stable in a \$70 to \$80 per cord range. Both peninsulas' volumes rose sharply in the 2<sup>nd</sup> quarter. UP volume had dropped from 13,742 cords in the 3<sup>rd</sup> quarter of FY 2014 down to 4,739 cords in the 4<sup>th</sup> quarter and then dropped further to 2,230 cords in the 1<sup>st</sup> quarter of FY 2015. It rose to 18,223 cords in the most recent 2<sup>nd</sup> quarter. Over the same quarters, the NLP went from 26,094 cords to 10,143 and then to 6,074 cords, but it went back up to 17,750 cords in the most recent quarter.



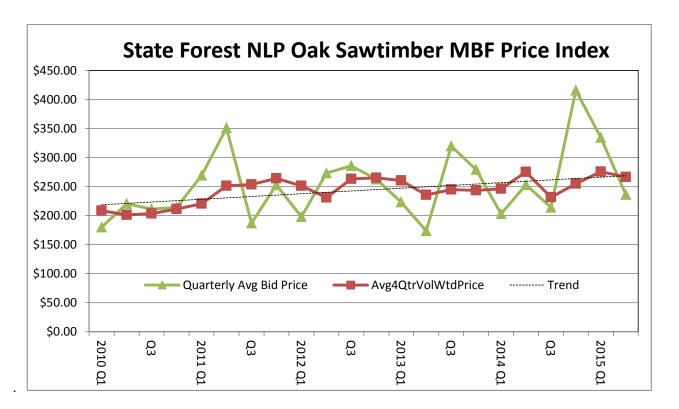
Jack pine prices have a well-established price pattern of the UP being consistently twice to over three times the NLP price. Jack pine sale volumes are also highly volatile from quarter to quarter. In the most recent (2<sup>nd</sup>) quarter, jack pine prices rose in the UP from \$67.55 to \$74.80 per cord; however the backdrop to these prices are that sale volumes rose from a very low 972 cords in the 1<sup>st</sup> quarter to a relatively high (for the UP) 12,837 cords in the 2<sup>nd</sup> quarter. The NLP price rose from \$22 to \$34.07 per cord at the same time NLP sale volume rose from 5,710 cords all the way up to 29,292 cords. The 2<sup>nd</sup> quarter NLP \$90 price is an anomaly; quarters around it were fairly stable in the \$20 to \$35 range.



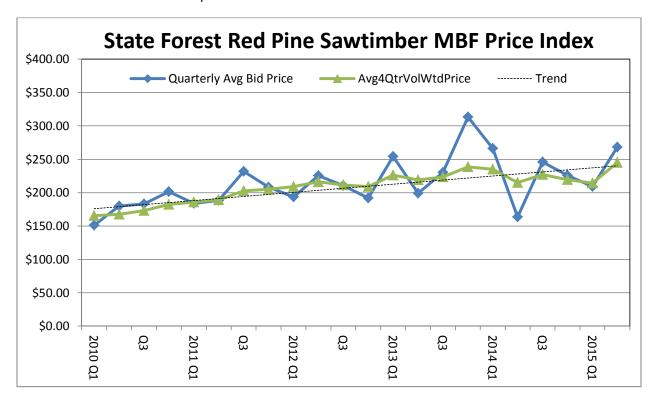
After dropping two quarters, the NLP 2<sup>nd</sup> quarter oak pulpwood prices more than doubled, from \$17 to \$36.33 per cord. Prices had risen dramatically in FY 2014, following six quarters of hovering around the \$20 level. Sale volume had risen from 5,800 cords to 9,230 cords between the 4<sup>th</sup> quarter of FY 2014 and the 1<sup>st</sup> quarter of 2015, but it leaped up further to a very high 24,182 cords in the 2<sup>nd</sup> quarter. Average quarterly sale volume for the 5-year period is 10,100 cords.



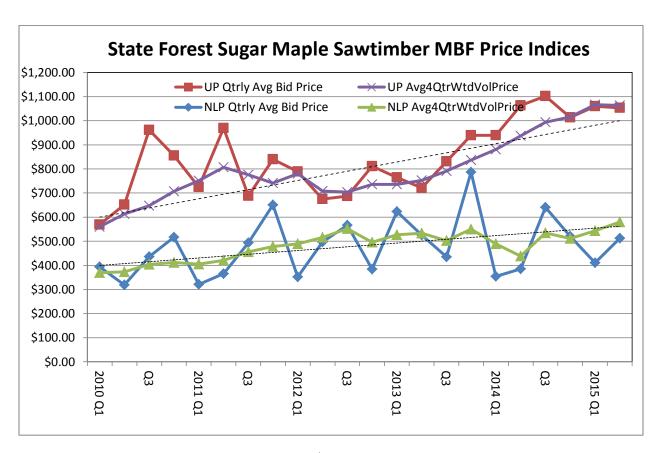
The "other hardwood pulpwood" cord price rose to \$39.49 per cord. It had been quite stable for three quarters at just under \$35 per cord. Sale volumes hit a record 66,150 cords in the 3<sup>rd</sup> quarter of FY 2014. They were down to less than a third of that - to 21,258 cords - in the 1<sup>st</sup> quarter of FY 2015, but the volume rebounded in the 2<sup>nd</sup> quarter to 47,029 cords. The average quarterly price and volume for the five-year period is close to \$30 and 38,000 cords.



NLP oak sawtimber prices fell sharply in the 2<sup>nd</sup> quarter. They had almost doubled in the 4<sup>th</sup> quarter of FY 2014 to \$415 per mbf - a 5-year record - but they fell back to \$334 per mbf in the 1<sup>st</sup> quarter of FY 2015 and then further to \$236.14 in the 2<sup>nd</sup> quarter. Prices hit a low of \$173 in the 2<sup>nd</sup> quarter of FY 2013. Sale volume for the 4<sup>th</sup> quarter of FY 2014 was only 1.6mmbf; it rose to 2.5mmbf in the 1<sup>st</sup> quarter of FY 2015, close to the average for the five-year period. The most recent 2<sup>nd</sup> quarter sale volume is a record level of 5.3mmbf.



Red pine sawtimber prices rose in the 2<sup>nd</sup> quarter from \$209 to \$268 per mbf. They had rebounded from a low of \$164 to \$246 between the 2<sup>nd</sup> and 3<sup>rd</sup> quarters of FY 2014 before falling for two quarters. For the most recent five-year period, prices reached a high of \$313 per mbf in the 4<sup>th</sup> quarter of FY 2013 and have averaged \$215 per mbf. Sale volume fell from 14.2mmbf in the 3<sup>rd</sup> quarter of FY 2014 down to 5.75mmbf in the 4<sup>th</sup> quarter and 3.2mmbf in the 1<sup>st</sup> quarter of FY 2015. Sale volume rebounded in the most recent (2<sup>nd</sup>) quarter to 9.6mmbf. There is a moderately increasing price trend.

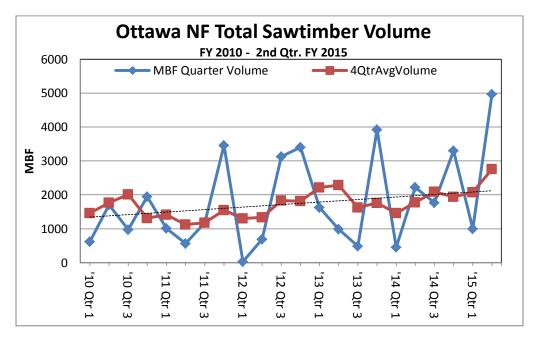


The UP sugar maple sawlog price dipped slightly in the 2<sup>nd</sup> quarter of FY 2015, from \$1060 to \$1,053 per mbf. Despite the recent dip, the price has been climbing fairly steadily for about three years. Sale volume rose again in the most recent quarter, from 820 to 904 mbf, up from 273mbf in the 4<sup>th</sup> quarter of FY 2014. The NLP sugar maple sawlog price bounced back from two successive quarters of declines and is now at \$513 per mbf, slightly above the \$477 per mbf average of the past five years. Sale volume was 220mbf, up from the very low level of just 96mbf in the 1<sup>st</sup> quarter, which was only one-fifth of the average (456mbf) for the five-year period. NLP sugar maple sawlog prices peaked at almost \$790 per mbf in the 4<sup>th</sup> quarter of 2013; now they are less than half the UP prices.

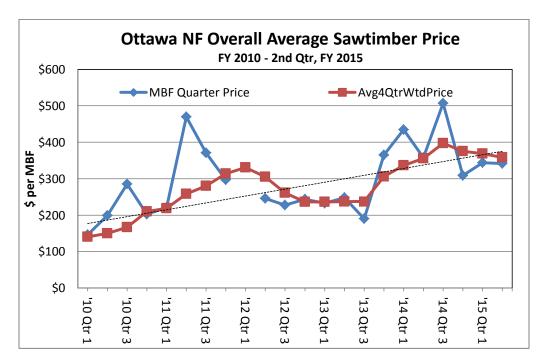
# Ottawa National Forest Major Species/Product Timber Sales, FY 2010 - 2<sup>nd</sup> Qtr, FY 2015

All graphs include a dotted trend line based upon the data set for the average of the last four quarters. Gaps in the blue quarter line indicate no sales in the quarter where the gap occurs. The National Forests follow the federal fiscal year from October 1 through September 30. The sale data included here goes through the second quarter of FY 2015 (January through March, 2015). Only certain major categories of timber sales are shown; more information is available through the Region 9 pdf reports posted on the Forest Service website:

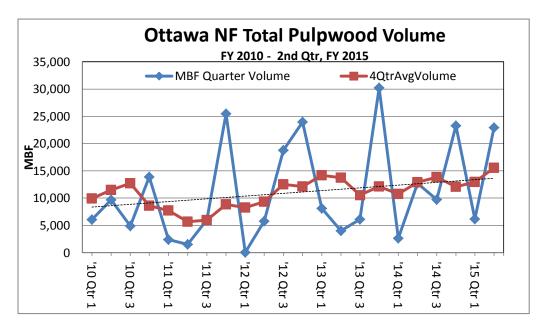




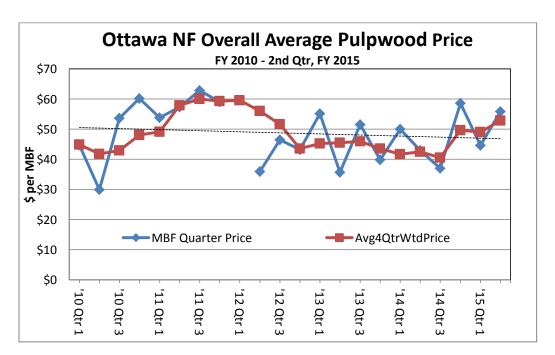
Total sawtimber sale volume rose to a five-year record of almost 5mmbf in the 2nd quarter from just 1mmbf in the 1st quarter. The average for the past five years has been close to 1.8mmbf. It is not unusual for Ottawa's 1<sup>st</sup> quarter to have relatively low volume, but it is unusual for the 2<sup>nd</sup> quarter to have such high volume. Normally, the 4<sup>th</sup> quarter has the highest volume. Sawtimber sale volume has been modestly increasing overall during the past five years, with sale volumes from quarter to quarter often erratic. It is expected that the 3<sup>rd</sup> quarter volume will fall sharply from the 2<sup>nd</sup> quarter.



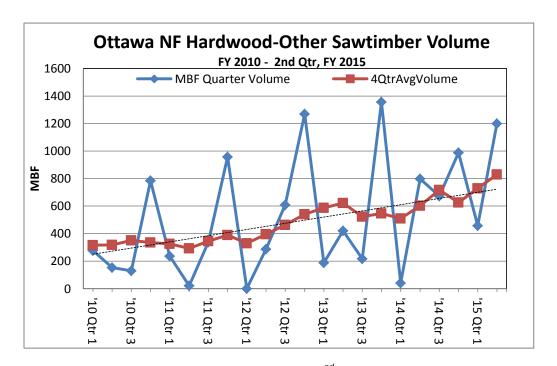
The overall average sawtimber price did not move much from the 1<sup>st</sup> quarter, dropping from \$344 to \$341 per mbf. It had dropped sharply from \$507 down to \$309 per mbf between the 3<sup>rd</sup> and 4<sup>th</sup> quarters of FY 2014. The price has doubled since the 1<sup>st</sup> quarter of FY 2010. Average prices are impacted by the mix of species and products sold. For the Ottawa, sugar maple sawtimber prices and associated volumes are the dominant determinant of its price trend.



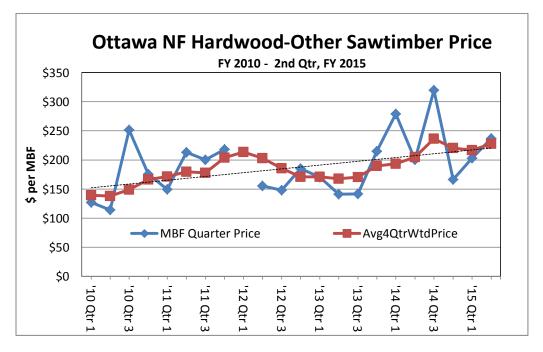
The  $2^{nd}$  quarter total pulpwood volume bounced back, but not to a record high like the sawtimber volume. The  $1^{st}$  quarter volume fell off from the  $4^{th}$  quarter level of 23.3mmbf down to 6.2mmbf. It rose to 22.95mmbf in the  $2^{nd}$  quarter. The record high level for the past five years was over 30mmbf reached in the  $4^{th}$  quarter of FY 2013. Overall, there has been a slight pulpwood sale volume increase during the past five years. As with sawtimber volumes, pulpwood volumes have been consistently highest in the  $4^{th}$  quarter after which they often fall sharply. As the graph above indicates, there is a pattern of the volume falling close to or below 5mmbf or close to or above 20mmbf, with just a few quarters having levels in the middle between these two low and high ranges.



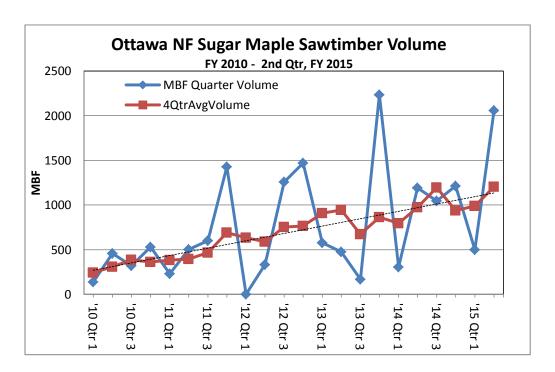
The 2<sup>nd</sup> quarter overall average pulpwood price rebounded to \$55.91 per mbf from \$44.61 per mbf. The FY 2014 4<sup>th</sup> quarter price had risen to \$58.63 per mbf, the highest level since FY 2011. There is a very slight declining price trend over the past five years. With the exception of the 4<sup>th</sup> quarter's price, pulpwood prices have been bouncing back and forth in or close to a \$35 to \$55 range for three years. They were somewhat higher - between \$53 and \$63 - from the 3<sup>rd</sup> quarter of FY 2010 through the 4th quarter of FY 2011. Higher sale volumes accompanied the higher prices of the 2<sup>nd</sup> quarter (and the 4<sup>th</sup> quarter of FY 2014). This indicates the influence of additional factors upon average pulpwood prices, beyond supply. Such factors include the changing nature of pulpwood sales quarter-to-quarter in terms of species and product quality composition, accessibility, changing market conditions, etc.



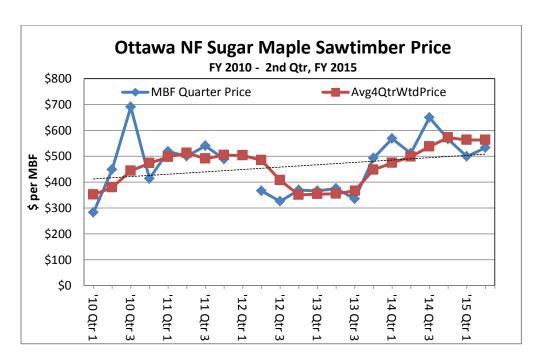
Sawtimber sales volume for "Hardwood-Other" increased in the 2<sup>nd</sup> quarter of FY 2015, from 457mbf in the previous quarter, up to 1199mbf. The volume trend has been sharply increasing over the past five years. Sawtimber sales volume for this product has had a fairly consistent seasonal pattern with distinctive, higher-volume peaks in the 4<sup>th</sup> quarter (July-Sep.) of each year and lower volumes otherwise. Sale volume levels had also been showing increasingly larger swings through the first four years of the most recent five-year period, with higher sale volumes achieved in the 4<sup>th</sup> quarter of each year, followed by volumes falling to or near zero in subsequent quarters. This pattern was broken with the past five quarters, wherein sale volumes have remained higher than average. The most recent 4<sup>th</sup> quarter did not reach a new high peak; however, the higher volumes in the other most recent four quarters more than made up for this. It is not clear what the pattern will be going forward, although it is probable that the 3<sup>rd</sup> quarter volume will drop from the 2<sup>nd</sup> quarter level.



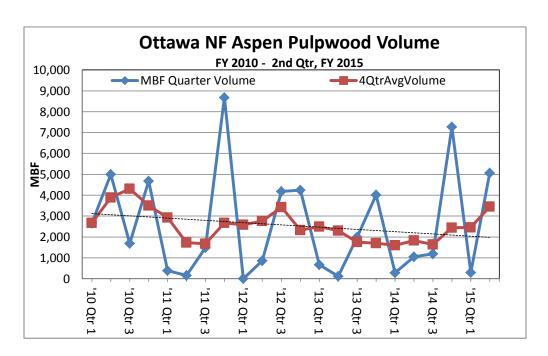
Hardwood-other sawtimber prices increased again to \$237 per mbf. They had previously risen to \$203 per mbf in the 1<sup>st</sup> quarter of 2015. They hit a record high of almost \$320 mbf in the 3<sup>rd</sup> quarter of last year before dropping sharply to \$166 in the 4<sup>th</sup> quarter. Prices had been close to \$140 per mbf in the 2<sup>nd</sup> and 3<sup>rd</sup> quarters of FY 2013; by the 1<sup>st</sup> quarter of FY 2014 they had almost doubled to \$280. There is an increasing price trend line for the past five years.



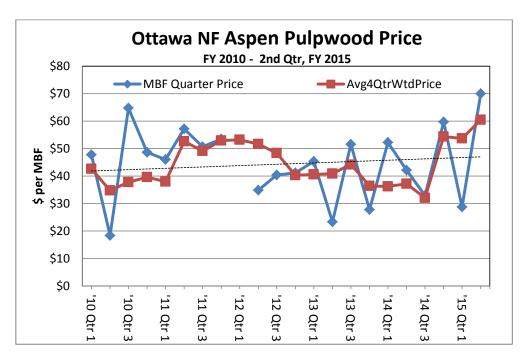
Sugar maple sawtimber sale volumes shot up to 2.1mmbf in the 2<sup>nd</sup> quarter from .5mmbf in the 1<sup>st</sup> quarter of FY 2015. The prior three quarters had the most stable and highest volumes of three quarters in a row during the past five-year period; all three quarters exceeded 1mmbf. As with most Ottawa timber products, it is not unusual for the 1<sup>st</sup> quarter to have the lowest sale volume. Sale volumes peaked in the 4<sup>th</sup> quarter of FY 2013 at over 2.2mmbf, but they plummeted to 305mbf in the 1<sup>st</sup> quarter of FY 2014. There is a sharply increasing sales volume trend for the past five years. Given the 5-year sale pattern and high 2<sup>nd</sup> quarter volume, it is expected that the 3<sup>rd</sup> quarter sale volume will fall sharply.



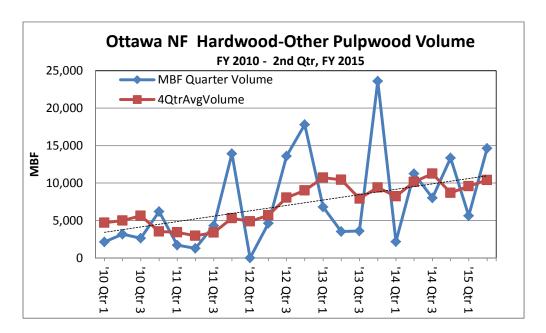
Sugar maple sawtimber prices rose slightly to \$533 per mbf in the 2<sup>nd</sup> quarter. They peaked at \$650 per mbf in the 3<sup>rd</sup> quarter of FY 2014 and dropped to \$499 per mbf in the 1<sup>st</sup> quarter of 2015. Prices had been quite stable and averaged \$355 per mbf for five quarters between the 2<sup>nd</sup> quarter of FY 2012 and the 3<sup>rd</sup> quarter of FY 2013. They have averaged over \$546 per mbf for the seven quarters since then. Peak prices for the five-year period were close to \$700 per mbf in the 3<sup>rd</sup> quarter of FY 2010; that quarter's price is the major exception to the increasing five-year price trend.



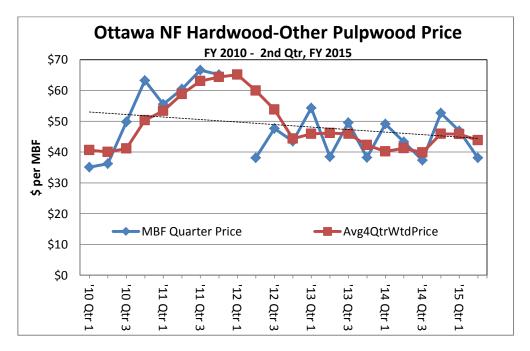
Aspen pulpwood sale volume in the 2<sup>nd</sup> quarter bounced back from the negligible 1<sup>st</sup> quarter volume to over 5mmbf. Typical of 1<sup>st</sup> quarter aspen sale volumes, the FY 2015 1<sup>st</sup> quarter volume was practically nonexistent at under 300mbf. The previous (4<sup>th</sup> quarter, FY 2014) sale volume was almost 7.3mmbf, but high 4<sup>th</sup> quarter volumes are not unusual. In contrast, high 2<sup>nd</sup> quarter volumes – such as the most recent quarter - are somewhat unusual. For the previous four years, the second quarter sale volume was generally not much higher than the first quarter sale volume. Sale volume has been quite erratic over the past four years with sale volumes at the extremes (under 1,000 mbf or over 4,000 mbf) more frequent than sales in the middle range. Despite the 2<sup>nd</sup> quarter sale volume, there is a downward sale volume trend.



The 2<sup>nd</sup> quarter aspen pulpwood price increased sharply to almost \$70 per mbf – a record for the 5-year period - from a 1<sup>st</sup> quarter level of only \$29 per mbf (on very little volume). There has been a seesaw pattern of price swings from quarter to quarter for the past two and a half years with this product, with higher prices after every swing. With sale volumes being erratic and including many quarters with low or no volume, the overall trend for the five-year period has been moderately increasing. The most recent 2<sup>nd</sup> quarter price jump is an exception to this moderate trend.



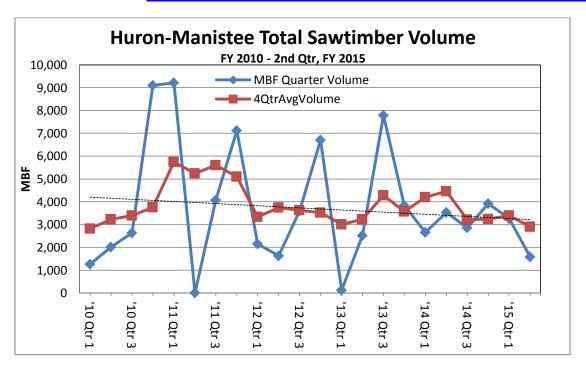
Hardwood-Other pulpwood sale volume increased from 5.6mmbf in the 1<sup>st</sup> quarter to 14.6mmbf in the 2<sup>nd</sup> quarter. Sale volume hit a record high 23.6mmbf volume in the 4<sup>th</sup> quarter of FY 2013. In the past five years, sale volumes have exhibited greater swings with each passing year until FY 2014 when the changes from quarter to quarter moderated. In fact, the most recent 2<sup>nd</sup> quarter volume is substantially higher than expected, given the sale pattern of the previous four years. If the most recent quarters reflect a new trend, then the coming 3<sup>rd</sup> quarter volumes will only slightly moderate from the 2<sup>nd</sup> quarter level and be at or near 10mmbf; if the previous four-year pattern holds, the 3<sup>rd</sup> quarter volume will fall sharply towards or below 5mmbf. Volumes have trended upward and have more than doubled in the past five years.



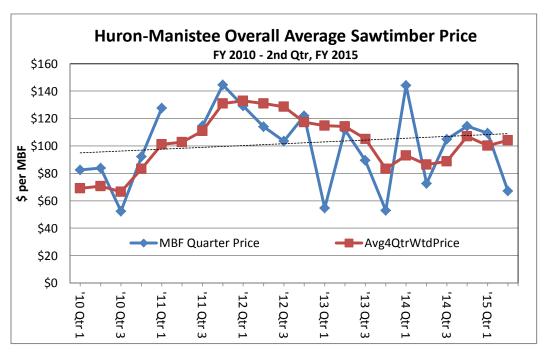
The 2<sup>nd</sup> quarter hardwood-other pulpwood price fell further to \$38 per mbf from \$47 per mbf in the 1<sup>st</sup> quarter of FY 2015. It had risen in the 4<sup>th</sup> quarter of FY 2014 to \$53 per mbf after having fallen the previous two quarters. Despite large swings in sale volumes, prices have been quite stable, going up and down from quarter to quarter in a fairly narrow \$38 to \$55 per mbf range for the past three-plus years. The 5-year price trend is slightly declining. Prices peaked in FY 2011 at over \$65 per mbf.

## Huron-Manistee National Forest Major Species Product Timber Sales, FY 2010 - 2<sup>nd</sup> Qtr, 2015

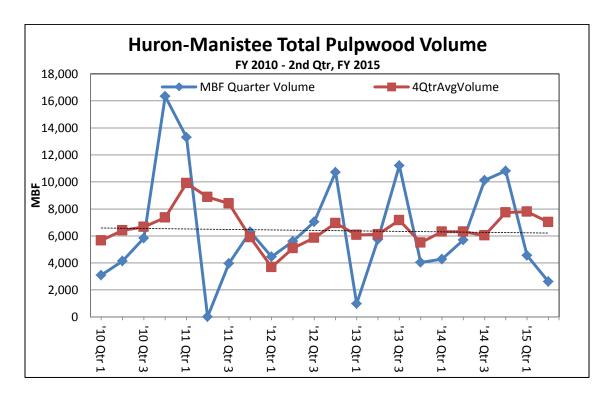
All graphs include a dotted trend line based upon the data set for the average of the last four quarters. Gaps in the blue quarter line indicate no sales in the quarter. The National Forests follow the federal fiscal year from October 1 through September 30. The most recent data included here is for the 2<sup>nd</sup> quarter covering January through March, 2015. Only certain major categories of timber sales are shown; more information is available through the Region 9 pdf reports posted on the Forest Service website: <a href="http://www.fs.fed.us/forestmanagement/products/sold-harvest/cut-sold.shtml">http://www.fs.fed.us/forestmanagement/products/sold-harvest/cut-sold.shtml</a>



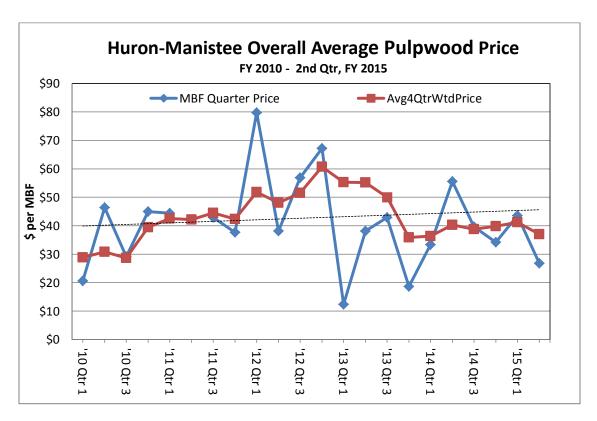
The volume of Huron-Manistee (H-M) sawtimber sales dropped further from 3.26mmbf to 1.582mmbf in the 2<sup>nd</sup> quarter of FY 2015. Before this most recent quarter, sale volumes had been fairly steady for six quarters, fluctuating between 2.6 and 4mmbf. Prior to that, H-M sawtimber sale volume had been extremely erratic from quarter to quarter. Annual sale volume usually peaks in the third or fourth quarters. There is a slight declining trend for the five-year period.



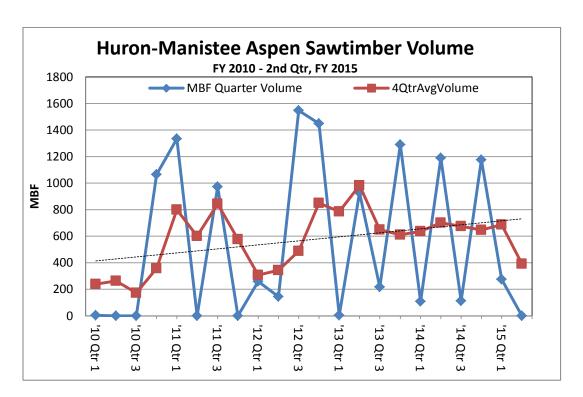
The overall average sawtimber price also dropped sharply in the 2<sup>nd</sup> quarter, from \$109 to \$67. Prices had been relatively steady for three quarters. Before that, prices had gone from \$144 per mbf in the 1<sup>st</sup> quarter of 2014, down to \$73 in the 2<sup>nd</sup> quarter, and then up again to \$105 in the 3<sup>rd</sup> quarter. Sawtimber prices are greatly influenced by the mix of species and quality of products put up for sale. Generally, red pine accounts for over half of the H-M sawtimber sale volume.



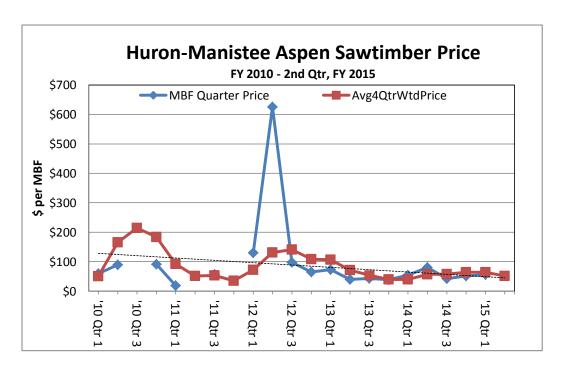
Total pulpwood volume decreased sharply in the 1<sup>st</sup> quarter of FY 2015 to 4.56mmbf and further dropped in the second quarter to 2.63mmbf in the 2<sup>nd</sup> quarter. They were above 10mmbf the prior two quarters. Pulpwood sales exceeded 16mmbf in the 4<sup>th</sup> quarter of FY 2010 followed by 13.3mmbf in the next quarter; they have not reached such levels since then. H-M's quarterly pulpwood sale volume does not follow any particular seasonal pattern. In this regard, there is little basis for predicting what next quarter's sale volume will be; however, with two back-to-back quarters of below average sales, it is likely the 3<sup>rd</sup> quarter sales will rebound somewhat. The low sales in the two most recent quarters have turned the five-year sale volume trend to slightly declining.



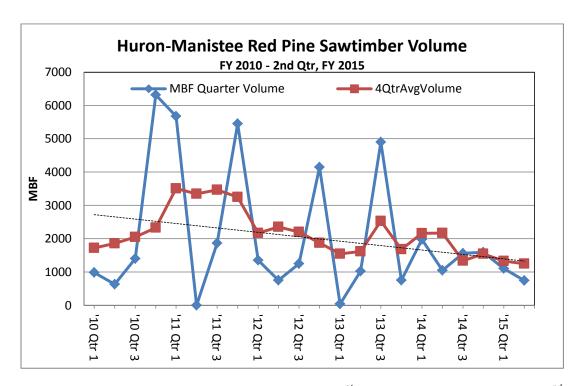
The overall average pulpwood price fell from \$43.61 per mbf to \$26.75 per mbf. Prices have gone from a high of \$80 per mbf in the 1<sup>st</sup> quarter of FY 2012 to a low of \$12 per mbf in the 1<sup>st</sup> quarter of FY 2013. Prices for the past year have been between \$25 and \$55 per mbf. There is a slight increasing price trend for the past five years.



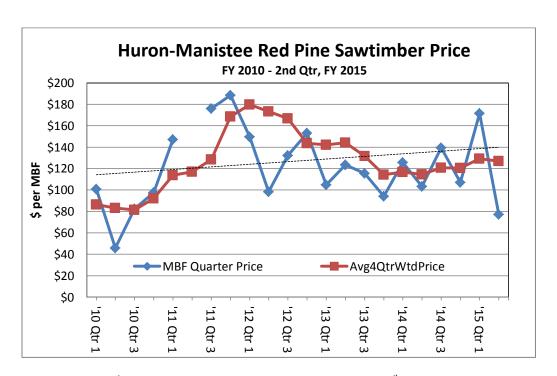
The 2<sup>nd</sup> quarter had no aspen sawtimber sale volume. As the graph depicts, the volume has seesawed from quarter to quarter. It went downward to 275mbf in the 1<sup>st</sup> quarter from almost 1.2mmbf in the 4th quarter. The volume has been extremely erratic from quarter to quarter over the past five years (and especially so in the last two years). There were ten quarters during the past five years when there were sales of less than 200mbf, but there were also nine quarters of sales close to or exceeding 1000mbf and no quarters with sales between 300mbf and 900mbf. Because of the large number of quarters with no sales in 2010 and 2011, there is an increasing sale trend over the period.



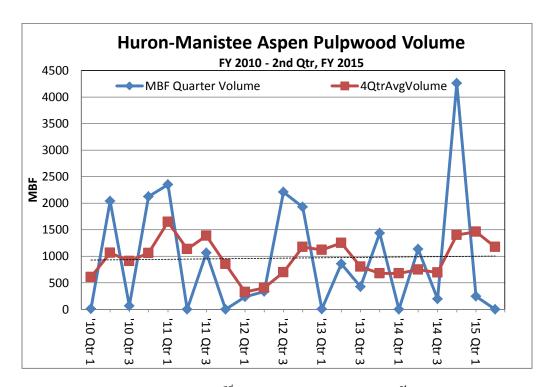
As there were no aspen sawtimber sales, aspen sawtimber prices are unchanged. They increased slightly from \$51 per mbf in the 4<sup>th</sup> quarter of FY 2014 to \$56 in the 1<sup>st</sup> quarter of FY 2015. Relative to other types of sawtimber prices and H-M Aspen sale volumes, Aspen sawtimber prices have remained quite steady for almost three years in a \$38 to \$80 range.



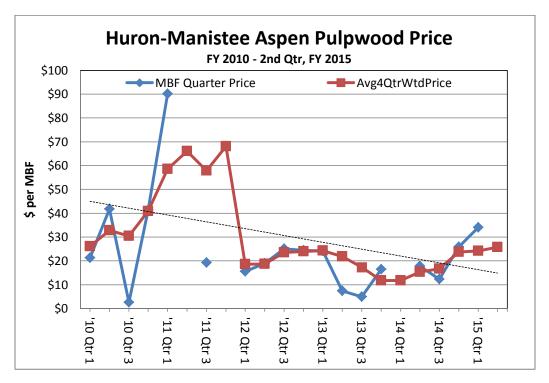
Red pine sawtimber volume dropped further, from 1.1mmbf in the 1<sup>st</sup> quarter down to .75mmbf in the 2<sup>nd</sup> quarter. The volume was close to 1.6mmbf in the 3<sup>rd</sup> and 4<sup>th</sup> quarters of FY 2014. Red pine often accounts for the majority of the sawtimber volume sold on the Huron-Manistee, but there are also many quarters when little or no volume is sold. In those quarters when it is sold, its price can often influence the Forest's overall total sale values. Sales have quite often peaked in the 4<sup>th</sup> quarter, but in FY 2013 sales plummeted from 4.9mmbf in the third quarter to 750mbf in the 4<sup>th</sup> quarter. Sale volume has been below 2mmbf for the past seven quarters, in contrast to the previous four years which annually saw peak quarter sale levels above 4mmbf. The sale volume trend line is declining.



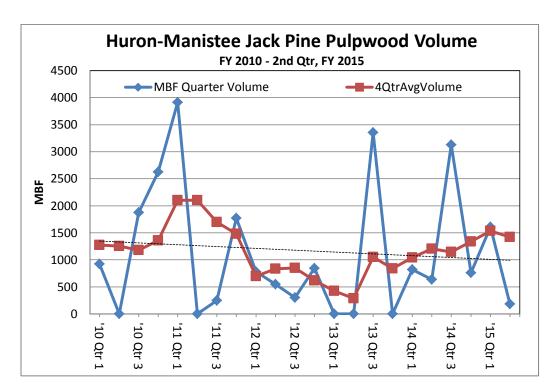
Red pine prices shot up in the 1<sup>st</sup> quarter to \$171.44 per mbf from \$107 in the 4<sup>th</sup> quarter and then dropped back down to \$77 in the most recent (2<sup>nd</sup>) quarter. Before the most recent two quarters, prices had been relatively stable between \$95 and \$125 per mbf for two years. They had nearly quadrupled from a low close to \$40 per mbf in FY 2010 to a peak of over \$180 per mbf in the 4<sup>th</sup> quarter of FY 2011. There is a steadily increasing price trend over the past five years.



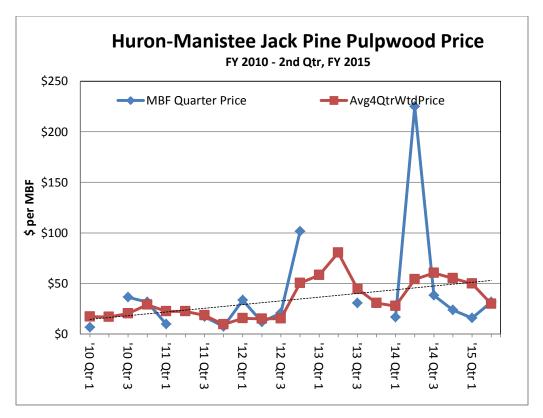
There was no aspen pulpwood volume sold in the 2<sup>nd</sup> quarter of FY 2015. In the 1<sup>st</sup> quarter, aspen sale volumes declined as sharply as they had risen the previous quarter. From a low volume of 193mbf in the 3<sup>rd</sup> quarter of FY 2014, sale volume rocketed to a record 4.26mmbf in the 4<sup>th</sup> quarter – double the level of any other quarter in the past five years – and then dropped all the way back to 244mbf in the 1<sup>st</sup> quarter. Sale volumes of aspen pulpwood have been extremely erratic over the past five years. There are many quarters without sales but other quarters with sale volumes close to or in excess of 2mmbf. There does not appear to be a well-established quarterly pattern to the data, but it is likely the 3<sup>rd</sup> quarter will see some sale volume in light of the absence of volume in the past two quarters.



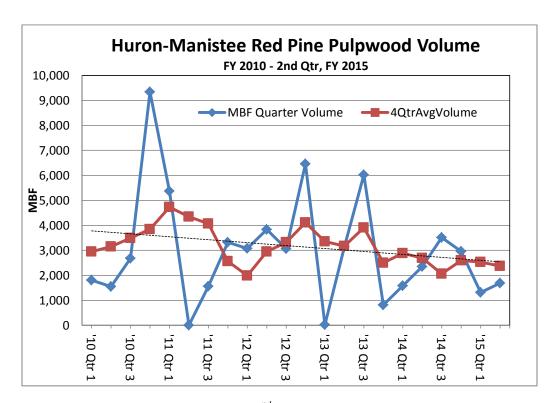
As there were no aspen pulpwood sales, aspen sawtimber prices are unchanged. The 1<sup>st</sup> quarter average aspen pulpwood price reached \$34 per mbf. It had climbed from \$12 to \$26 in the 4<sup>th</sup> quarter of FY 2014. Aspen pulpwood prices were extremely low (<\$10) in the 2<sup>nd</sup> and 3<sup>rd</sup> quarters of FY 2013. In contrast, the price exceeded \$40 several quarters in FY 2010 and FY2011. The result has been a fairly steep five-year price decline trend, but prices for many quarters are based on low or no sale volumes. The decline in the trend line should moderate over coming quarters as prices most quarters are expected to remain close to or above \$20.



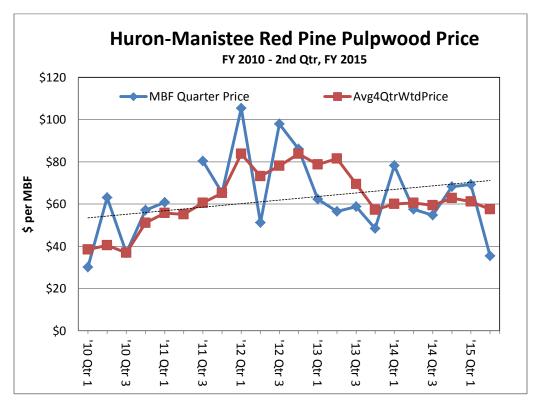
Jack pine pulpwood decreased in the 2<sup>nd</sup> quarter from over 1.6mmbf to only .18mmbf. It had been over 3.1mmbf in the 3<sup>rd</sup> quarter of FY 2014. Overall, jack pine pulpwood sale volume has been on a downward trend over the past five years and many quarters there are no sales or the sale volume is well below 1mmbf. There have been a few distinct exceptions when volume shoots up to over 3mmbf. Part of the jack pine sale volume decline in recent years may be due to more jack pine being included in a combined sale category with red and white pine. There is no seasonal or quarterly pattern.



The 1<sup>st</sup> quarter jack pine pulpwood price nearly doubled from \$15.80 to \$31.48 per mbf. It had fallen from \$38.13 to \$23.58 per mbf in the previous quarter. The price for the FY 2014 2<sup>nd</sup> quarter is a mistake or an anomaly and should not be considered a reliable price for the product. Besides erratic prices, there have been two price outliers (the 4<sup>th</sup> quarter of FY 2012 being the other one) and too many quarters without sales to establish a credible five-year price trend line.



Red pine pulpwood sale volume rose moderately in the 2<sup>nd</sup> quarter to 1.7mmbf after having declined sharply from 3mmbf in the 4<sup>th</sup> quarter of FY 2014 to 1.3mmbf in the 1<sup>st</sup> quarter of FY 2015. Like many other products on the H-M, the five-year sale volume pattern has large swings in volumes, from quarters with over 6mmbf to subsequent quarters with no or negligible sale volume. Overall, there is a declining volume trend.

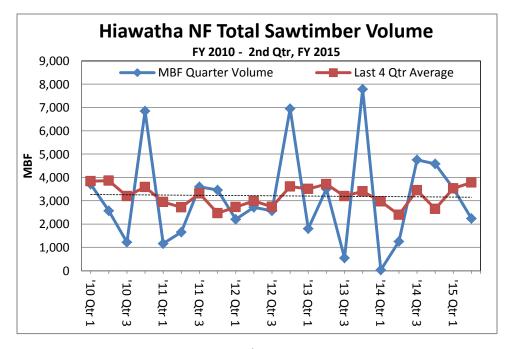


The 2<sup>nd</sup> quarter price declined sharply, from \$69.28 per mbf to \$35.40, the lowest price since FY 2010. With the exception of the most recent quarter and the 1<sup>st</sup> quarter of FY 2014 when prices rose to almost \$80 per mbf, the last ten quarters have had fairly stable prices in the \$50 to \$70 per mbf range. Overall, prices for the past five years have seen a moderately increasing trend, but the highest prices were reached in FY 2012.

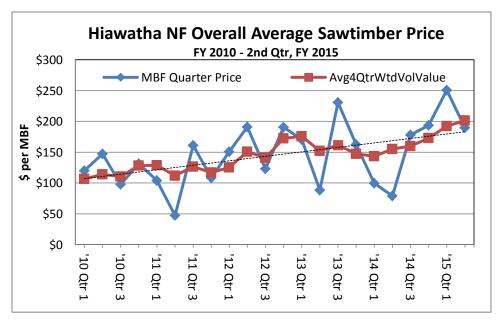
# Hiawatha National Forest Major Species Product Timber Sales, FY 2010 - 2<sup>nd</sup> Qtr, 2015

All graphs include a dotted trend line based upon the data set for the average of the most recent four quarters. Gaps in the blue quarter line indicate no sales in the quarter where the gap occurs. The National Forests follow the federal fiscal year (FY) from October 1 through September 30 (as does the MI DNR). The most recent data included here is for the second quarter of FY 2015, covering January through March, 2015 sales. Only certain major categories of timber sales are shown; more information is available through the Region 9 pdf reports posted on the Forest Service website:

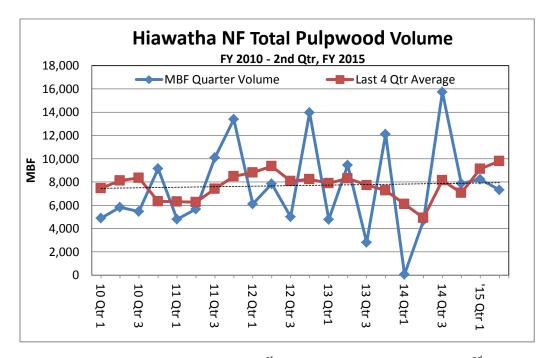




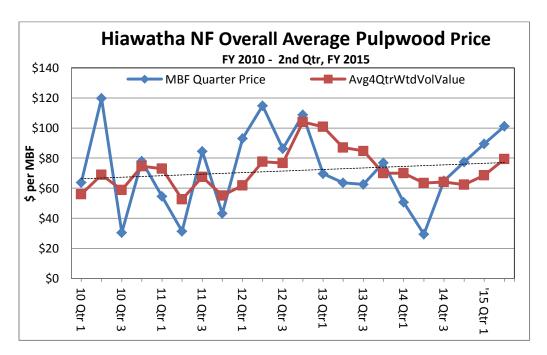
Hiawatha sawtimber sale volume dropped further in the 2<sup>nd</sup> quarter of FY 2015, from 3.5 million board feet (mmbf) in the 1<sup>st</sup> quarter down to 2.2mmbf. In FY 2014, sale volume had jumped to 4.75mmbf in the 3<sup>rd</sup> quarter and dipped to 4.6mmbf in the 4<sup>th</sup> quarter, following two back-to-back quarters with the lowest sale volume in many years. The highest single quarter volume sold (7.8 mmbf) was in the fourth quarter of fiscal year 2013. The Hiawatha has rather erratic sale volumes from quarter to quarter with a tendency for higher sales in the fourth quarter most years, followed by much lower sales in the 1<sup>st</sup> quarter. (The decline in the most recent 1<sup>st</sup> quarter was modest relative to past years' 1<sup>st</sup> quarter declines.) Overall, the five-year trend of sawtimber sale volume has been virtually flat.



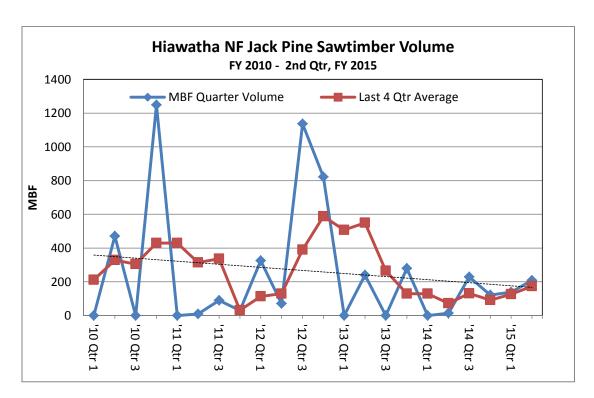
The average sawtimber price dropped from \$251 to \$190 per mbf between the 1<sup>st</sup> and 2<sup>nd</sup> quarters of FY 2015. It was only \$80 per mbf in the 2<sup>nd</sup> qiarter of FY 2014. The average sawtimber price is influenced by the mix of species and products offered. Overall, the 5-year price trend has been increasing.



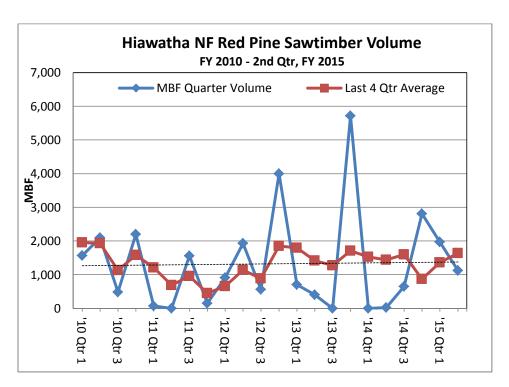
Pulpwood sale volumes decreased from 8.25mmbf in the 1<sup>st</sup> quarter down to 7.3mmbf in the 2<sup>nd</sup> quarter. These levels are close to the average level for the past five years. The highest they have been in 5 years was in the 3<sup>rd</sup> quarter of FY 2014 at 15.73mmbf. The overall 5-year trend is flat. There has tended to be higher sales in the 4<sup>th</sup> quarter versus other quarters for the past five years, but the 2014 quarterly peak occurred in the 3<sup>rd</sup> quarter. Also, 1<sup>st</sup> quarter sales normally drop off sharply from 4<sup>th</sup> quarter volumes; but this also did not happen this year. The large swings in quarterly sale volumes may be moderating if the most recent three quarters are any indication of a trend; however, it would not be surprising if there was a drop in volume next (3<sup>rd</sup>) quarter given the relatively high level of sales for the past four quarters.



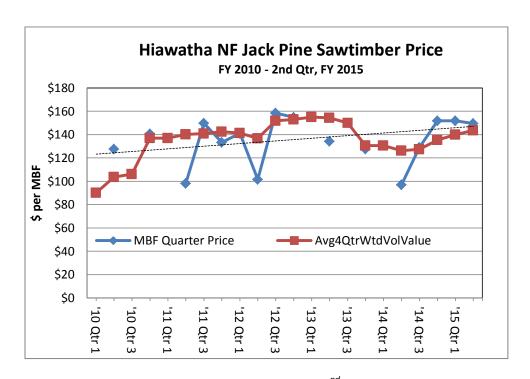
The overall average pulpwood price continued to rise for the fourth quarter in a row, reaching \$101 per mbf; the highest level in ten quarters. In the second quarter of FY 2014, the price was just under \$30 which was its lowest level in over five years. The trend line shows a slight increasing price trend since the beginning of FY 2010. Given the most recent four quarters of price increases, next quarter may see prices moderate somewhat unless there is a very sharp decline in sale volumes.



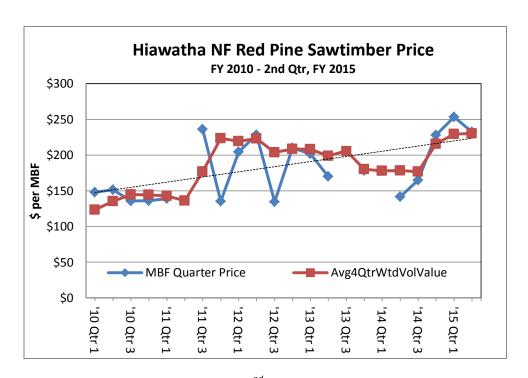
Hiawatha sales of jack pine sawtimber have been relatively negligible; the highest volume sold, 1.25mmbf, was back in the 4<sup>th</sup> quarter of FY 2010. Jack pine sawtimber sales dropped from 229mbf in the 3<sup>nd</sup> quarter of FY 2014 to 121mbf in the 4<sup>th</sup> quarter, went up slightly in the 1<sup>st</sup> quarter to 139mbf and reached 209mbf in the most recent (2<sup>nd</sup>) quarter. There now have been ten quarters in a row of sales below 300mbf; the average for these nine quarters is just over 100mbf. Despite it being a slight increase, the most recent sale volume level perpetuates a five-year downward sale volume trend. As with jack pine pulpwood, there are almost as many quarters without jack pine sawtimber sales as there are quarters with sales.



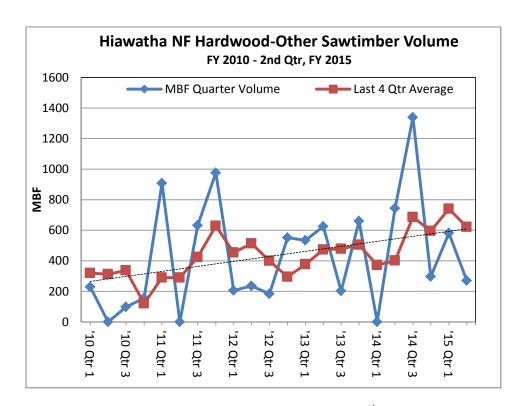
Twice as much red pine sawtimber as jack pine sawtimber has been sold on the Hiawatha during the past five years. Red pine sawtimber sale volume declined to again in the 2<sup>nd</sup> quarter to 1.12mmbf from 1.97mmbf in the 1<sup>st</sup> quarter of FY 2015. It had increased in the 4<sup>th</sup> quarter to 2.8.mmbf, but this increase was not as much as increases seen in the previous two 4<sup>th</sup> quarters; 5.7mmbf was sold in the 4<sup>th</sup> quarter of FY 2013 and 4mmbf was sold in the 4<sup>th</sup> quarter of 2012. However, the most recent volume decline from the 4<sup>th</sup> to the 1<sup>st</sup> quarter (.8mmbf) was much less than what had taken place in the previous two years also (over 3mmbf and 5.8mmbf). Volume tends to be low in the 3<sup>rd</sup> quarter for the past five years.



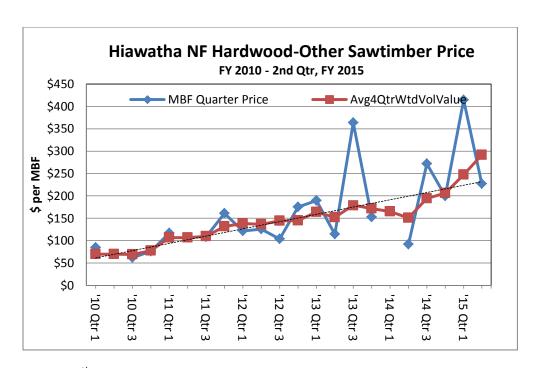
The Hiawatha jack pine sawtimber price per mbf dipped slightly in the 2<sup>nd</sup> quarter. It had risen from just under \$100 in the 2<sup>nd</sup> quarter of FY 2014 to almost \$130 in the 3<sup>rd</sup> quarter and then it reached \$152 in the 4<sup>th</sup> quarter where it remained through the 1st quarter of FY 2015. Overall, based upon the 4-quarter volume-weighted average price, there appears to be an increasing price trend over the past five years, but there are so many quarters with negligible or no sales that the trend is not well-defined or reliable.



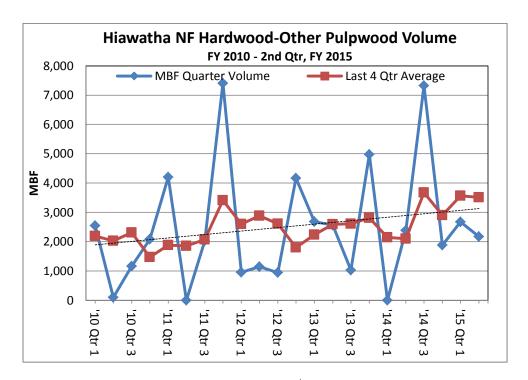
Red pine sawtimber price dipped to \$232 per mbf in the 2<sup>nd</sup> quarter. It had reached \$253 per mbf in the 1<sup>st</sup> quarter of FY 2015, its highest level in recent years. It was \$142 in the 2<sup>nd</sup> quarter of FY 2014 and \$165 in the 3<sup>rd</sup> quarter, then \$228 in the 4<sup>th</sup> quarter. Prices have generally been within a \$140 to \$230 per mbf range over the past five years. The overall five-year price trend has been moderately increasing. It was noted last quarter that with the 1st quarter price increase, there is more of an expectation that prices could decline moderately in the coming 2<sup>nd</sup> and 3<sup>rd</sup> quarters. This still holds for the 3<sup>rd</sup> quarter – it is expected that prices may remain the same or decline more.



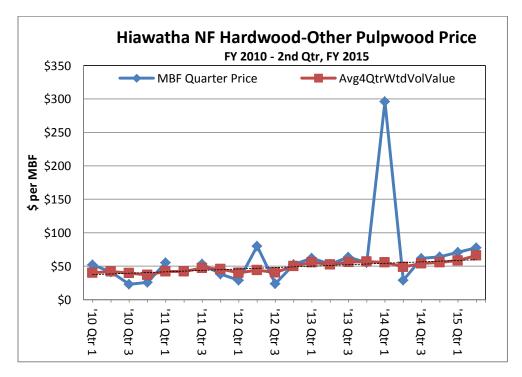
The "hardwood-other" sawtimber sale volume decreased from 580mbf in the 1<sup>st</sup> quarter to 270mbf, close to its level of the 4<sup>th</sup> quarter of FY 2014. The quarterly sale volume reached a 5-year record level of 1.3mmbf in the 3<sup>rd</sup> quarter of FY 2014 before falling to the 4<sup>th</sup> quarter 300mbf level. Although at times erratic from quarter to quarter, sales of "hardwood other" have trended upward over the past five years; however this trend is strongly influenced by the high 2<sup>nd</sup> and 3<sup>rd</sup> quarter sale volumes of FY 2014. Based upon the 5-year pattern, it was predicted that 2<sup>nd</sup> quarter sales would remain close to the 1<sup>st</sup> quarter level or decline. If the coming 3<sup>rd</sup> quarter volume is consistent with this pattern, it will be higher.



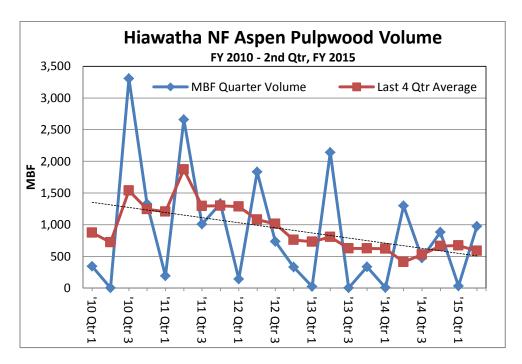
It was projected that the 1<sup>st</sup> quarter run-up in the price would moderate considerably and it did. The "hardwood-other" sawtimber 2<sup>nd</sup> quarter price dropped back to \$227 per mbf from the record \$414 per mbf price it reached in the 1<sup>st</sup> quarter. In the 2<sup>nd</sup> quarter FY 2014, the price was below \$92 per mbf. The price trend has risen quite steeply over the past five years – more than jack or red pine sawtimber - from well under \$100 to over \$200 per mbf.



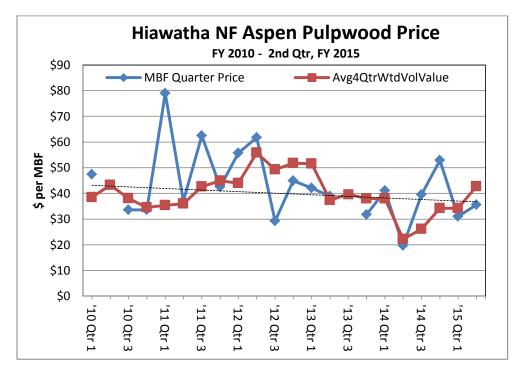
Sales of "hardwood-other" pulpwood volume increased in the 1<sup>st</sup> quarter of FY 2015 to 2.7mmbf and then declined to 2.2mmbf in the 2<sup>nd</sup> quarter. After shooting up in the 3<sup>rd</sup> quarter of FY 2014 to over 7.3 mmbf, the pulpwood sales came down in the 4<sup>th</sup> quarter as sharply to 1.9mmbf. Sales were under 2.4mmbf in the 2<sup>nd</sup> quarter of FY 2014 and there were no sales in the 1<sup>st</sup> quarter of FY 2014. Generally, sales are highest in the 4th quarter, but FY 2014 was an exception with the peak sales in the 3<sup>rd</sup> quarter. Beyond the erratic nature of sale volumes from quarter-to-quarter, there is a moderate increasing sale volume trend over the past five years. Similar to "hardwood-other" sawtimber, it was projected that the 2<sup>nd</sup> quarter volume would remain close to the 1<sup>st</sup> quarter level or decline. 3<sup>rd</sup> quarter volume is likely to increase moderately.



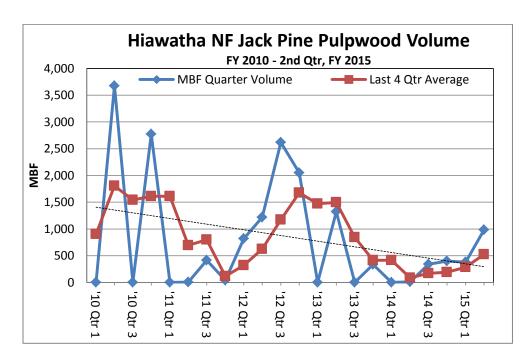
The 2<sup>nd</sup> quarter "hardwood-other" pulpwood price increased moderately again for the fourth straight quarter to \$77 per mbf. It was at a recent low value of \$29 in the 2<sup>nd</sup> quarter of FY 2014 before rising to over \$64 per mbf in the 4<sup>th</sup> quarter of last fiscal year. The 1<sup>st</sup> quarter FY 2014 is an anomaly or error. For the past five years, the price has tended to range between \$28 and \$70.



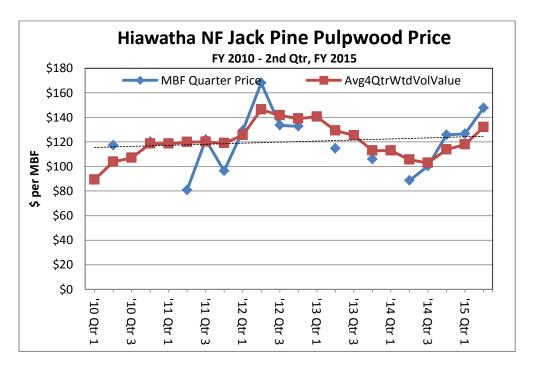
Aspen pulpwood sale volume rose to 974mbf in the 2<sup>nd</sup> quarter of FY 2015. Aspen pulpwood volumes are quite erratic, often going from no or negligible volume in one quarter to over 1.5mmbf the next quarter. However, as the above graph shows, there is a distinctively downward trend over the past five-plus years with each year's peak quarterly volume diminishing over time. Unlike for many other products, there is not a pattern of higher 4<sup>th</sup> quarter sales for aspen. The most recent annual sale peaks have come in the second quarter of the fiscal year; the highest peak for the past five years came in the 3<sup>rd</sup> quarter of FY 2010. It was predicted that the 2<sup>nd</sup> quarter volume would be under 1.5mmbf; 3<sup>rd</sup> quarter volume is likely to also be under 1.5mmbf, unless it breaks sharply from the five-year pattern.



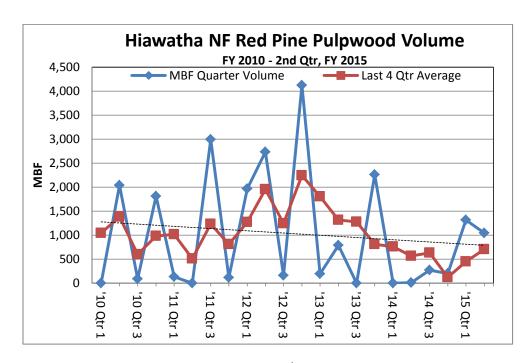
The 2<sup>nd</sup> quarter aspen pulpwood price rose back up to \$36 from \$31 per mbf in the 1<sup>st</sup> quarter. It had doubled in the 3<sup>rd</sup> quarter of FY 2014, from under \$20 to almost \$40 per mbf, and rose again in the 4<sup>th</sup> quarter to \$53 per mbf. The 2<sup>nd</sup> quarter's \$20 price was at a five-year record low and less than half of its average for the period. There is a slight downward trend to prices. If sale volumes continue on their downward trend, it will not be surprising to see prices continue to rise and a reversal in the downward price trend take place.



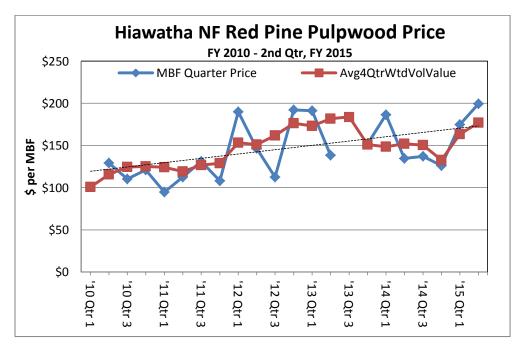
Jack pine pulpwood sales rose to 985mbf in the 2<sup>nd</sup> quarter of FY 2015. They had been quite stable for 3 quarters at 340, 402, and 379mbf before going to 985mbf in the most recent quarter. There were no jack pine pulpwood sales in the first two quarters of FY 2014. Sales have been on a steep downward trend over the past five years and, like aspen pulpwood, there were no sales in the 1<sup>st</sup> and 3<sup>rd</sup> quarters of fiscal year 2013. Besides the recent three no sale quarters, there were two quarters without sales in FY 2010 and three quarters without sales in FY 2011. Last quarter it was noted that if the pattern of the last five years continues, sales in some upcoming quarter might exceed 1,000mbf; however, there is a better likelihood that there will be quarters without any sale volume given the downward volume five-year trend and the number of quarters with no sale volume.



The 2<sup>nd</sup> quarter jack pine pulpwood price increased to \$146 per mbf. The price had remained virtually the same at \$126 per mbf for the previous two quarters and was \$105 per mbf in the 4<sup>th</sup> quarter of FY 2013. Beyond increases in the most recent four quarters, no longer-term price trend for jack pine pulpwood prices can be discerned, given that there have been about as many quarters without sales of jack pine as there have been quarters with sales over the past five years.



Red pine pulpwood sale volume declined from 1.3mmbf in the 1<sup>st</sup> quarter of FY 2015 to 1.05mmbf in the second quarter. It had dropped in the 4<sup>th</sup> quarter of FY 2014, from just over 270mbf down to 197mbf. Like jack pine, there were no sales of Hiawatha red pine pulpwood in the first two quarters of FY 2014. The red pine pulpwood sale volume for the four FY 2014 quarters is by far the lowest annual volume sum for the past five years. The sum for all four quarters of FY 2014 year amounts to less than half of what the average is <u>per quarter</u> for the past five years. In the most recent five-year period, there had not been four quarters in a row without one of the quarters exceeding 1.8mmbf – until FY 2014. Similar to red pine sawtimber, red pine pulpwood sale volume is very erratic from quarter to quarter. There is no volume trend to speak of other than there are frequent no volume quarters, which leaves little basis to project future volumes.



The 2<sup>nd</sup> quarter red pine pulpwood price increased further to \$200 per mbf, from \$126 in the 4<sup>th</sup> quarter of FY 2014 (on low volume) through \$175 per mbf in the 1<sup>st</sup> quarter of FY 2015. The 4<sup>th</sup> quarter of FY 2013 had an average price of \$152 per mbf on significant (2.3mmbf) sale volume. Prices have been on an upward trend over the past five years; however, with very little sale volume in many recent quarters, the trend is not on very solid footing.