

## Michigan Public Timber Markets, 1st Quarter (October - December), FY 2017

**State Forest data** – Sale volume dipped in the 1st quarter of FY 2017. Bid-species-only volume went from 207,703 to 196,568 cords while total sale (bid & non-bid species) volume went from 238,945 to 230,196 cords. The recent sales broke a pattern of lower 4<sup>th</sup> and 1<sup>st</sup> quarter sale volumes and higher sale volumes in 2<sup>nd</sup> and 3<sup>rd</sup> quarters. A record 366,531 cords offered in the 1<sup>st</sup> quarter is also noteworthy. This high amount is due to both rebid sales and sale contract information not being recorded before the end of the 1<sup>st</sup> quarter. Given these factors, next (2<sup>nd</sup>) quarter's sale volume should increase due to spillover from the 1<sup>st</sup> quarter. NLP bid species 1<sup>st</sup> quarter sale volume increased from 107,500 to almost 133,000 cords. UP bid species sale volume sharply decreased, from 101,087 to 63,773 cords. The 4<sup>th</sup> quarter overall State Forest average bid price increased from \$51.92 to \$55.26 per cord. This overall price index reached a record \$69.99 per cord in the 3<sup>rd</sup> quarter of FY 2015, but it has been mostly in a range between \$52 and \$62 since then.

NLP aspen pulpwood bid species sale volumes averaged 29,000 cords per quarter for FY 2016, but fell to 22,460 cords in the 1<sup>st</sup> quarter. The NLP 1<sup>st</sup> quarter price rose slightly from \$28.09 to \$29.50 per cord. UP aspen pulpwood sale volume was cut in half from 20,572 to 10,781 cords in the 1<sup>st</sup> quarter while prices went from \$41.58 to \$49.72 per cord. UP red pine pulpwood bid species sale volumes bounced back from 3,097 to 16,460 cords while the NLP volume went from 14,547 to 20,486 cords. The NLP red pine pulpwood price dipped from \$64.19 to \$60.61 per cord while the UP price rose from \$70.52 to \$84.81 per cord. NLP jack pine pulpwood bid species volume more than tripled, from 3,266 to 9,773 cords; it had reached 29,292 cords in the 2<sup>nd</sup> quarter of last year. UP jack pine pulpwood sale volume went from 11,603 to 5,327 cords in the 1<sup>st</sup> quarter. Jack pine pulpwood cord prices were little changed for the 1<sup>st</sup> quarter in either peninsula, going from \$61.23 to \$62.62 in the UP and from \$34.73 to \$35.24 in the NLP. UP softwood pulpwood sale volume fell back sharply from 29,258 to 7,886 cords while its price dipped slightly from \$40.48 to \$39.77 per cord. NLP Oak pulpwood sale volume more than doubled from 9,018 to 20,885 cords while its average price fell sharply from \$35.12 to only \$15.69 per cord. Other hardwood pulpwood volume fell again from 37,785 to 28,537 cords in the 1<sup>st</sup> quarter. Its price also dropped further from \$36.30 to \$33.29 per cord. Statewide red pine sawtimber prices declined again for the seventh quarter in a row, dropping to \$169.38 per mbf while volumes increased from 6.8 to 8.4mmbf. UP sugar maple sawtimber prices rose from \$733 to \$804 per mbf as volume dropped from 528 to 336mbf. The NLP sugar maple sawtimber price settled back from \$723 to \$650 per mbf as the volume also went down from 730 to 568mbf. NLP oak sawtimber volume increased from 2.95mmbf in the 4<sup>th</sup> quarter up to 4.92 mmbf while its price went \$214 up to \$221 per mbf.

**National Forest data** – 1<sup>st</sup> quarter total pulpwood and total sawtimber volumes declined on all three Michigan National Forests. Huron-Manistee (H-M) outputs virtually matched their large increases last quarter with as large of decreases in the 1<sup>st</sup> quarter. Sawtimber sale volume fell from 10.8 to 3.65mmbf and pulpwood sale volume went from 18.8 to only 3.0mmbf. Ottawa sawtimber sale volumes declined from 4.0 to 3.0mmbf while its pulpwood volume went from over 16 to 8mmbf. Hiawatha sawtimber sale volume went from 2.7 to only .97mmbf while its pulpwood volume dropped sharply from 7.3 to 1.2mmbf.

Ottawa's overall average sawtimber price shot up from \$202 to \$336 per mbf while its overall pulpwood mbf price rose from \$44.83 to \$46.98. Ottawa sugar maple sawtimber sale volume was hardly changed at 1.05mmbf while its price shot up from \$374 to \$628 per mbf. Its aspen pulpwood sale volume dropped from 3.9 down to 1.6mmbf as its price went up from \$61 to \$74 per mbf. The "hardwood-other" pulpwood volume dropped back from 8.9 to 5.1mmbf as its quarterly price rebounded somewhat from \$23 to \$29 per mbf.

The Hiawatha's overall average sawtimber price bounced back up from \$136 to over \$165 per mbf as its red pine sawtimber price fell from \$186 to \$166 per mbf. No jack pine or "hardwood-other" sawtimber volume was sold in the 1<sup>st</sup> quarter. Nor was there any "hardwood-other" or aspen pulpwood, or any appreciable jack pine pulpwood sold. Red pine pulpwood sale volume doubled from a low .5 to 1.1mmbf as its price went from \$143 to \$128 per mbf.

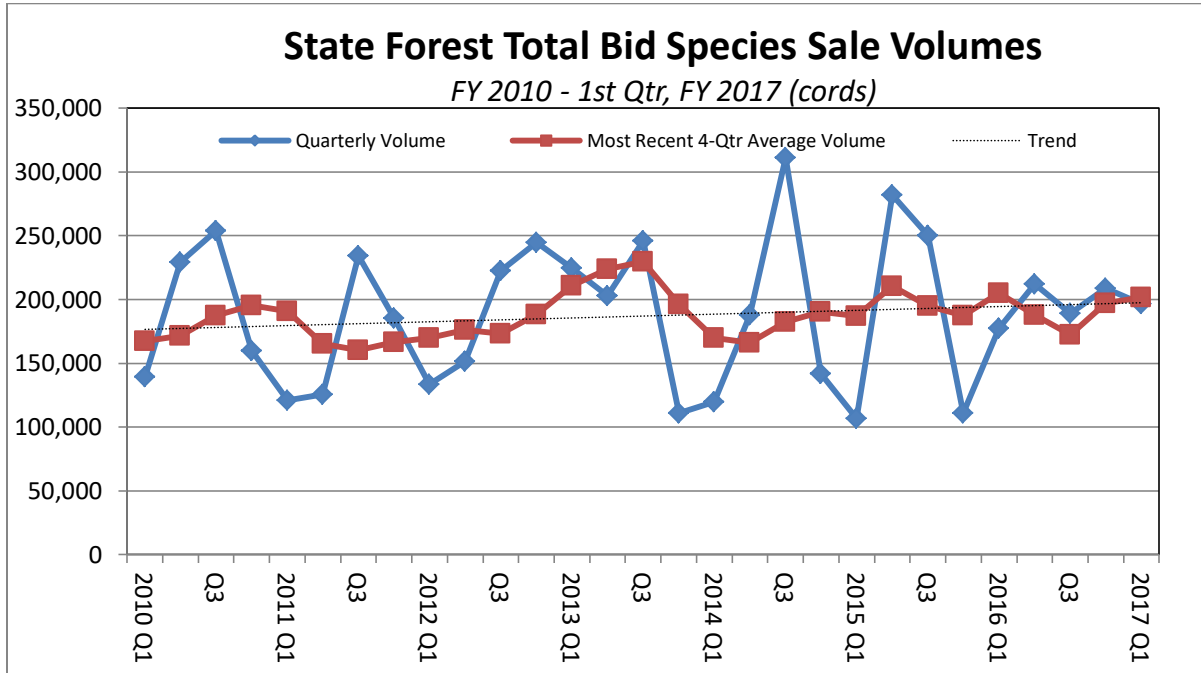
H-M average mbf sawtimber prices dropped back a little, from \$132 to \$127 per mbf while average pulpwood prices shot up from \$50 to over \$83 per mbf. After virtually no sales of aspen sawtimber in the prior three quarters, 1.25mmbf was sold in the 4<sup>th</sup> quarter at an average price of \$68 per mbf. But there were no sales of aspen sawtimber again in the 1<sup>st</sup> quarter of FY 2017. Similarly, the 4<sup>th</sup> quarter's aspen pulpwood 4.6mmbf sale volume (at an average \$37 per mbf) followed three quarters of virtually no sales and there was no aspen pulpwood sold in the first quarter of FY 2017. Red pine sawtimber sale volume fell back from 6.8 to 3.3mmbf as the price fell from \$153 to \$135 per mbf. There was no jack pine pulpwood sale volume. H-M red pine pulpwood sale volume dropped back as sharply as it had risen, from 8.1 to 2.7mmbf as its price rose again, from \$80 to \$90 per mbf.

## State Forest Quarterly Timber Sales for Major Species & Products

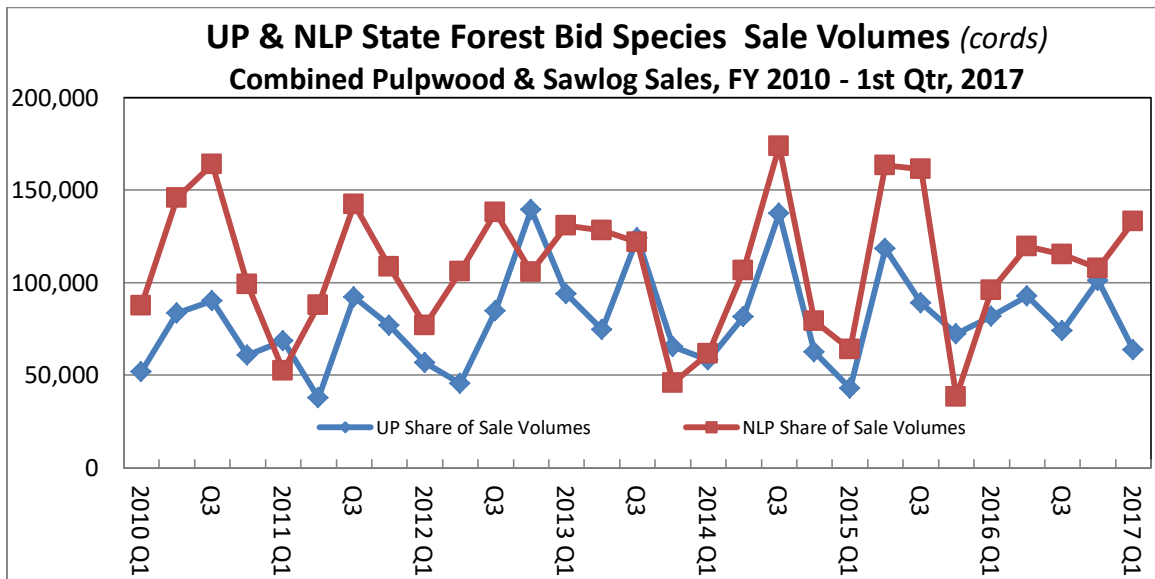
FY 2010 – 1<sup>st</sup> Qtr, FY 2017

Source: Michigan DNR, Forest Resources Division

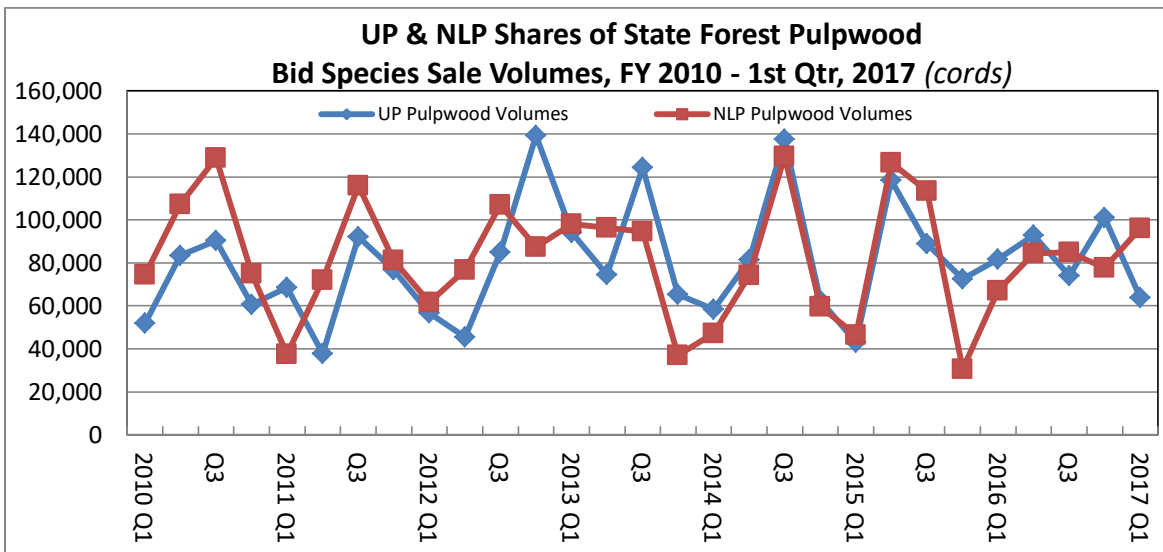
The State follows the federal fiscal year (October 1 through September 30). Graphs below show bid species sale volume and value data; total sale volumes and values are slightly more. The graphs often include a dotted trend line based upon data for the average of the most recent four quarters (labeled as "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.



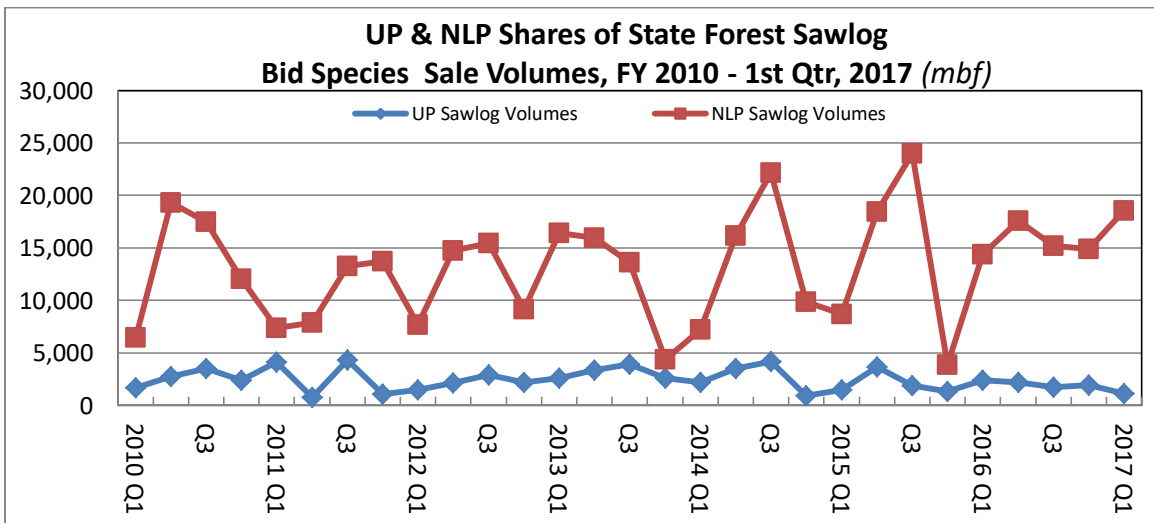
Total State Forest sale volume for bid species dropped from 208,677 to 196,772 cords in the 1<sup>st</sup> quarter of FY 2017. The volume has been quite stable - close to 200,000 cords per quarter - for the past five quarters. Total sale volume for bid and nonbid species was at 231,196 cords and total offered sales was at a very high 366,531 cords. This high amount was due to higher no bids and contracts submitted in January. The 6-year sale volume trend has been slightly increasing.



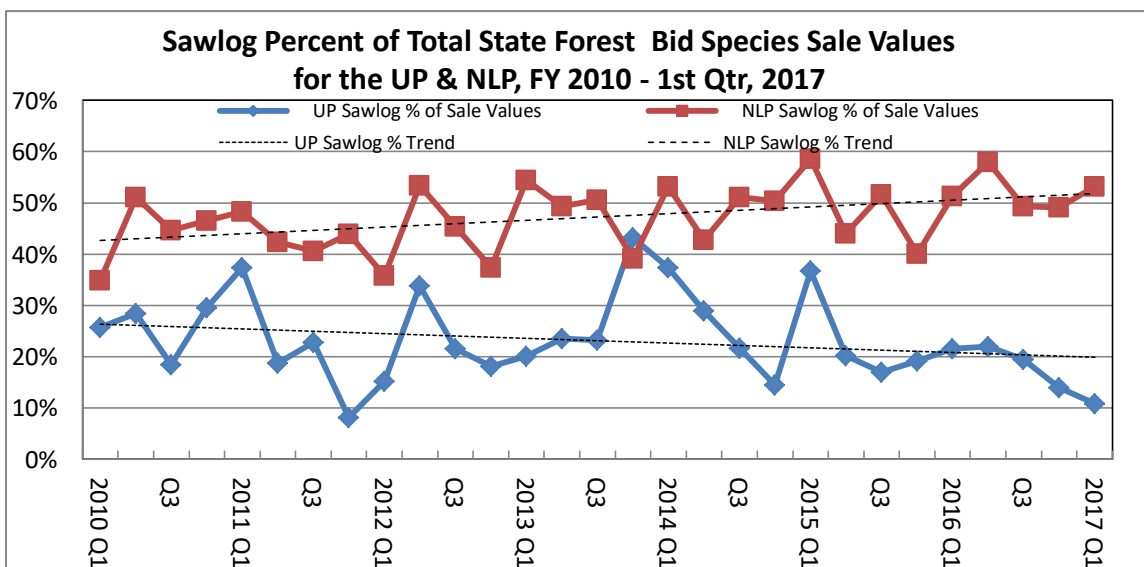
UP bid species sale volumes dropped sharply in the 1<sup>st</sup> quarter of FY 2017, from 101,087 to 63,773 cords, but they rose in the NLP from 107,591 to 132,997 cords. It is rare for the UP to generate less than half the State Forest sale volume of the NLP. The NLP generally has had higher, but more extreme swings in its sale volumes. However, NLP volumes have been relatively stable for five quarters, following its lowest sale volume in the past six years in the FY 2015 4<sup>th</sup> quarter.



Pulpwood sale volume accounts for about 80% of total State Forest sale volume. UP pulpwood sale volumes decreased sharply in the 1<sup>st</sup> quarter from 97,195 to 61,585 cords while the NLP rose from 77,780 to 95,943 cords.

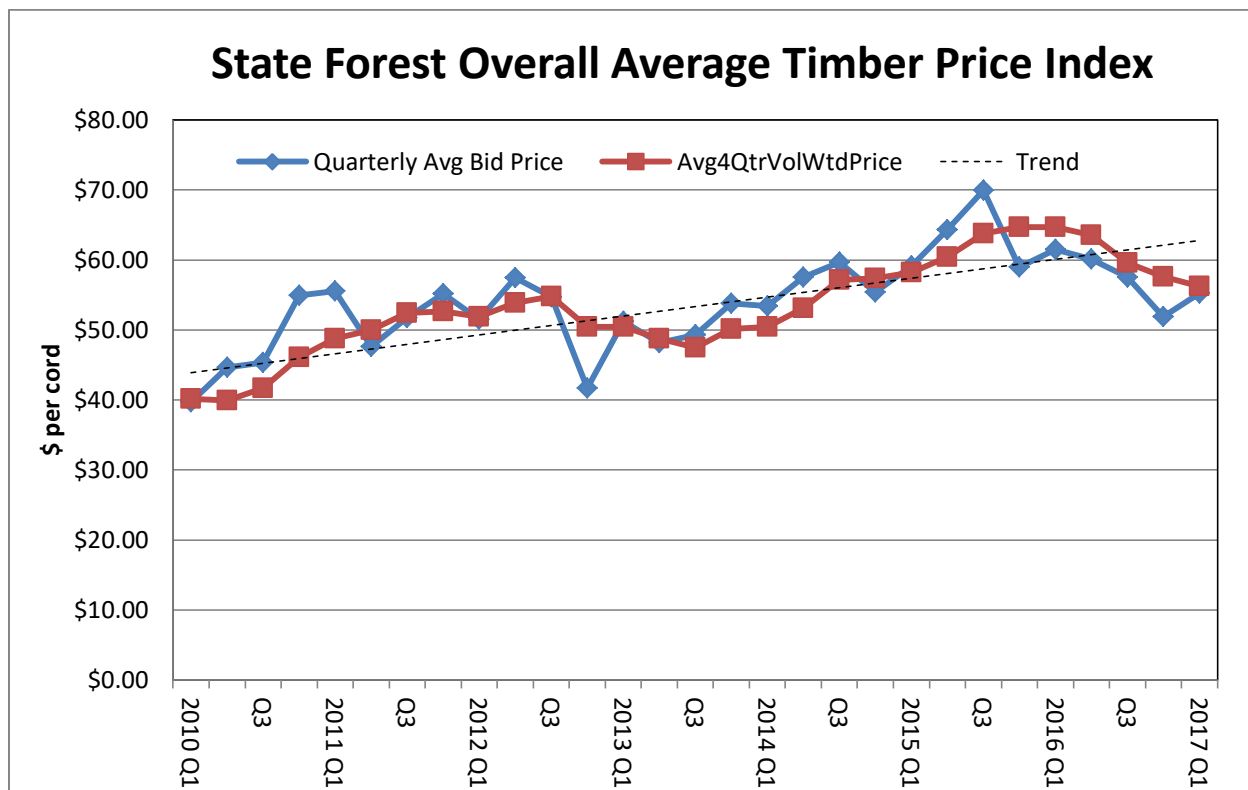


NLP sawlog volumes and values are generally much higher but more erratic than the UP's. The NLP sawlog volume rose in the 1<sup>st</sup> quarter from 15 to 18.5 mmbf. The much lower UP sawlog volume fell further from 2 to 1 mmbf.



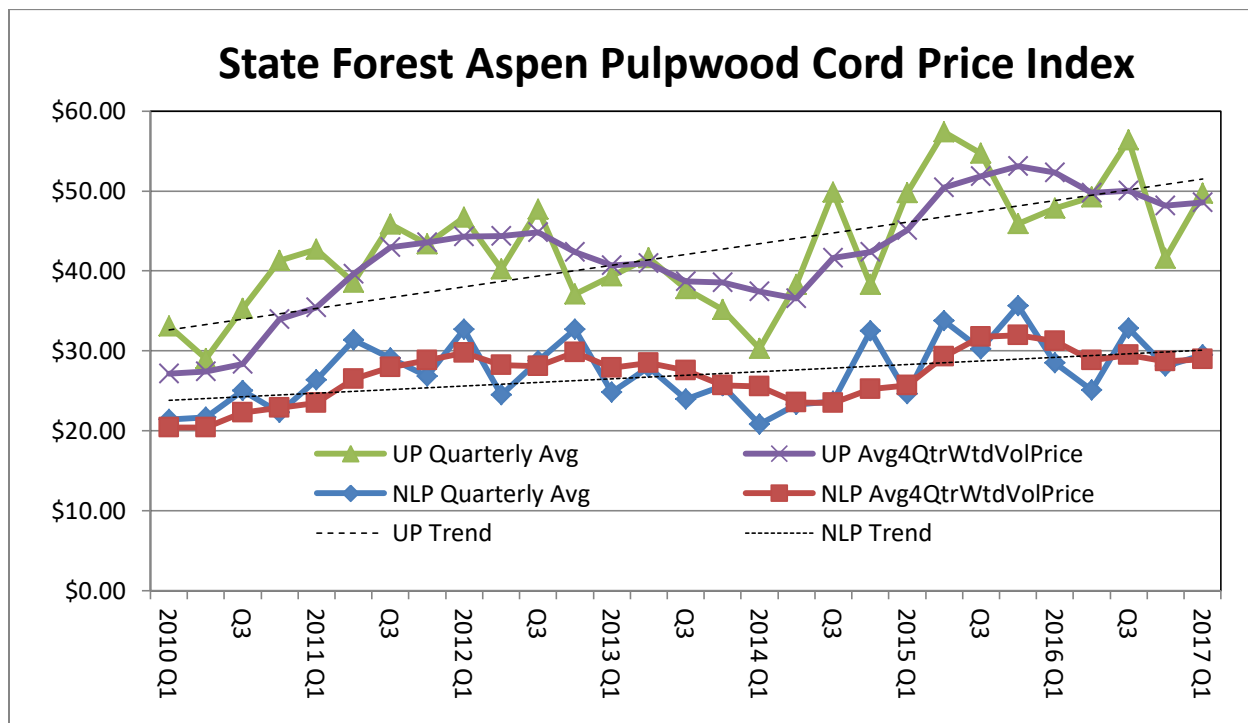
The sawlog percent of NLP bid species sale values increased in the 1<sup>st</sup> quarter to 53%; it has been on a mild upward trend. The UP sawlog percent of sale values declined again from 14% to 11%; it has been on a fairly steady decline.

## State Forest Overall Average Timber Price Index

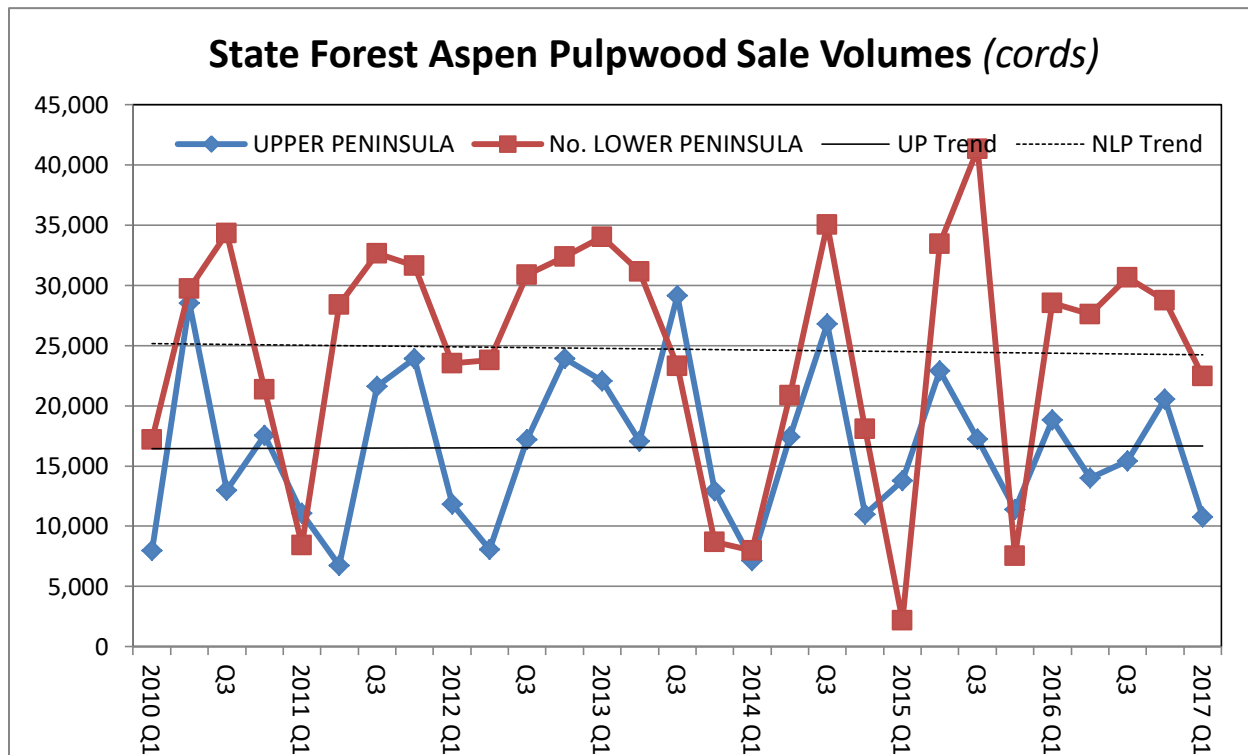


The 1<sup>st</sup> quarter overall average timber cord price index increased from a 3-year low of \$51.92 up to \$55.26. The index was at a record level of \$69.99 per cord six quarters ago, but had fallen fairly steadily since then. Despite recent declines, quarterly prices have been increasing overall during the past six years and a reversal of the recent declines – to rising prices again – has been expected. The recent higher level of sales without bids will temper increases.

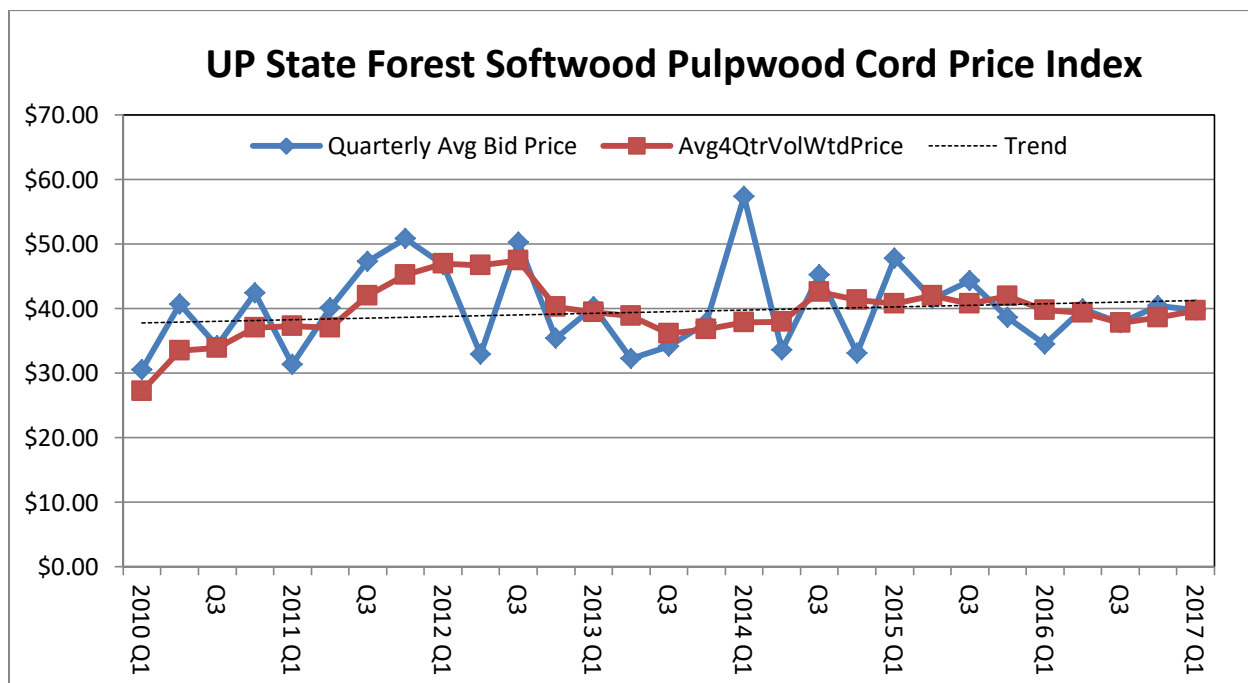
## State Forest Aspen Pulpwood Cord Price Index



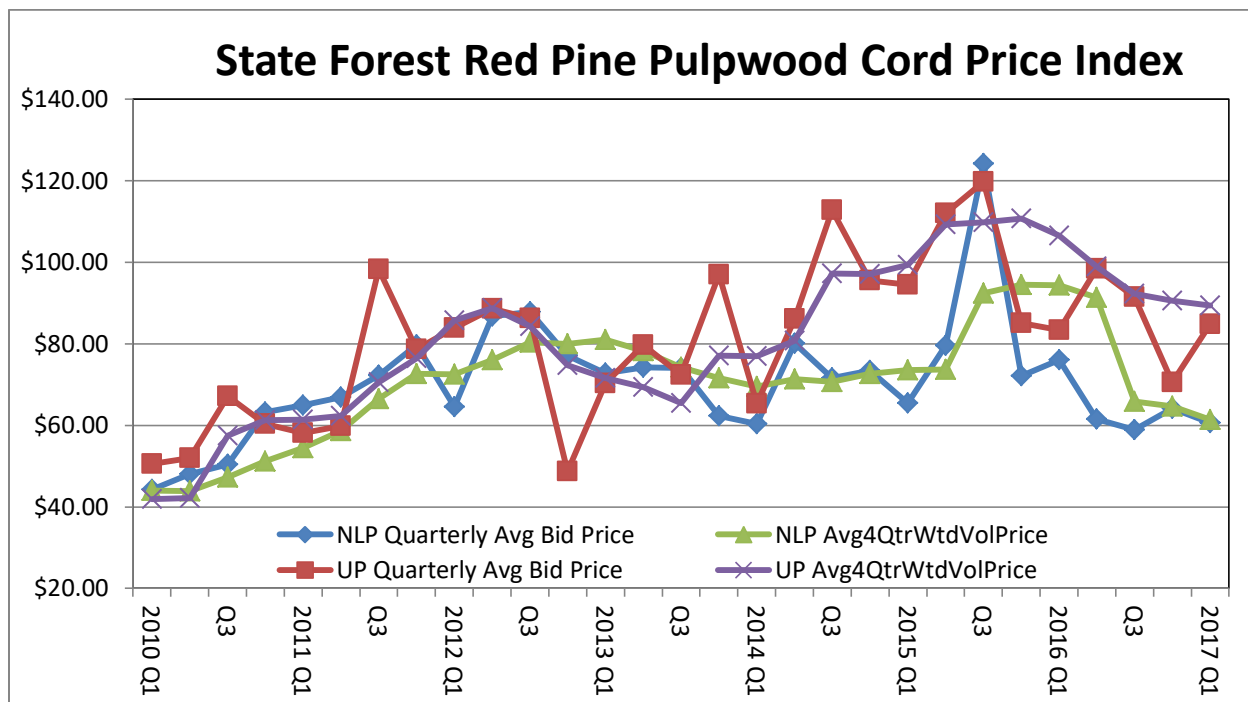
The UP average aspen pulpwood cord prices have had some large price swings in recent quarters. Prices plunged from \$56.38 in the 3<sup>rd</sup> quarter down to \$41.58 in the 4<sup>th</sup> quarter of FY 2016, but they bounced back to \$49.72 in the 1<sup>st</sup> quarter of FY 2017. The average NLP aspen pulpwood cord price increased just slightly in the most recent quarter, from \$28.09 to \$29.50. Both peninsulas have had increasing price trends over the past 6 years, but the UP price trend is steeper relative to the NLP price trend.



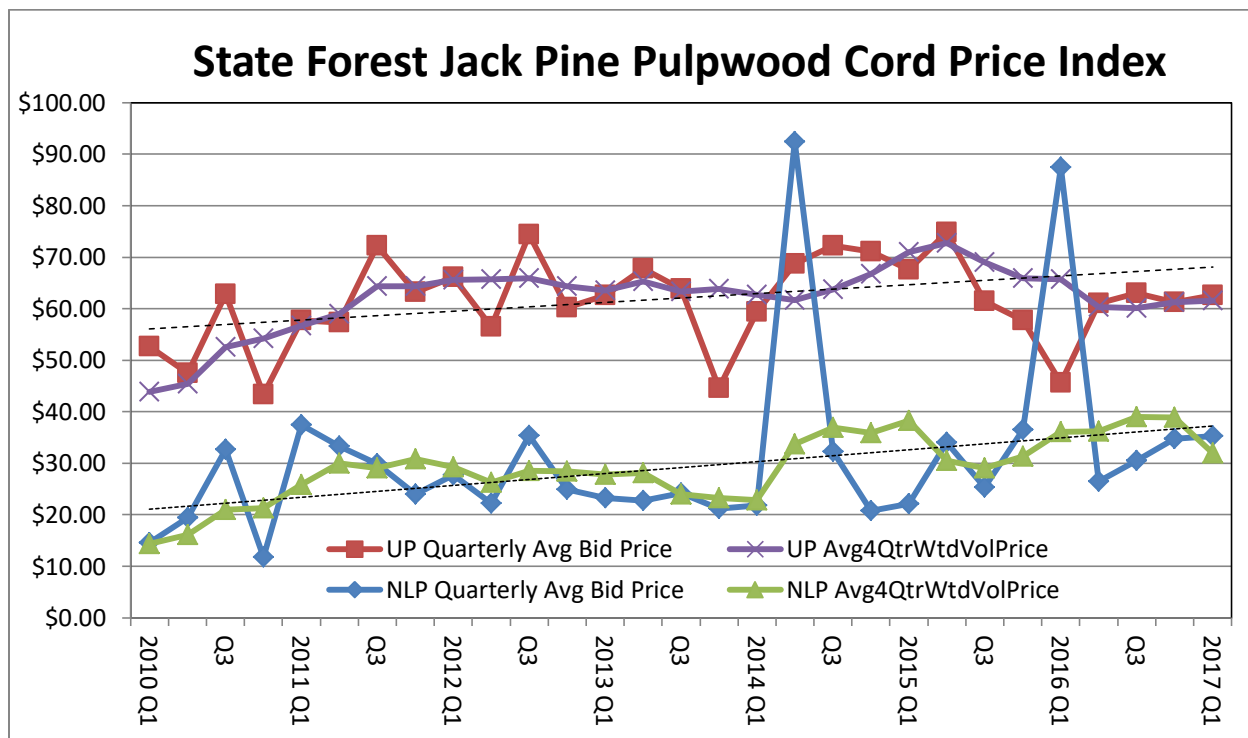
Aspen pulpwood sale volume dropped in both peninsulas in the 1<sup>st</sup> quarter. NLP aspen pulpwood bid sale volume dropped from 28,739 down to 22,460 cords. Changes in quarterly NLP sale volumes over the past year were quite moderate compared to what they had been. They had plummeted from a record high of 41,328 cords down to only 7,553 cords between the 3<sup>rd</sup> and 4<sup>th</sup> quarters of FY 2015. Similar large swings occurred in FY 2014. UP 1<sup>st</sup> quarter sale volume dropped sharply from 20,572 to 10,781 cords. The UP has a very flat six-year trend line while the NLP has had a very slightly declining trend over the same period despite the above average FY 2016 volumes.



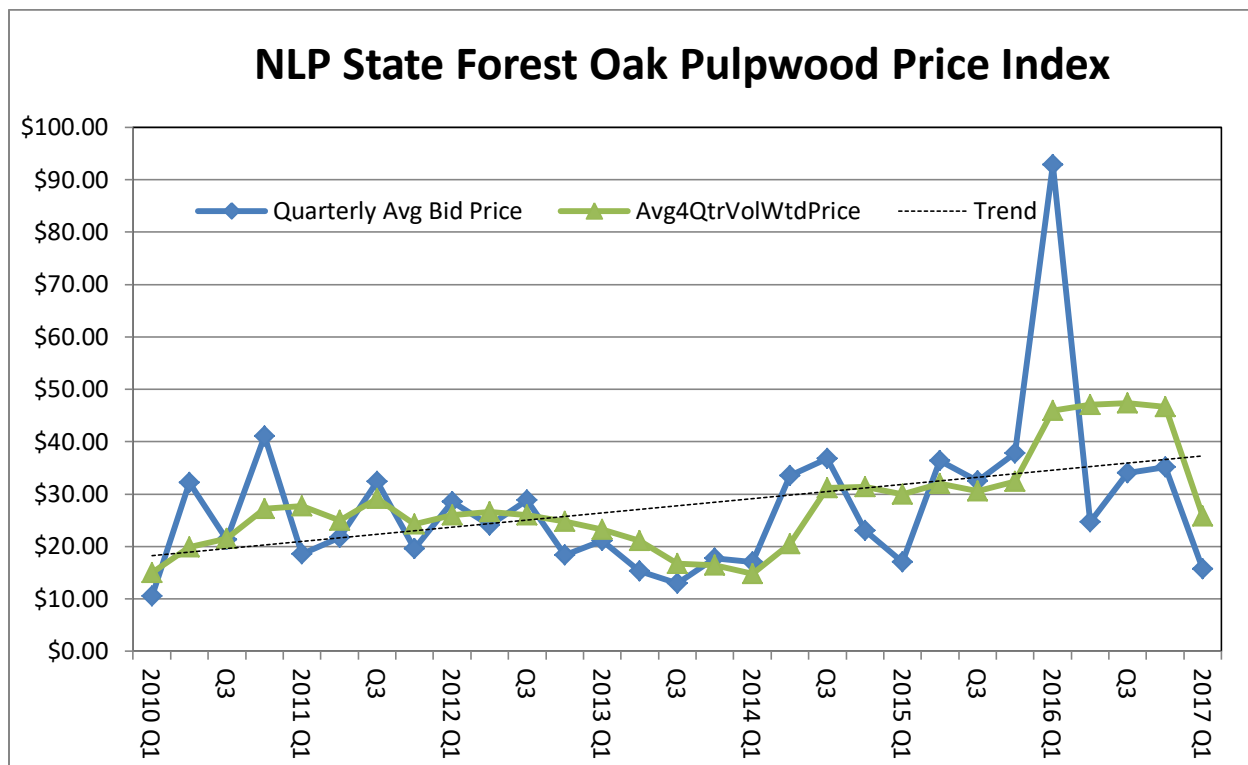
The UP accounts for close to 90% of what is sold as “softwood pulpwood.” The 1<sup>st</sup> quarter softwood pulpwood cord price dipped from \$40.48 to \$39.77 per cord as volume fell sharply from 29,258 to 7,886 cords of sale volume. Prices do not fluctuate as much for UP softwood pulpwood as they do for most other timber products. The quarterly price has seldom gone outside of a \$30 to \$50 range over the past six years. Quarterly sale volumes do fluctuate though, from under 10,000 cords to over 30,000 cords. There is a very slight upward price trend for the product.



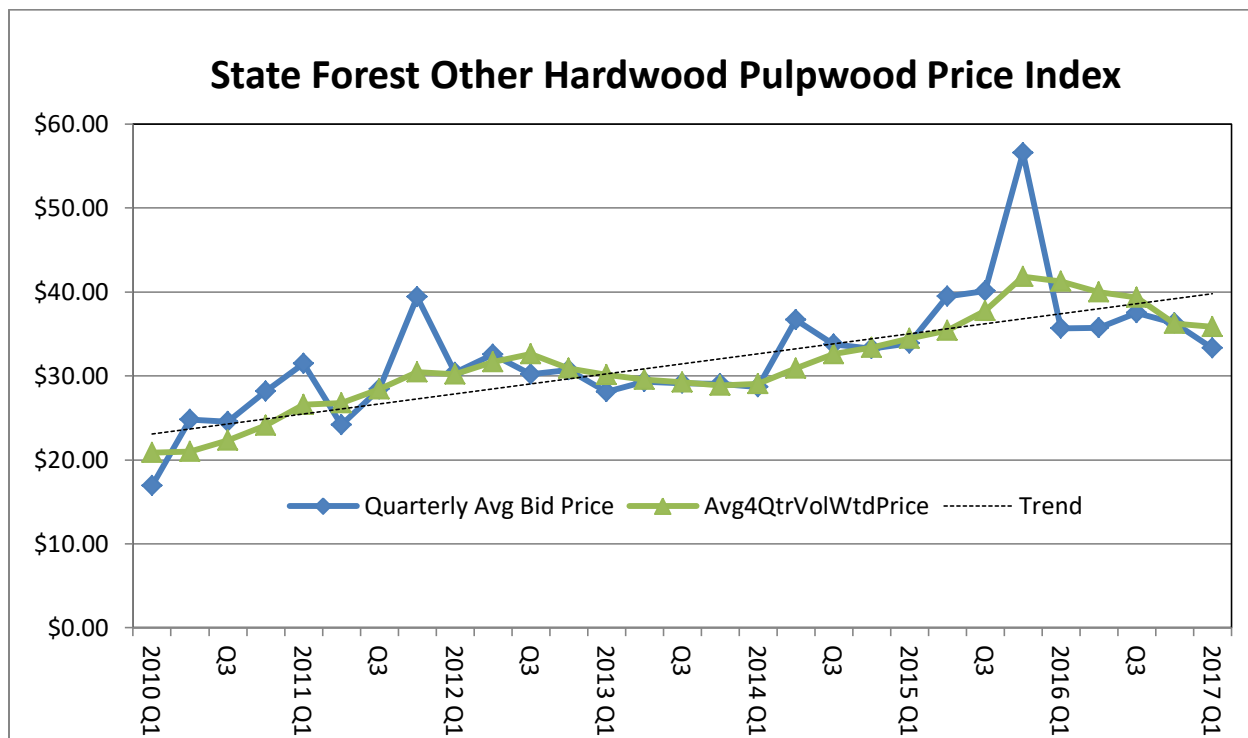
The FY 2017 1<sup>st</sup> quarter NLP red pine pulpwood price fell from \$64.19 to \$60.61 per cord as sale volume went from 14,547 to 20,486 cords. The price had shot up in the 3<sup>rd</sup> quarter of FY 2015 to over \$124 per cord before dropping back even more sharply to a \$72 price. It has been in the \$58 to \$78 range since then. The UP generally has higher RP pulpwood prices than the NLP. The UP price dropped sharply in the 4<sup>th</sup> quarter of FY 2016, from \$91.48 to \$70.52 per cord, and then rose back up in the most recent (1<sup>st</sup>) quarter to \$84.81. It had reached \$119 per cord in the 3<sup>rd</sup> quarter of last year before falling to \$85 in the 4<sup>th</sup> quarter. FY 2016 UP sale volume declined from 12,394 cords to 8,965 cords in the 3<sup>rd</sup> quarter and then to only 3,097 in the 4<sup>th</sup> quarter, but it rose back to 16,460 cords in the 1<sup>st</sup> quarter of FY 2017.



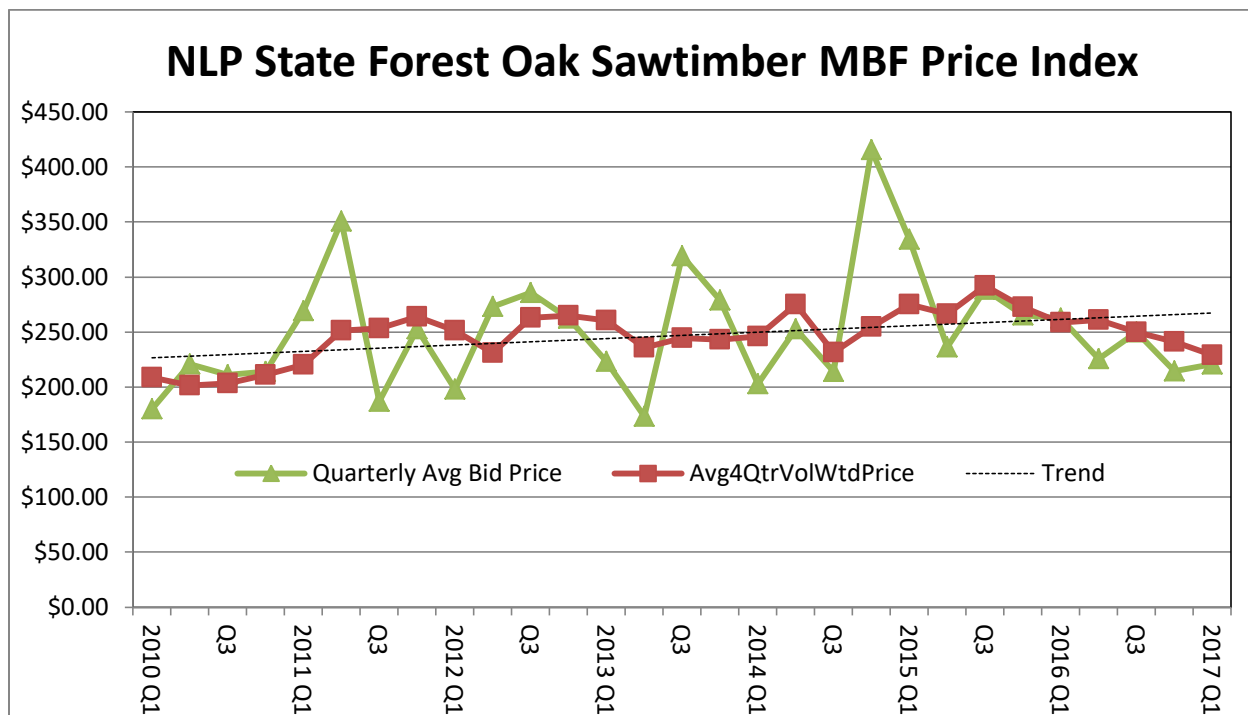
Jack pine pulpwood cord prices increased slightly in both peninsulas, from \$34.73 to \$35.24 in the NLP and from \$61.23 to \$62.62 in the UP. The UP price has generally been two to three times the NLP price. Jack pine sale volumes are highly volatile from quarter to quarter in both peninsulas. UP quarterly sale volume dropped from 11,603 to 5,327 cords in the 1<sup>st</sup> quarter while NLP sale volume tripled from a low 3,266 last quarter up to 9,773 cords in the most recent 1<sup>st</sup> quarter.



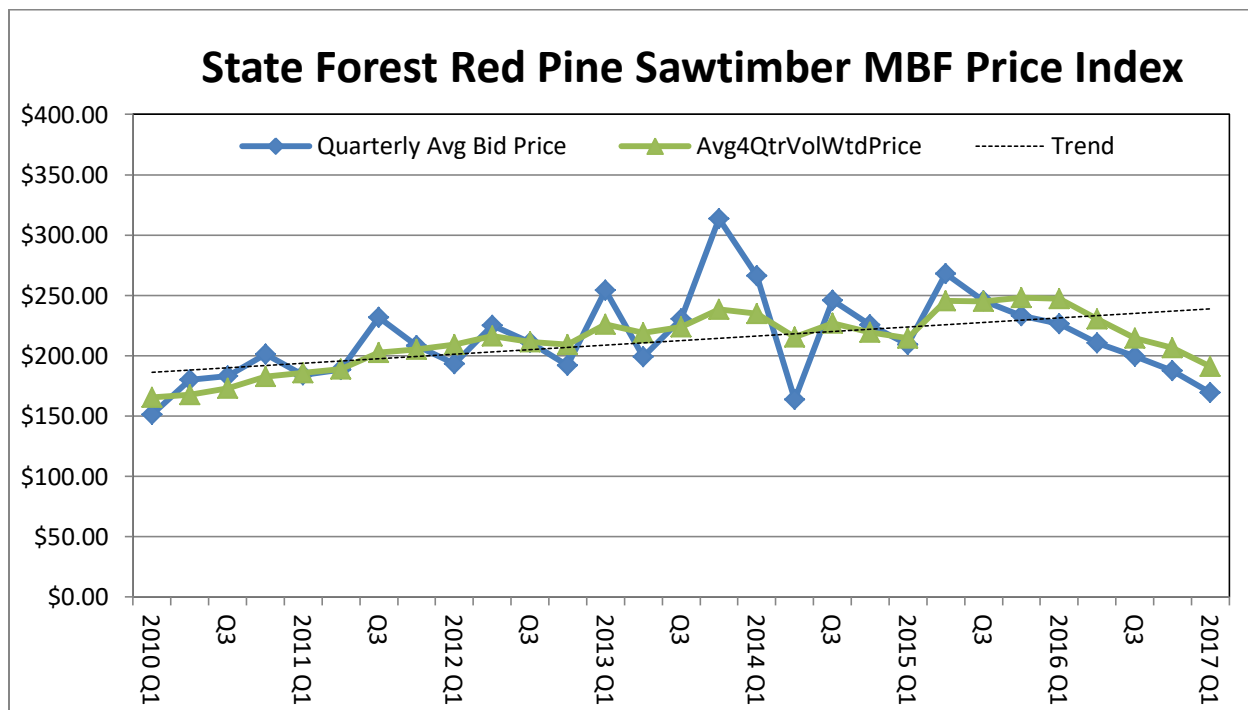
The FY 2016 1<sup>st</sup> quarter NLP oak pulpwood price was reported to be a record \$92.84 per cord, more than double any price achieved in the past six years, but then it dropped to \$24.67 in the 2<sup>nd</sup> quarter, rose to \$34.01 in the 3<sup>rd</sup> quarter, and was little changed at \$35.12 in the 4<sup>th</sup> quarter. The 1<sup>st</sup> quarter FY 2017 price plummeted to \$15.69 per cord as the sale volume more than doubled from 9,017 to 20,865 cords. The average price over the past six years was under \$30.00 per cord. In contrast to the recent price decline, there is an increasing six-year price trend.



For the fifth quarter in a row, the "other hardwood pulpwood" cord price was virtually unchanged. It declined further from \$36.30 to \$33.29 in the 1<sup>st</sup> quarter. It was at a record high price of \$56.55 per cord in the 4<sup>th</sup> quarter of FY 2015. Bid species sale volume dropped from 37,785 to 28,537 cords. It had reached 55,652 cords in the 3<sup>rd</sup> quarter of FY 2016; the average quarterly volume for the past six years is close to 40,000 cords. The product has an increasing price trend.

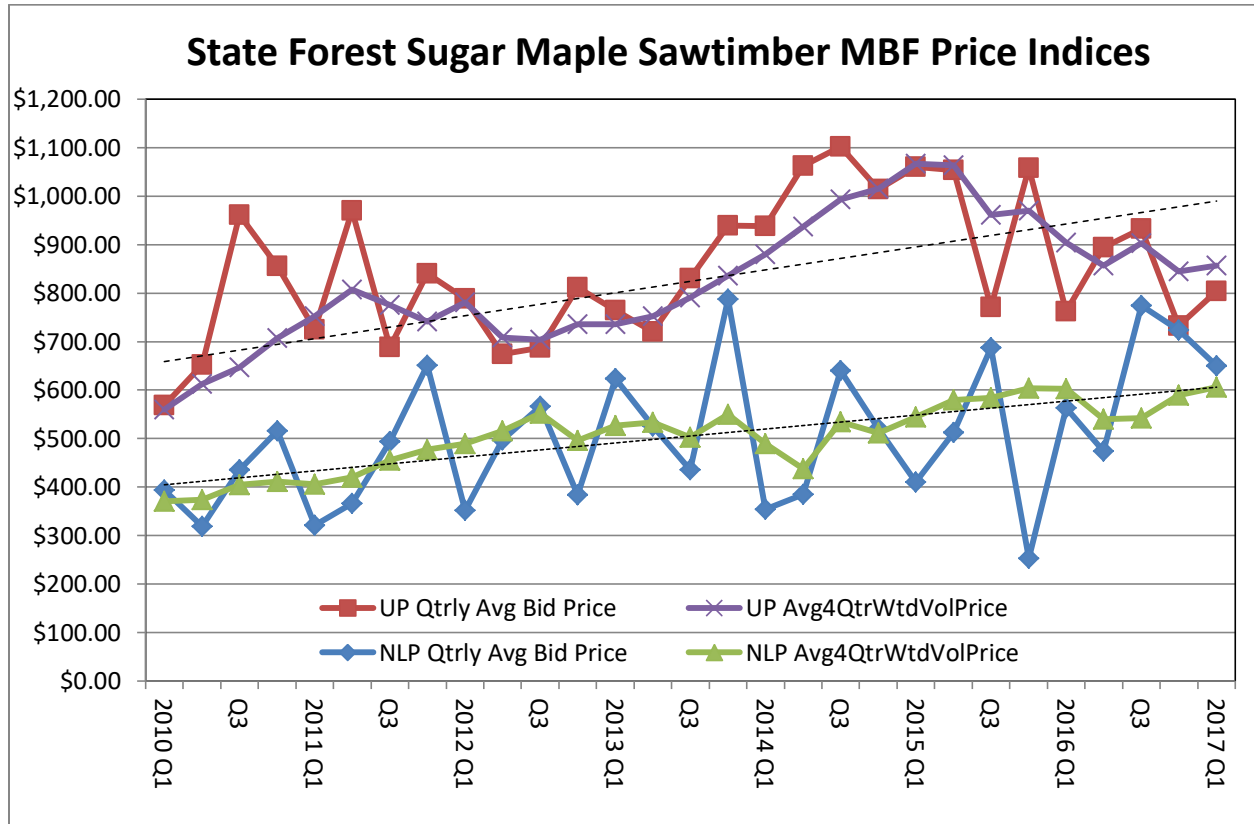


NLP oak sawtimber prices rose slightly in the 1<sup>st</sup> quarter, from \$214.43 to \$220.96 per mbf on sale volume of almost 5mmbf. Prices reached a high of \$415 per mbf in the 4<sup>th</sup> quarter of FY 2014 before falling most quarters since then. Overall, there has been a very modest increasing price trend for the past six years. Sale volumes over the same period have averaged about 2.8mmbf per quarter. In FY 2015, sale volume reached 5.3mmbf in the 2<sup>nd</sup> quarter before falling to only 1.28mmbf in the 4<sup>th</sup> quarter. Sale volumes have averaged above 3.8mmbf for the past five quarters.



As the graph above shows, red pine sawtimber prices had their seventh quarterly decline in a row in the 1<sup>st</sup> quarter. The price was just below \$169 per mbf on 8.4mmbf sale volume for the quarter. Prices had been moderately increasing over the past 6 years and have averaged over \$210 per mbf. Sale volume reached 13.14mmbf in the 3<sup>rd</sup> quarter of FY 2015 and then fell to 1.79mmbf the next quarter. In FY 2016 volumes were fairly stable, going from 6.97mmbf in the 1<sup>st</sup> quarter to 8.354mmbf in the 2<sup>nd</sup> quarter, declining to 5.335mmbf in the 3<sup>rd</sup> quarter, and finishing at 6,815 in the 4<sup>th</sup> quarter. The average quarterly sale volume for the past six years is close to 7.15mmbf.



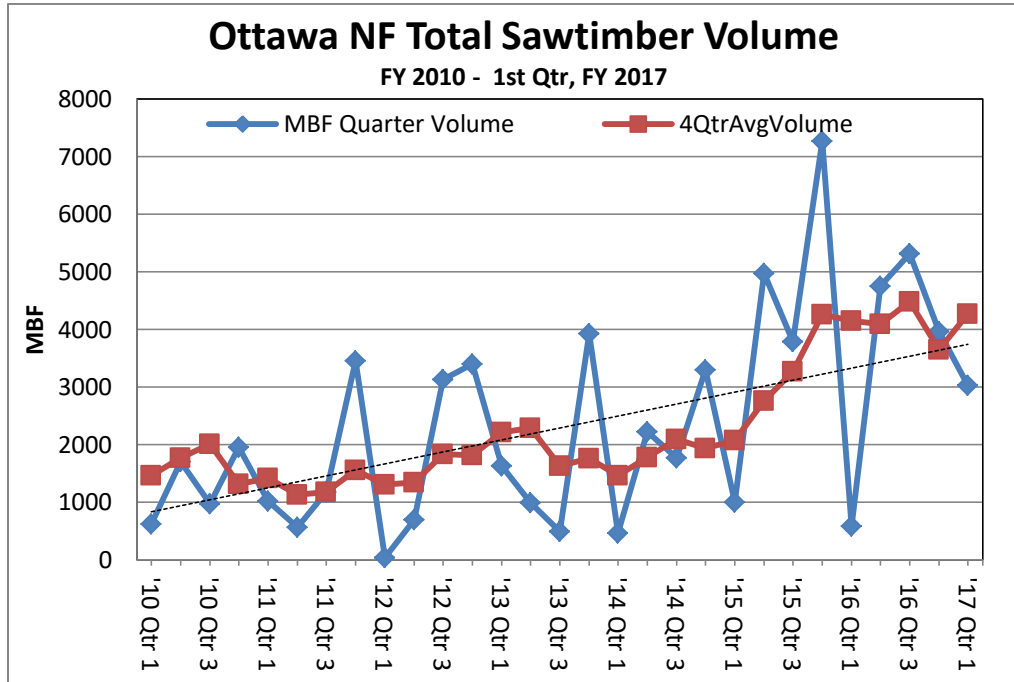


Most quarters the UP sugar maple sawtimber price is significantly higher than the NLP's, but the difference has not been large the last three quarters. NLP sugar maple sawtimber prices dropped again in the 1<sup>st</sup> quarter, from \$723.47 to \$650.39 as volume went from 730 down to 568 mbf. At the same time, the UP price increased from \$732.54 to \$804.41 per mbf as sale volumes went from 528 down to 336 mbf. The UP average price reached \$1058 per mbf in the 4<sup>th</sup> quarter of FY 2015 and had been above \$1000 per mbf for a string of five quarters before that. The NLP price reached a price of \$774 per mbf in the 3<sup>rd</sup> quarter of FY 2016 and a six-year peak of \$787 in the 4<sup>th</sup> quarter of FY 2013. The UP price has a fairly steep six-year trend; the NLP's price trend is slightly less steep. Unlike the most recent quarter, the UP generally sells more sugar maple sawtimber sale volume than the NLP; however, the UP's average (680mbf) has been falling while the NLP's (480mbf) has been rising.

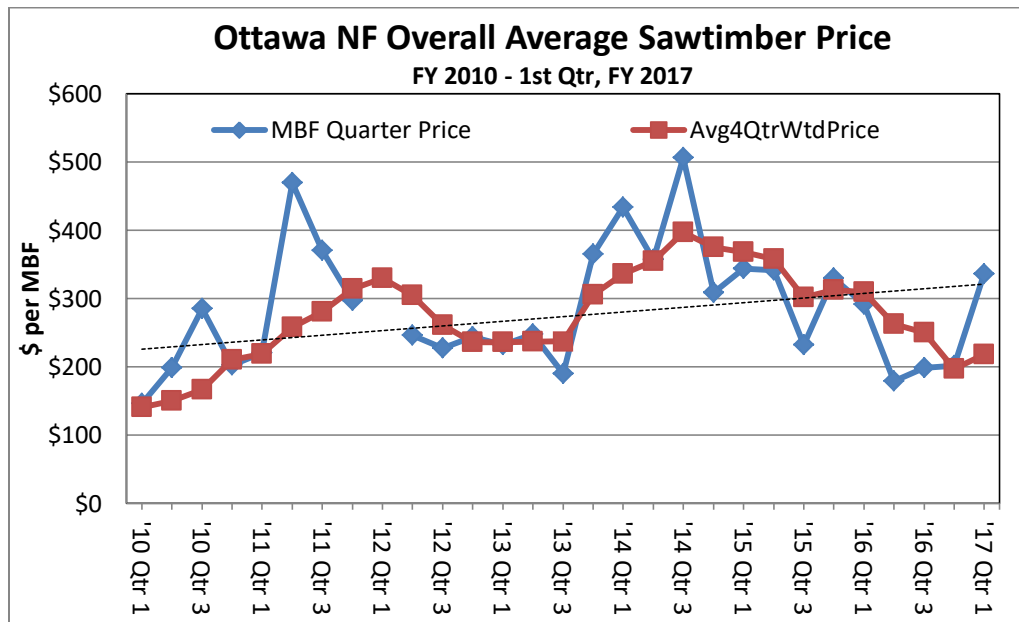
## Ottawa National Forest Major Species/Product Timber Sales, FY 2010 – 1<sup>st</sup> Qtr, 2017

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 first quarter of FY 2017 (October - December, 2016). 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:

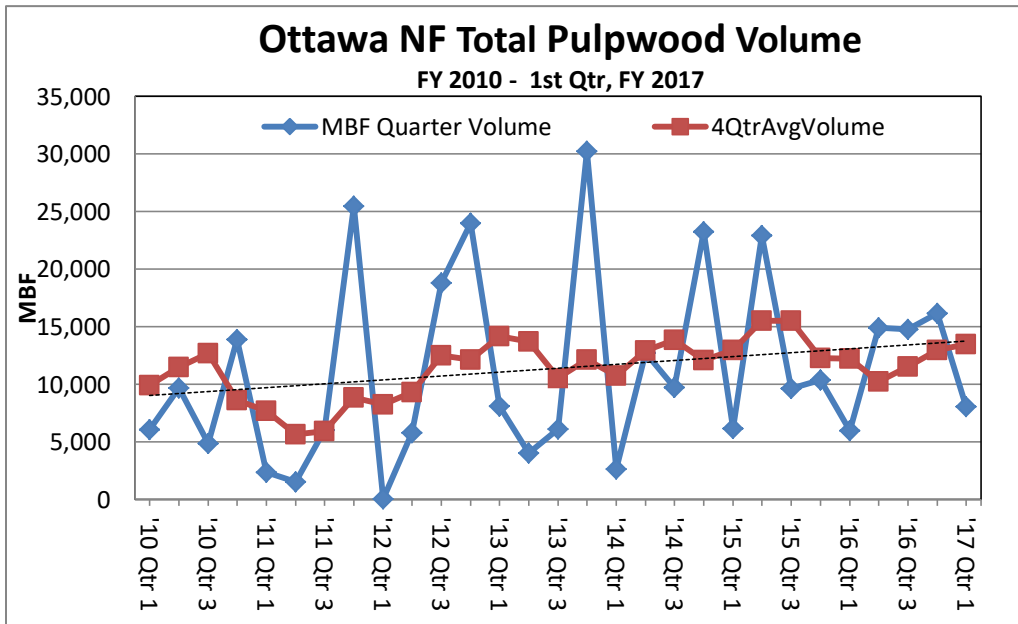
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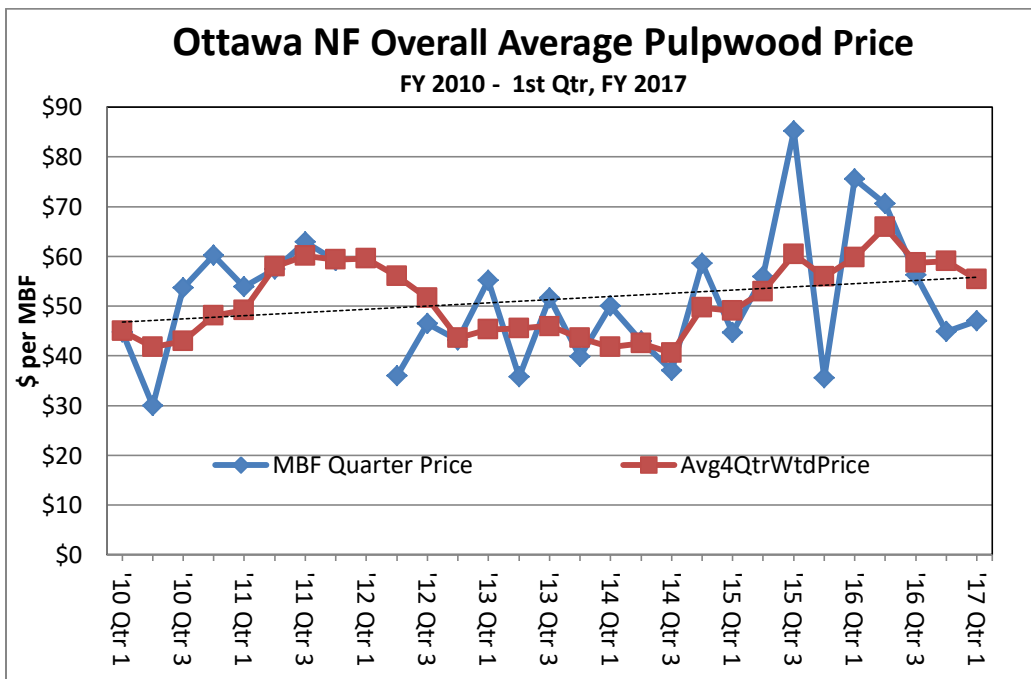
Total Ottawa sawtimber sale volume dropped from 4.0 to 3.0mmbf in the 1<sup>st</sup> quarter. After reaching a record 7.3mmbf in the 4<sup>th</sup> quarter of FY 2015, it dropped to only 577mbf in the 1<sup>st</sup> quarter of FY 2016 after which it rebounded to 4.75 and then 5.3mmbf in the 2<sup>nd</sup> and 3<sup>rd</sup> quarters. There is a sharply increasing six-year sale volume trend, although volumes from quarter-to-quarter are somewhat erratic.



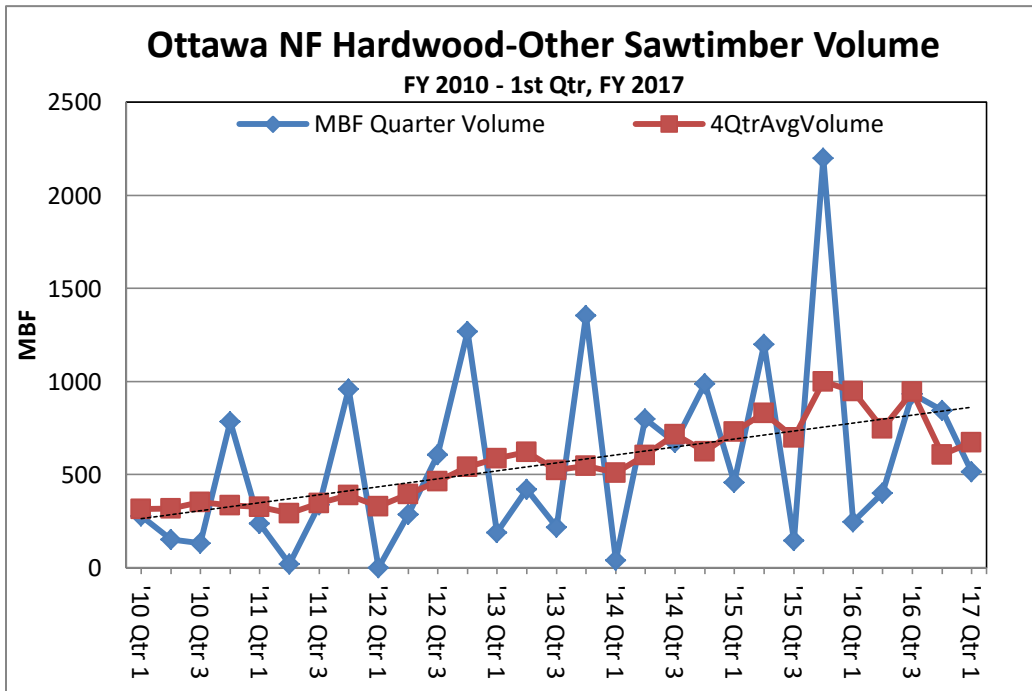
The 1<sup>st</sup> quarter overall average sawtimber price jumped from \$202 to \$336 per mbf, bringing the price slightly above its six-year trend line. It reached a peak at \$507 per mbf in the 3<sup>rd</sup> quarter of FY 2014. There is an increasing six-year price trend although the price has been on a downward trend over the past two years. Average prices are impacted by the mix of sold species and products. The Ottawa sawtimber price trend is greatly influenced by sugar maple volumes and prices.



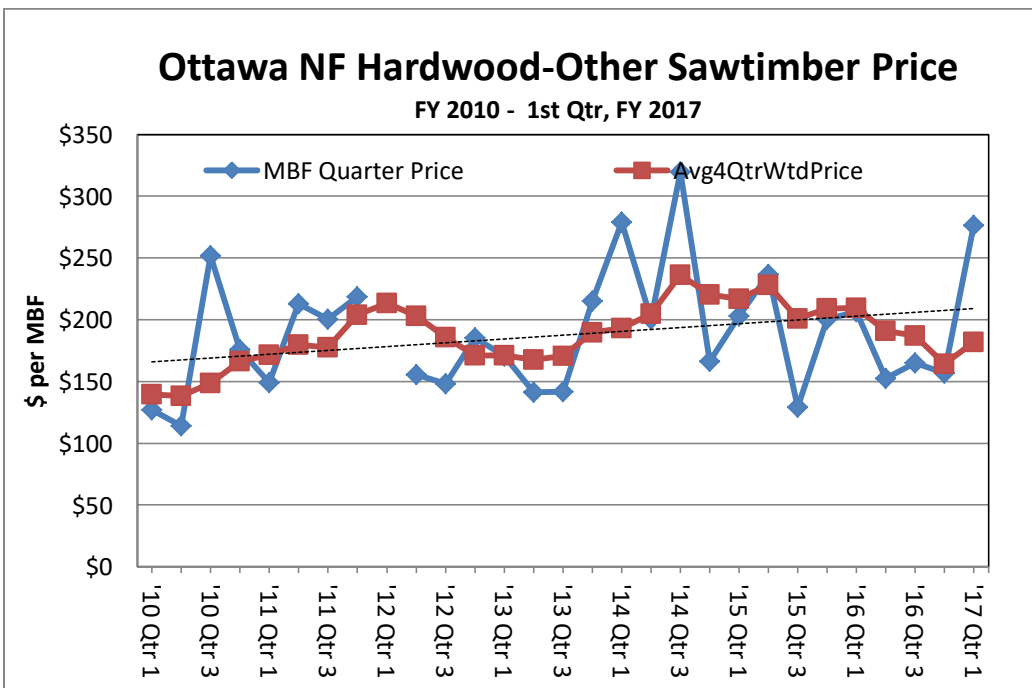
After hovering around 15 to 16mmbf for three quarters, the 1<sup>st</sup> quarter total pulpwood sale volume dropped in half to 8mmbf. From FY 2011 through the beginning of FY 2015, Ottawa pulpwood sale volumes seesawed back and forth from one quarter to the next, going from 5mmbf or less one quarter to close to or above 25mmbf the next quarter. Sale volumes for the past seven quarters have not been as erratic. The record high level for the past six years was over 30mmbf reached in the 4<sup>th</sup> quarter of FY 2013. The six-year sale volume trend has been on a modest incline. Ottawa sawtimber and pulpwood volumes have been generally highest in the 4<sup>th</sup> quarter and have often dropped sharply in the 1<sup>st</sup> quarter. Generally, the 2<sup>nd</sup> quarter sees a modest increase over the 1<sup>st</sup> quarter.



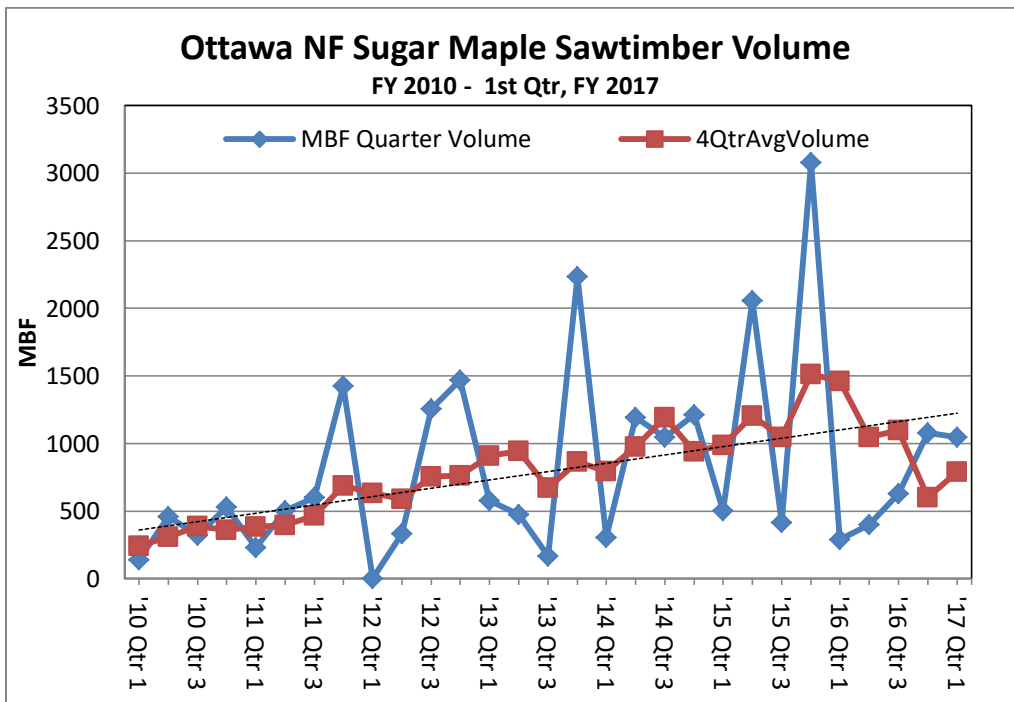
Following three quarters of falling prices, the 1<sup>st</sup> quarter saw a slight increase in the overall average pulpwood price, from \$44.83 to \$46.98 per mbf. This latest price is still well below the 6-year average and mildly increasing 6-year time line. Prices had plunged from a six-year peak of \$85.22 to \$35.56 per mbf between the 3<sup>rd</sup> and 4<sup>th</sup> quarters of FY 2015 before rebounding to \$75.52 in the 1<sup>st</sup> quarter of FY 2016. Barring major negative economic events, prices are likely to continue to swing back and forth a bit, but mostly experience increases in coming quarters.



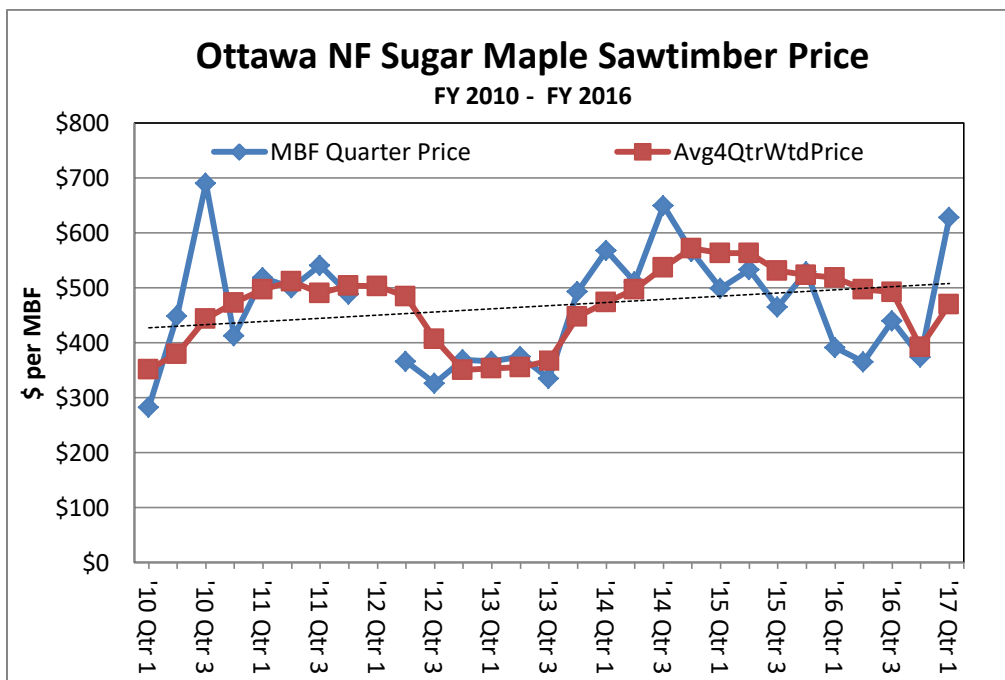
The hardwood-other sawtimber sale volume dropped from 846 to 514 mbf in the 1<sup>st</sup> quarter. It reached a record 2.2mmbf level in the 4<sup>th</sup> quarter of FY 2015. This level was achieved after being at only a 146mbf level in the previous quarter. The sale volume trend has been sharply increasing over the past six years, but sales have been erratic from one quarter to the next. There had been a fairly consistent seasonal pattern with distinctive, higher-volume peaks in the 4<sup>th</sup> quarter of most years and lower volumes otherwise, but that did not occur in FY 2016. Also, while the drop was fairly sharp in the most recent 1<sup>st</sup> quarter, it was not as large of a drop as in most past years' 1<sup>st</sup> quarters.



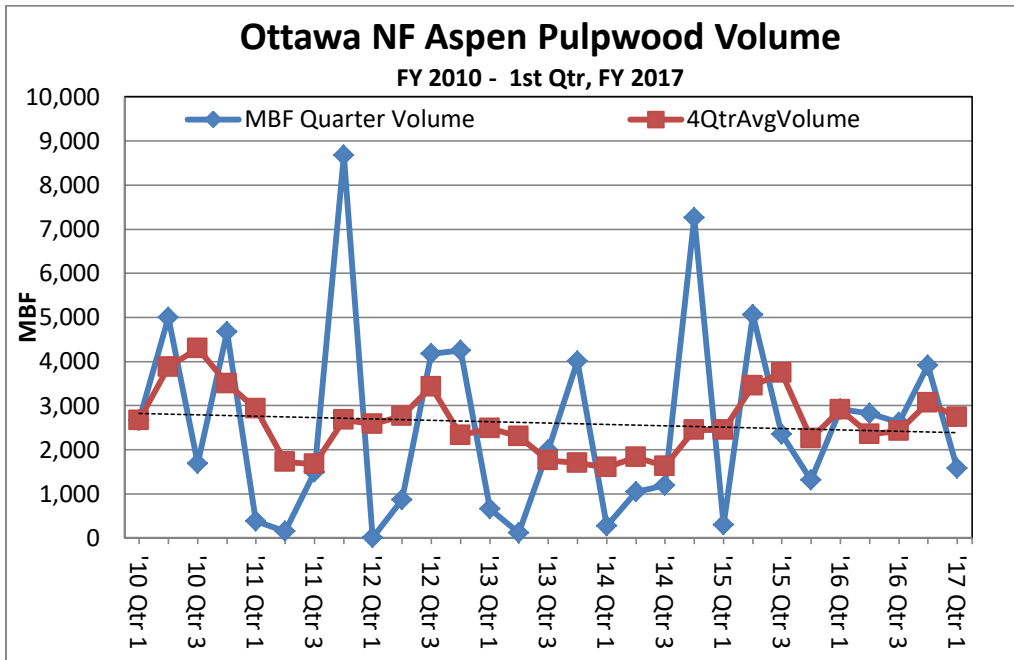
After three quarters with little change, the hardwood-other sawtimber prices shot up in the 1<sup>st</sup> quarter, from \$157 to \$276 per mbf. They had been close to \$200 per mbf in late FY 2015. They were at a record high of almost \$320 mbf in the 3<sup>rd</sup> quarter of FY 2014 before dropping sharply to \$166 in the following quarter. Overall, there has been a modestly increasing price trend line for the past six years.



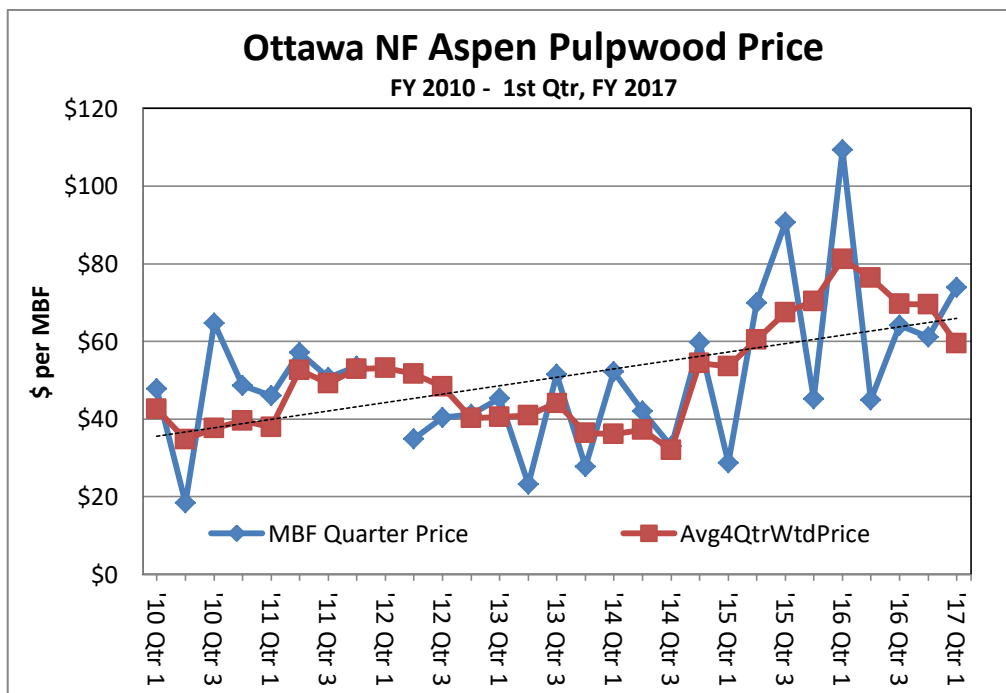
The 1<sup>st</sup> quarter Ottawa sugar maple sawtimber sale volume was little changed, going from 1.1 to 1.05mmbf. Sugar maple sawtimber sale volumes hit a six-year record of 3.1mmbf in the 4<sup>th</sup> quarter of FY 2015, before falling back to 290mbf in the 1<sup>st</sup> quarter of FY 2016. As with most Ottawa timber products, it is not unusual for the 1<sup>st</sup> quarter to have the lowest sale volume and the 4<sup>th</sup> quarter to have the highest volume. However, with the relatively low volumes of the past four quarters, it is not surprising that the 1<sup>st</sup> quarter sales volume broke that pattern. The 6-year sales volume trend is increasing.



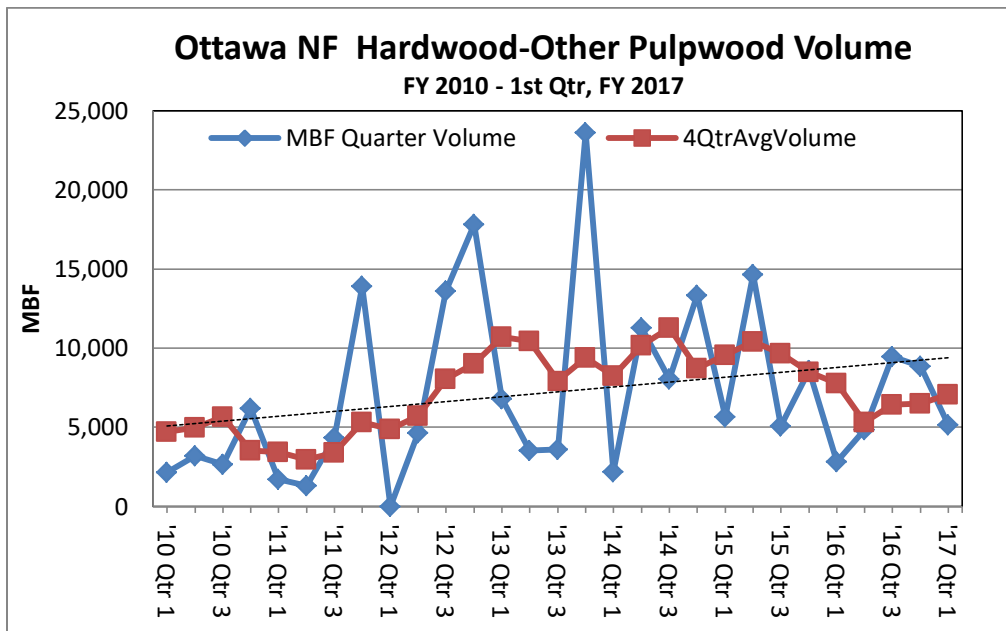
The average sugar maple sawtimber price shot up from \$374 to \$628 per mbf in the 1<sup>st</sup> quarter. It has been at or above this level twice in the past six years: at \$690 back in the 3<sup>rd</sup> quarter of FY 2010 and at \$650 in the 3<sup>rd</sup> quarter of FY 2014. There is a moderately increasing price trend over the past six years despite lower prices in all FY 2016 quarters. With such a sharp rise in price for the 1<sup>st</sup> quarter, it is likely prices will drop off sharply in one or more of the upcoming quarters.



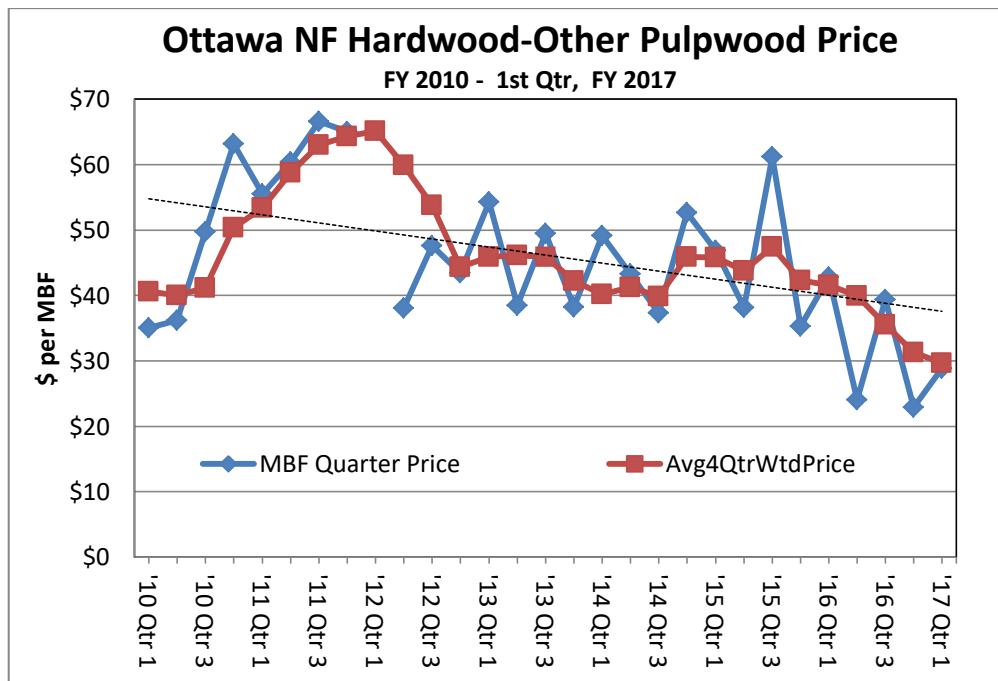
Aspen pulpwood sale volume fell in the 1<sup>st</sup> quarter, from 3.9 to 1.6mmbf. Sale levels were at slightly above average levels for all of FY 2016. Previously, sale volumes had been quite erratic from quarter to quarter, with volumes at the extremes (under 1,000 mbf or over 4,000 mbf) more frequent than sales in the middle range. Sales have been as high as 8.7mmbf in the 4<sup>th</sup> quarter of FY 2011 and 7.3mmbf in the 4<sup>th</sup> quarter of FY 2014. There is a slight downward sale volume trend. Generally aspen pulpwood sales fall off in the 1<sup>st</sup> quarter and it was not surprising they did so in the 1<sup>st</sup> quarter given recent above-average sales. Next (2<sup>nd</sup>) quarter's sales are likely to not change much, but perhaps increase modestly.



The 1<sup>st</sup> quarter aspen pulpwood price rose from \$61 to \$74 per mbf. The 1<sup>st</sup> quarter FY 2016 aspen pulpwood price shot up to a record \$109 per mbf from a previous quarter price of \$45, but the price came right back down to \$45 again in the 2<sup>nd</sup> quarter of FY 2016 before rising again to \$64. With erratic sale volumes and many quarters with low or no volume as a backdrop, the overall price trend for the past six years has been increasing.



Hardwood-Other pulpwood 1<sup>st</sup> quarter sale volume dropped from 8.9 to 5.1mmbf. First quarter sale volumes generally are down substantially from 4<sup>th</sup> quarter volumes, but with smaller swings in sale volumes from quarter to quarter in recent years, the drop in volume for the 1<sup>st</sup> quarter - as expected - was more moderate than in the past. Sale volume was only 2.8mmbf in the 1<sup>st</sup> quarter of FY 2016. It had been 8.6mmbf in the 4<sup>th</sup> quarter of FY 2015. Sale volume hit a record high 23.6mmbf in the 4<sup>th</sup> quarter of FY 2013. Volumes have trended upward and have almost doubled in the past six years, but the trend for the past three years is actually slightly declining.

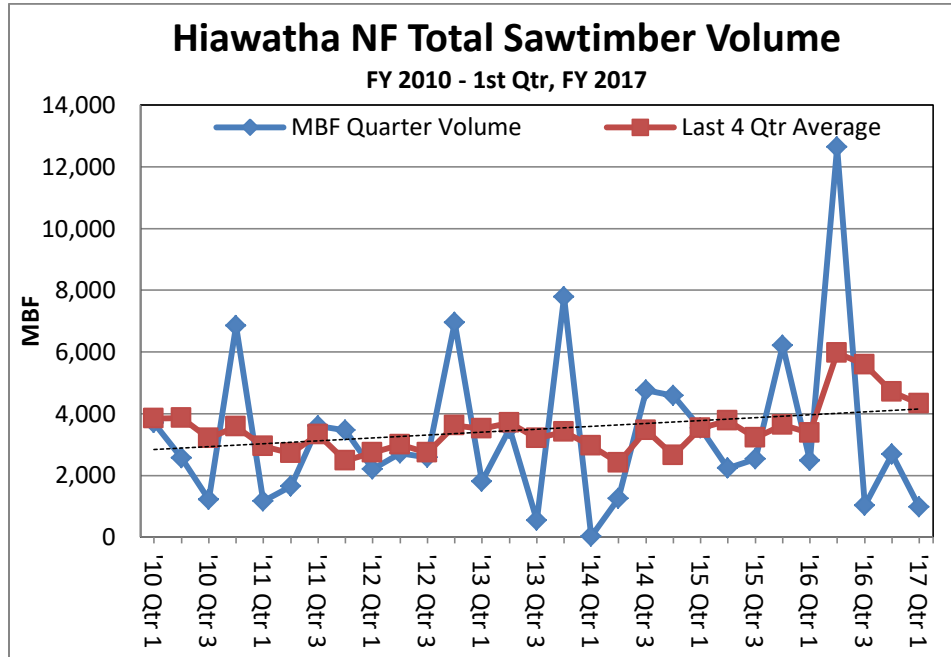


The 1<sup>st</sup> quarter hardwood-other pulpwood price rose from \$23 to \$29 per mbf. In FY 2016, the price had decreased significantly from \$43 to \$24 per mbf in the 2<sup>nd</sup> quarter, then it increased to \$39 before falling to \$23. It was over \$61 per mbf before falling in the 4<sup>th</sup> quarter of FY 2015 to \$35. The product had been selling in a fairly narrow \$38 to \$55 range between FY 2012 and FY 2014. Prices peaked in FY 2011 at over \$65 per mbf. The six-year price trend is declining, particularly influenced by higher prices in FY 2010 and FY 2011 and the low prices in the 2<sup>nd</sup> and 4<sup>th</sup> quarters of FY 2016.

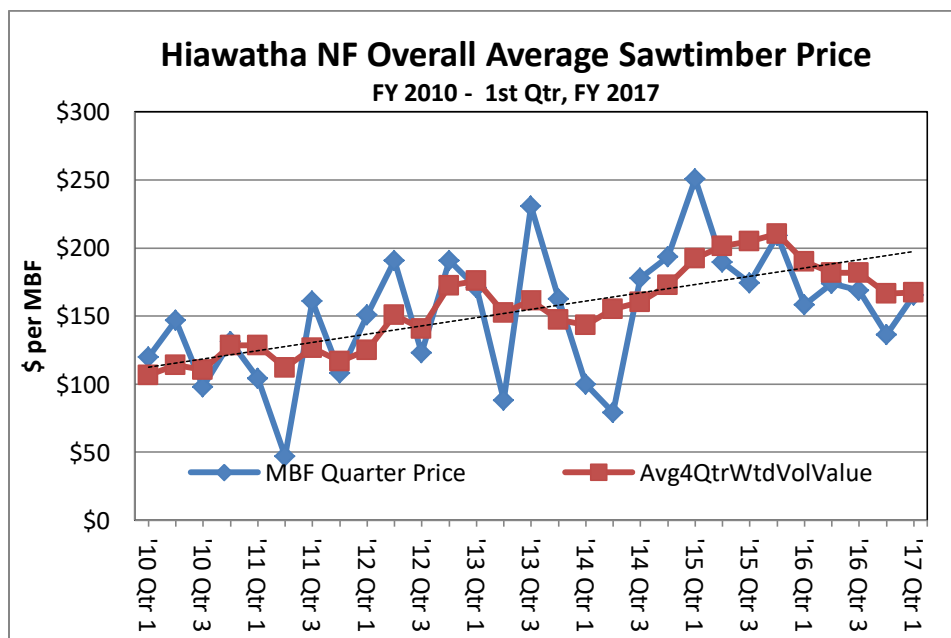
## Hiawatha National Forest Major Species Product Timber Sales, FY 2010 – 1<sup>st</sup> Qtr, 2017

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 1<sup>st</sup> quarter of FY 2017, covering October through December of 2016 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:

<http://www.fs.fed.us/forestmanagement/products/cut-sold/index.shtml>

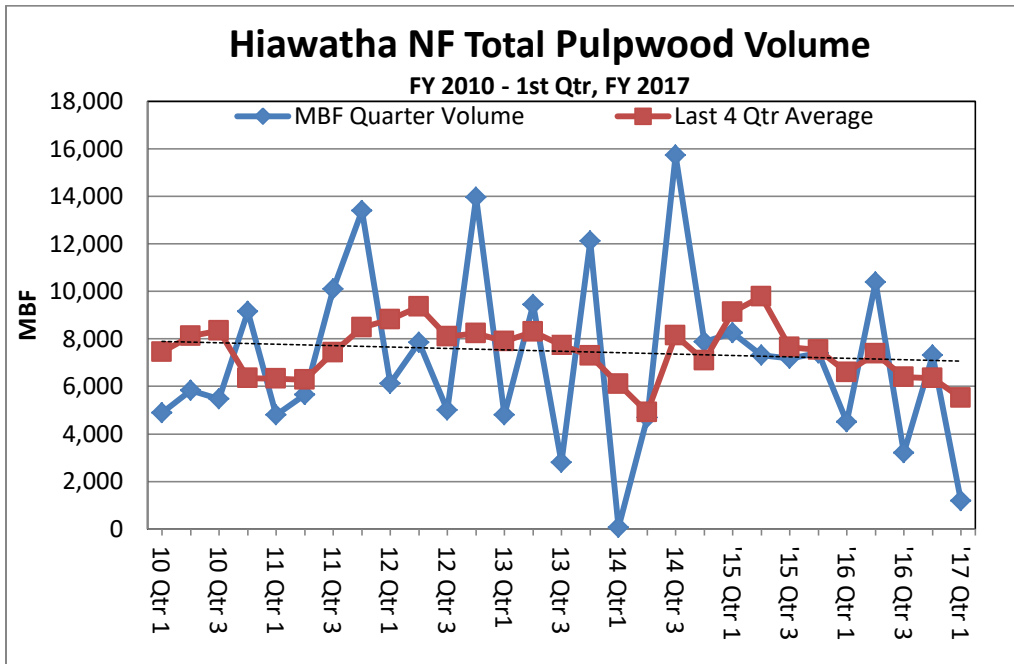


Hiawatha sawtimber sale volume decreased from 2.677 to just .97mmbf in the 1<sup>st</sup> quarter. Sales were at a record 12.6mmbf volume in the 2<sup>nd</sup> quarter of last fiscal year before falling to just 1.025mmbf. The 6-year trend of sawtimber sale volume is slightly increasing, in large part due to that record 2<sup>nd</sup> quarter record volume last year. Sale volumes are likely to increase at least modestly in future quarters.

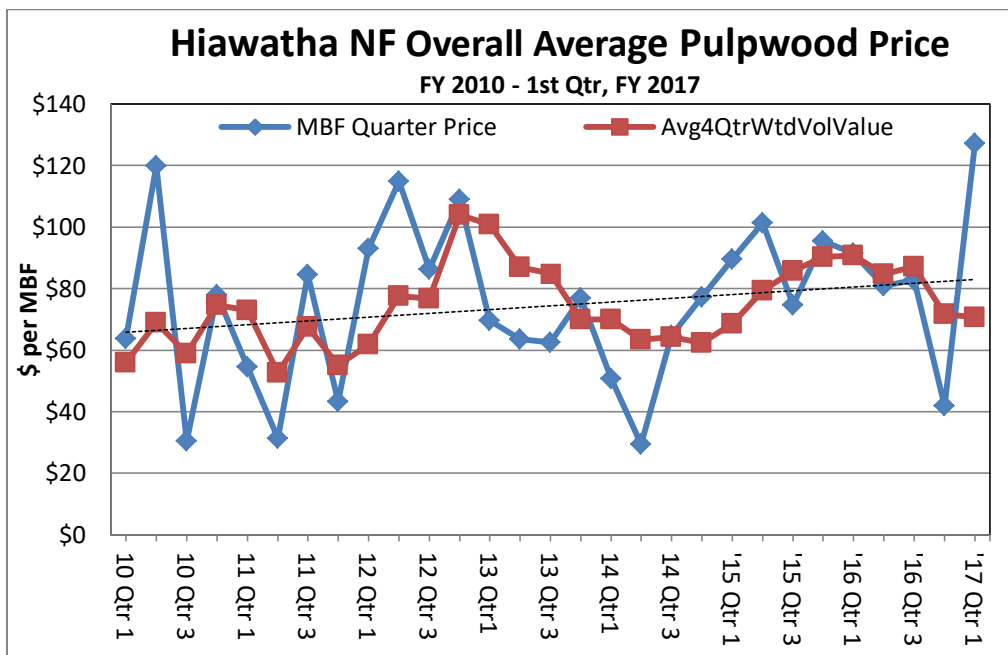


Average Hiawatha sawtimber prices picked up a little, from \$136.25 to \$165.52 per mbf in the 1<sup>st</sup> quarter. They peaked at \$250 in the 1<sup>st</sup> quarter of FY 2015 after which they fell to below \$200 per mbf. They have generally experienced only mild changes for the past eight quarters. The average sawtimber price is strongly influenced by the mix of species and products offered. The six-year price trend has been increasing, with almost a doubling of the nominal price since 2010. The five most recent quarters (FY 2016 quarters) have all been below the 6-year average and trend line.

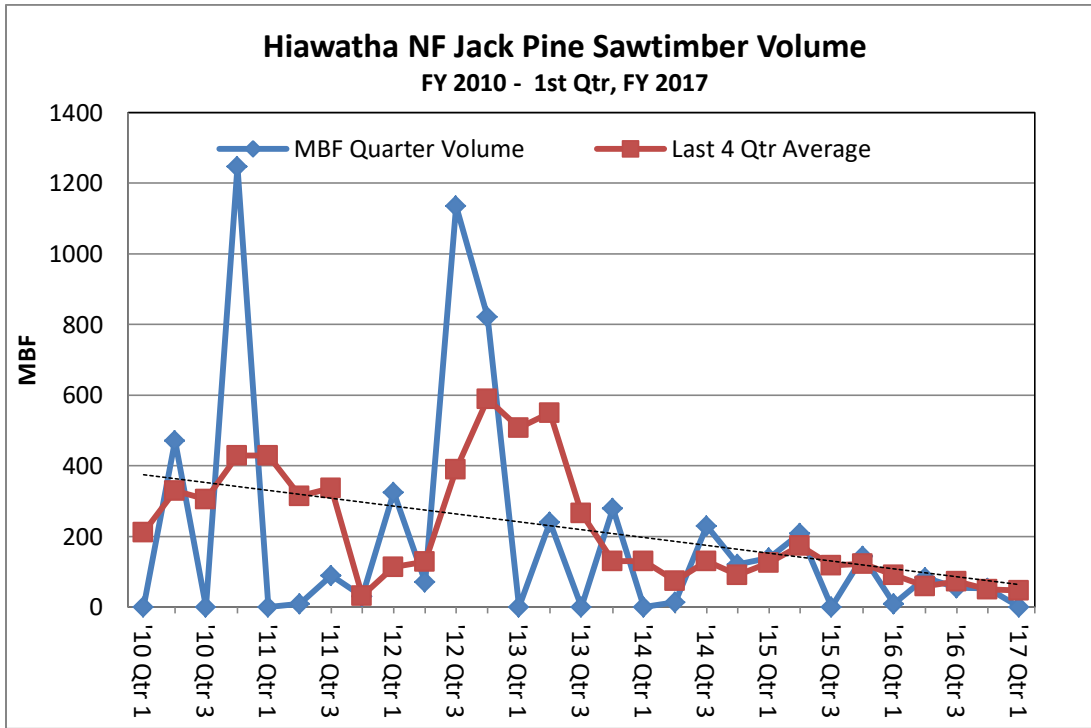




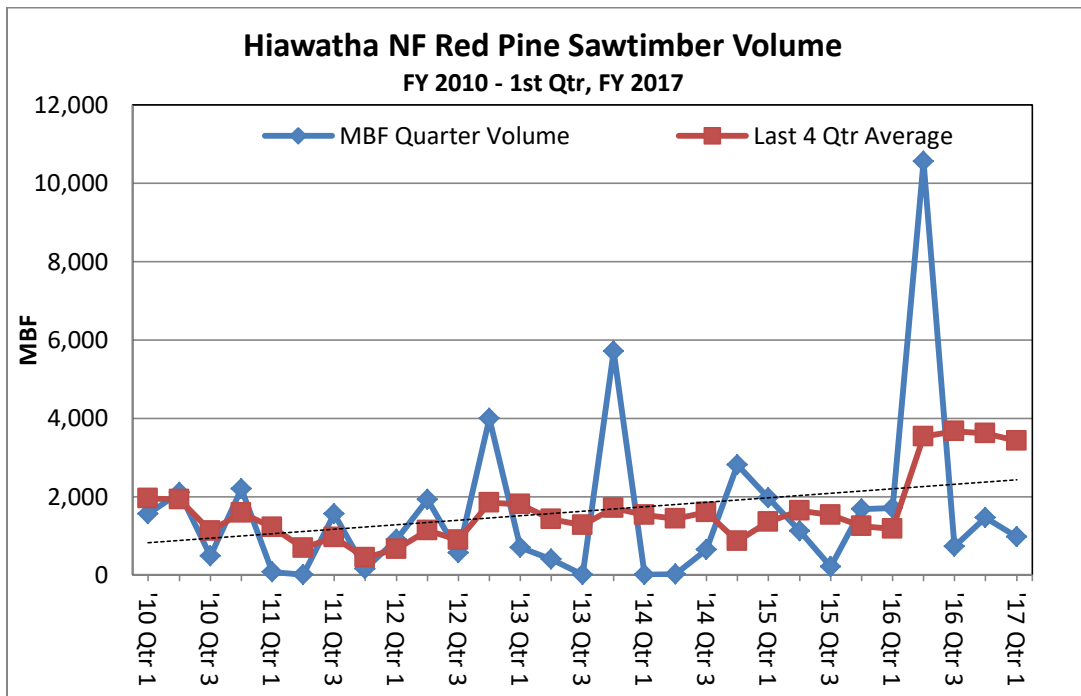
Hiawatha 1<sup>st</sup> quarter pulpwood sale volume fell sharply from 7.3 to 1.2 mmbf. The last four quarters have seen large swings in pulpwood volumes, akin to, but slightly smaller than what was frequently seen from 2011 through 2014. For the past six years, the highest sale volume was 15.73mmbf in the 3<sup>rd</sup> quarter of FY 2014; the most recent quarter is the second lowest volume in the same six years. The six-year quarterly sales trend is slightly falling.



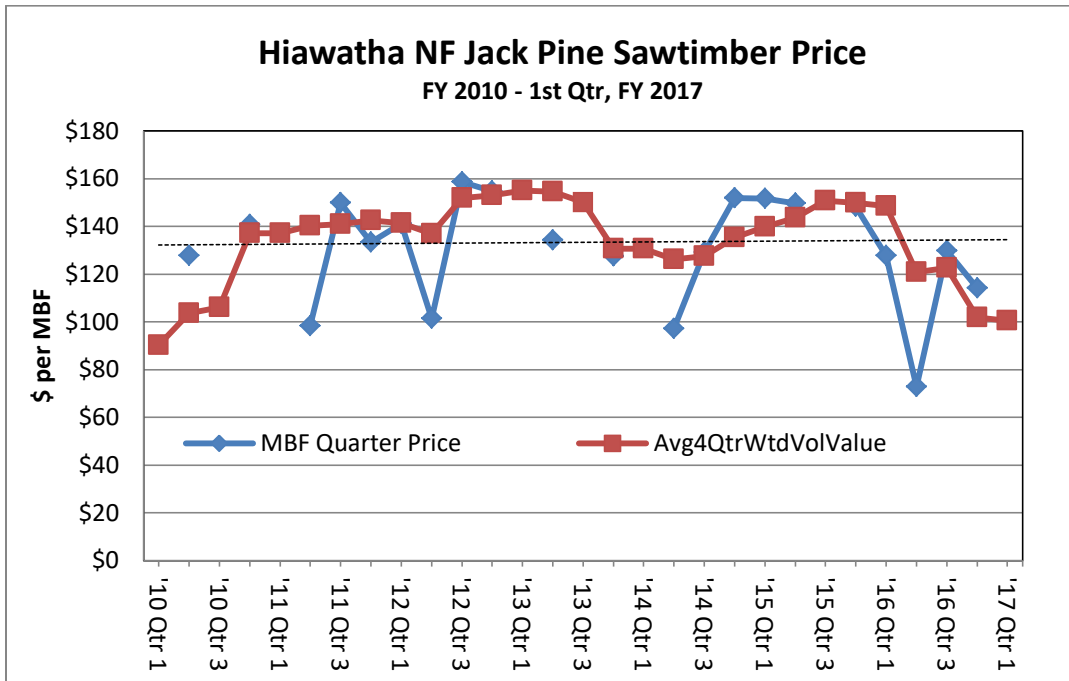
The 1<sup>st</sup> quarter FY 2017 average pulpwood price had the sharpest quarterly rise in price in recent years. It went from a low \$42 to over \$127 per mbf. Prior to last quarter's \$42 average it had been fairly stable in a range between \$75 and \$101 per mbf for eight quarters. It hit a low of under \$30 in the second quarter of FY 2014. The six-year trend line shows a moderately increasing price trend since the beginning of FY 2010. Last quarter it was noted that was relatively safe to assume prices would be higher in coming quarters given the magnitude of the price decline in the 4<sup>th</sup> quarter to \$42. The reverse is now true – that given the magnitude of the 1<sup>st</sup> quarter price increase, it is relatively safe to assume prices will be lower in coming quarters.



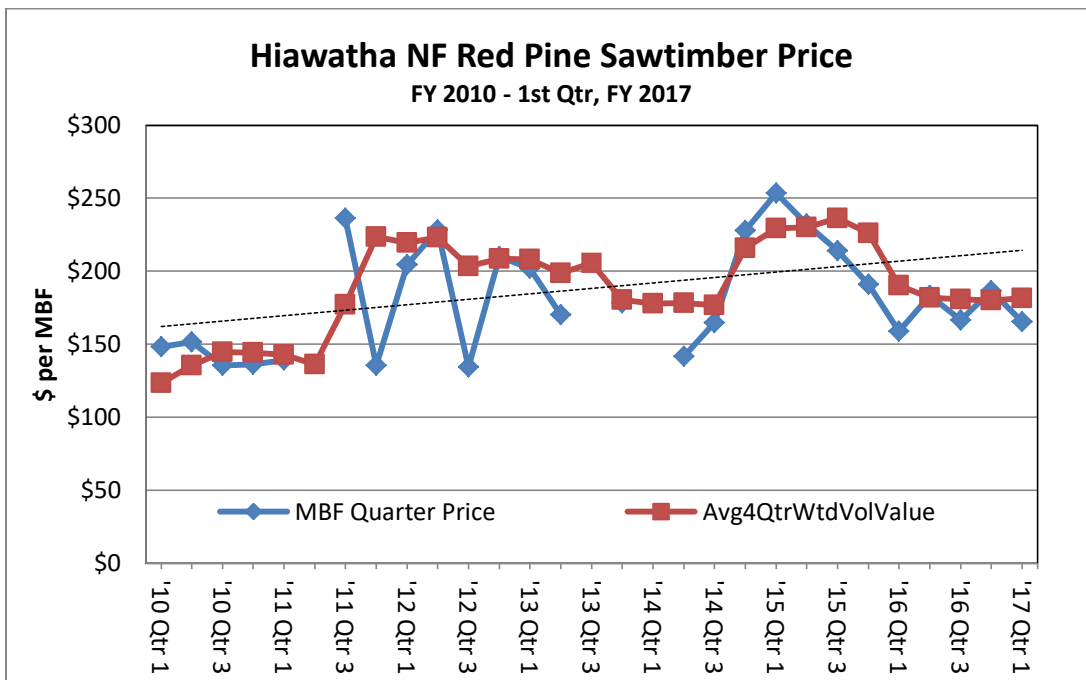
*There is a steep downward sale volume trend for jack pine sawtimber on the Hiawatha. There were no Hiawatha sale volumes of jack pine sawtimber in the most recent (1<sup>st</sup>) quarter. This follows an average of only 50 mbf for the four quarters of FY 2016. Sale volumes have been negligible for over three years. The highest volume sold in the past six years (1.25mmbf) was way back in the 4<sup>th</sup> quarter of FY 2010; sales also exceeded 800mbf twice in 2012. As with jack pine pulpwood, there are almost as many quarters without sales (or only incidental sales less than 10mbf) as there are quarters with sales.*



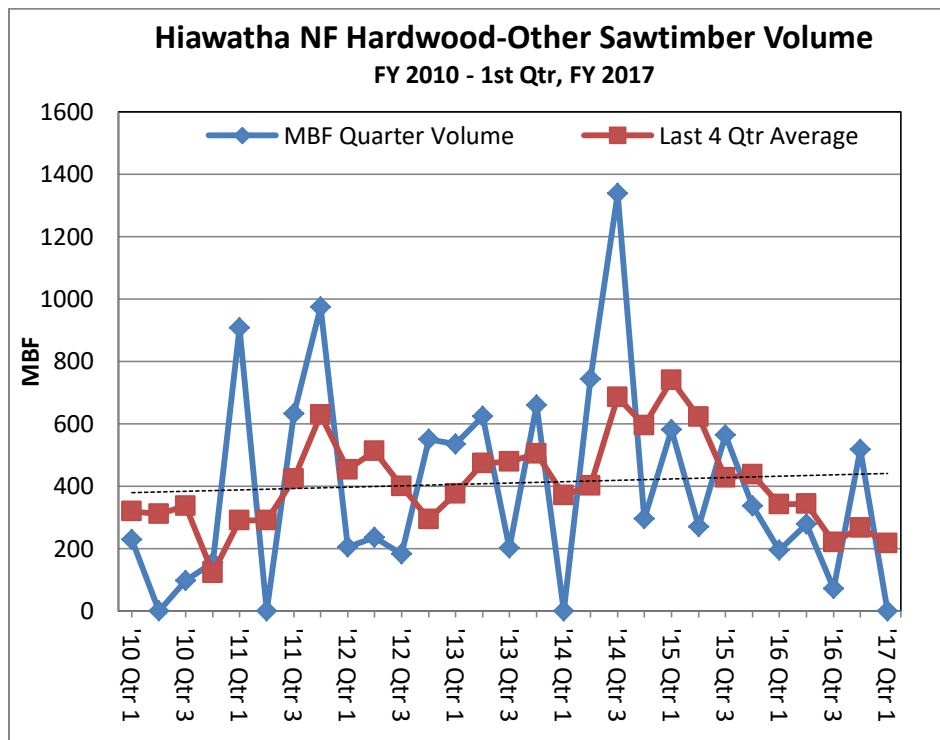
*Hiawatha red pine sawtimber sale volume was little changed in the first quarter, dropping from 1.46 to .97mmbf. It had hit a record level of 10.56mmbf in the 2<sup>nd</sup> quarter of FY 2016. The six-year sale average is 1.6mmbf. While there is an increasing sale trend, without the record volume of last year's 2<sup>nd</sup> quarter, the six-year trend would be flat. Over the past six years, three times as much red pine sawtimber as jack pine sawtimber has been sold on the Hiawatha.*



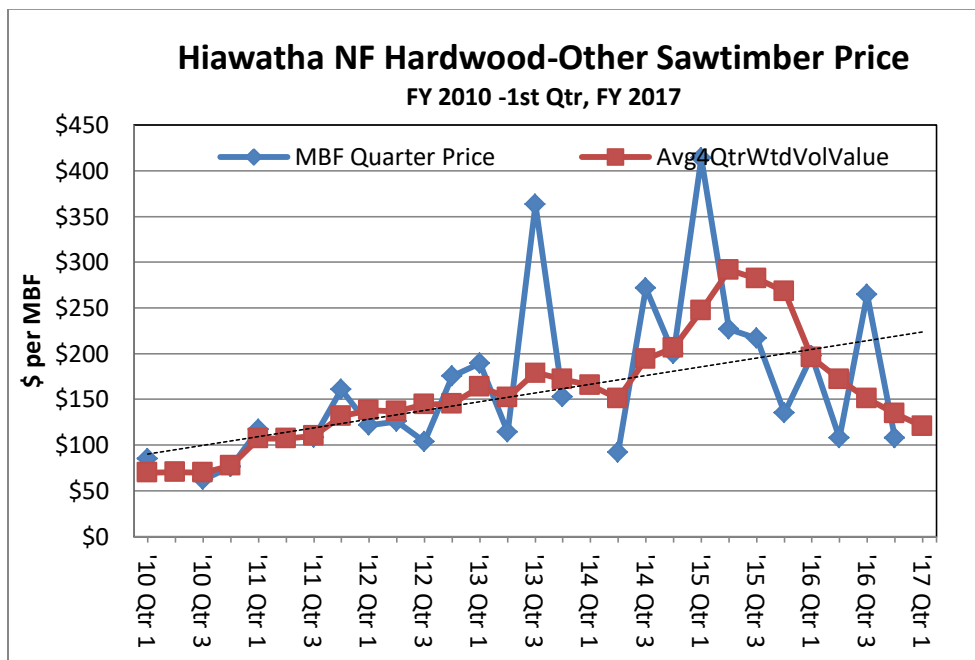
*There is no 1<sup>st</sup> quarter price for jack pine sawtimber as there was no volume sold. The average price for last (4<sup>th</sup>) quarter of FY 2016 was \$114 per mbf. The 4<sup>th</sup> quarter FY 2015 jack pine sawtimber price was \$148 per mbf. Prices have been based upon negligible volumes sold for the past three years. There is a moderate increasing price trend over the past six years, but this price trend is based upon many quarters with negligible or no sales.*



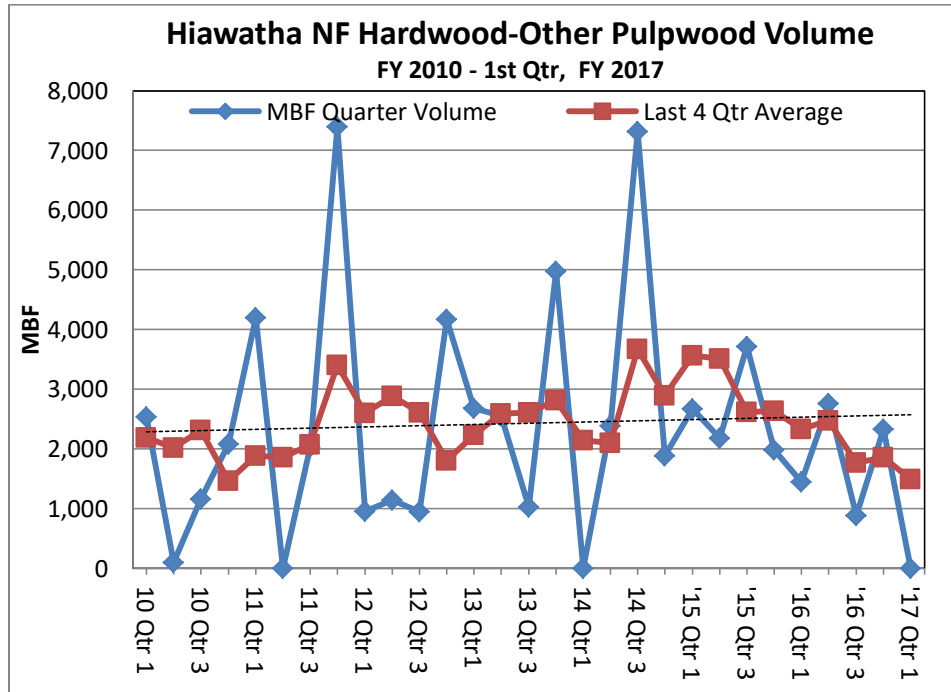
*The red pine sawtimber price fell from \$186 to \$166 per mbf in the 1<sup>st</sup> quarter. The price reached \$253 per mbf in the 1<sup>st</sup> quarter of FY 2015, its highest level in years, before declining for four straight quarters. It has subsequently bounced back and forth for five quarters between \$158 and \$188. The overall six-year price trend has been moderately increasing. The 1<sup>st</sup> quarter of FY 2017 was expected to see little price change, but if anything, a price increase was expected to be more in line with the six-year trend line. Standard economic theory associates reduced supplies with higher prices. However, sometimes a lack of sale volume offered can be associated with a lack of interest and lower bids in contrast to those situations where higher volumes are offered and greater interest leads to the bidding up of prices.*



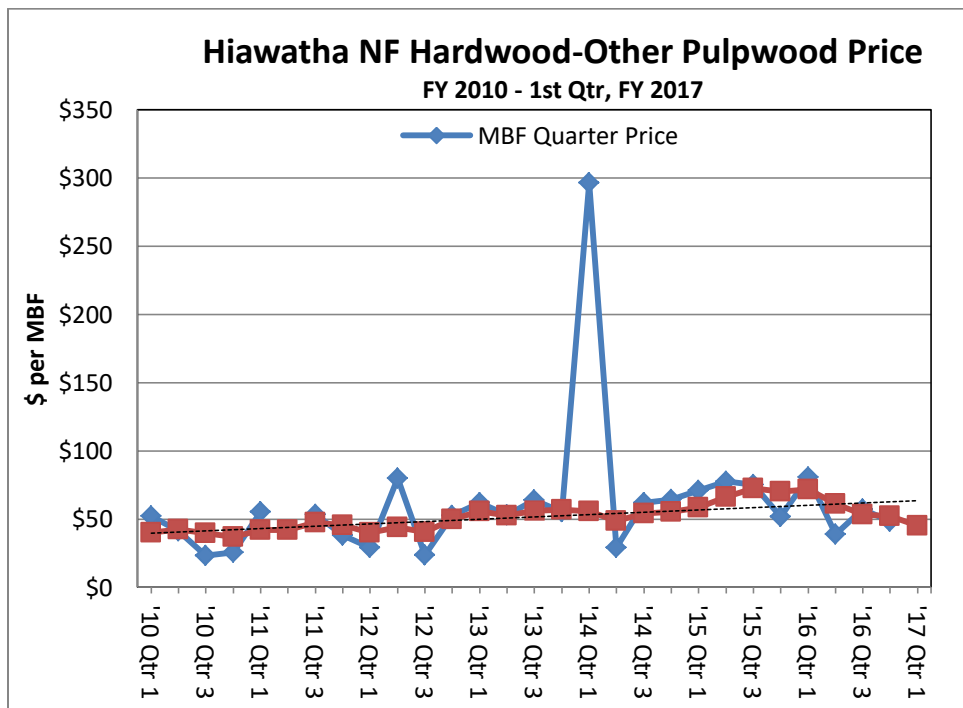
There were no sales of Hiawatha’s “hardwood-other” sawtimber in the 1<sup>st</sup> quarter. Sale volume was at 517mbf in the previous (4<sup>th</sup>) quarter. Quarterly sale volume reached a six-year record level of 1.3mmbf in the 3<sup>rd</sup> quarter of FY 2014 after which they had largely been on a downward decline until the 4<sup>th</sup> quarter. There is a modestly increasing six-year sale volume trend, but this is strongly influenced by the high 2<sup>nd</sup> and 3<sup>rd</sup> quarter sale volumes of FY 2014; without these the trend would be flat or declining.



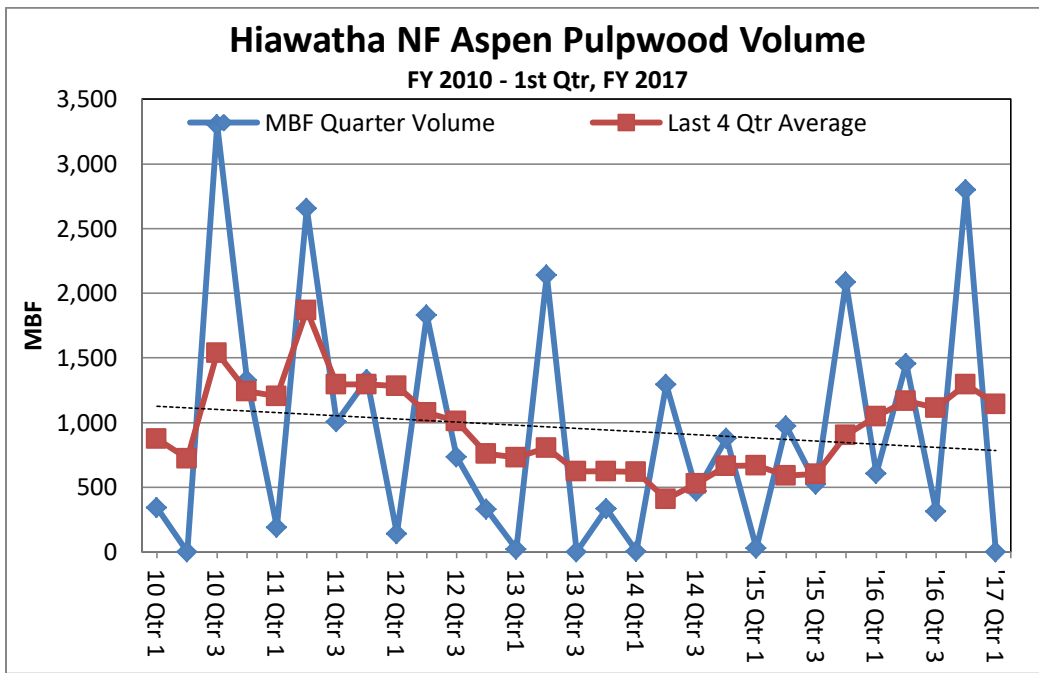
There was no 1<sup>st</sup> quarter “hardwood-other” sawtimber price as there were no sales of it during the quarter. Despite some relatively low prices in recent quarters, the quarterly price trend has risen fairly steeply over the past six years, from under \$70 to about \$225 per mbf. Recent quarterly prices have largely been below the six-year trend line and future quarters are expected to predominantly have price increases.



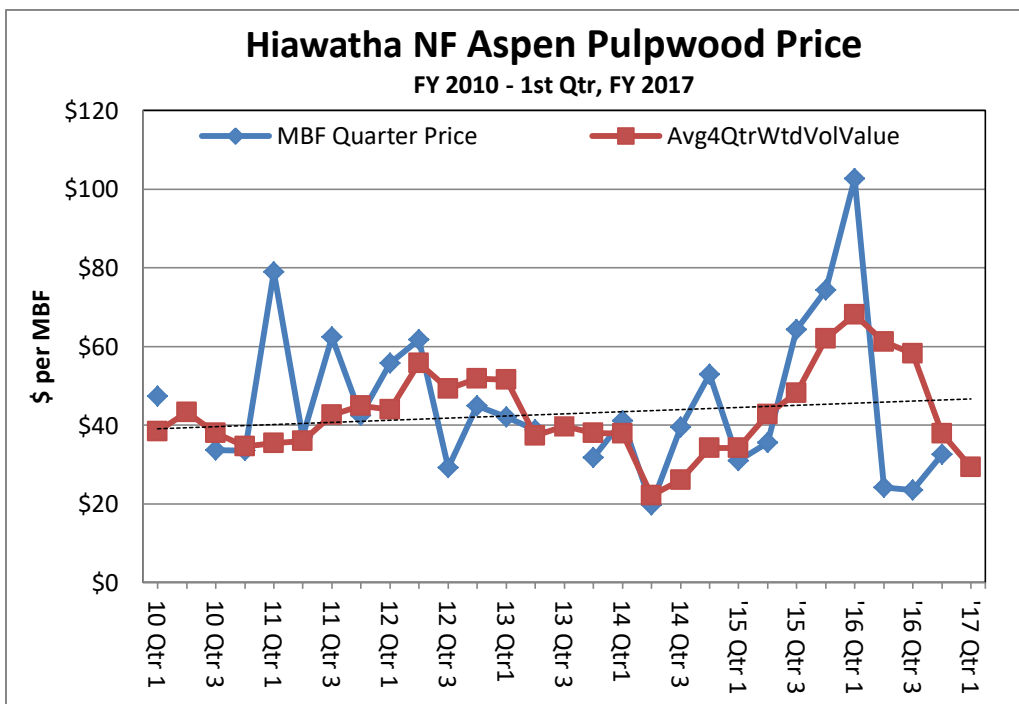
*There was no hardwood-other pulpwood sale volume in the 1<sup>st</sup> quarter. Sale volumes have been close to 7.5mmbf twice in the last six years, but volumes have exceeded 3mmbf only once in the last ten quarters. There is a very slight increasing sale volume trend over the past six years, but this is disappearing due to largely lower sales in the last ten quarters. The erratic nature of earlier sale volumes from quarter-to-quarter appears to be moderating, although the drop off to no sales in the most recent quarter was quite steep.*



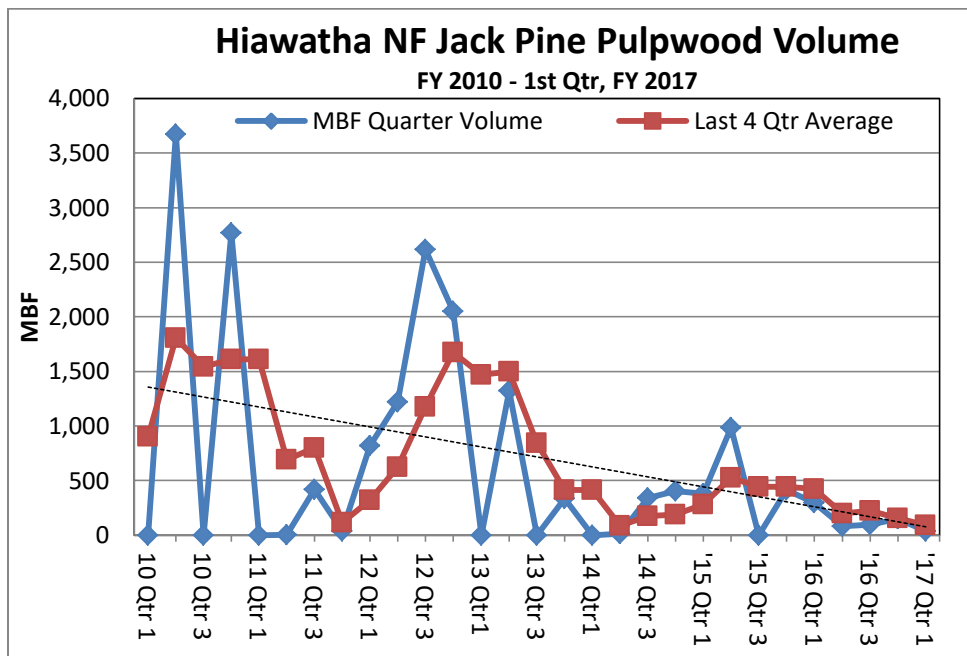
*With no sale volume, there was no price for “hardwood-other” pulpwood in the 1<sup>st</sup> quarter. Prices had fallen from \$57 to \$48 per mbf in the 4<sup>th</sup> quarter. Prices had risen gradually from \$29 in the 2<sup>nd</sup> quarter of FY 2014 before dropping back down to \$52 in the 4<sup>th</sup> quarter of FY 2015. The 1<sup>st</sup> quarter FY 2014 price is an anomaly or error. Other than this major exception and a few minor ones, the price has fluctuated in a fairly narrow range around \$50 over the past six years. There has been a very modest increasing price trend for the period.*



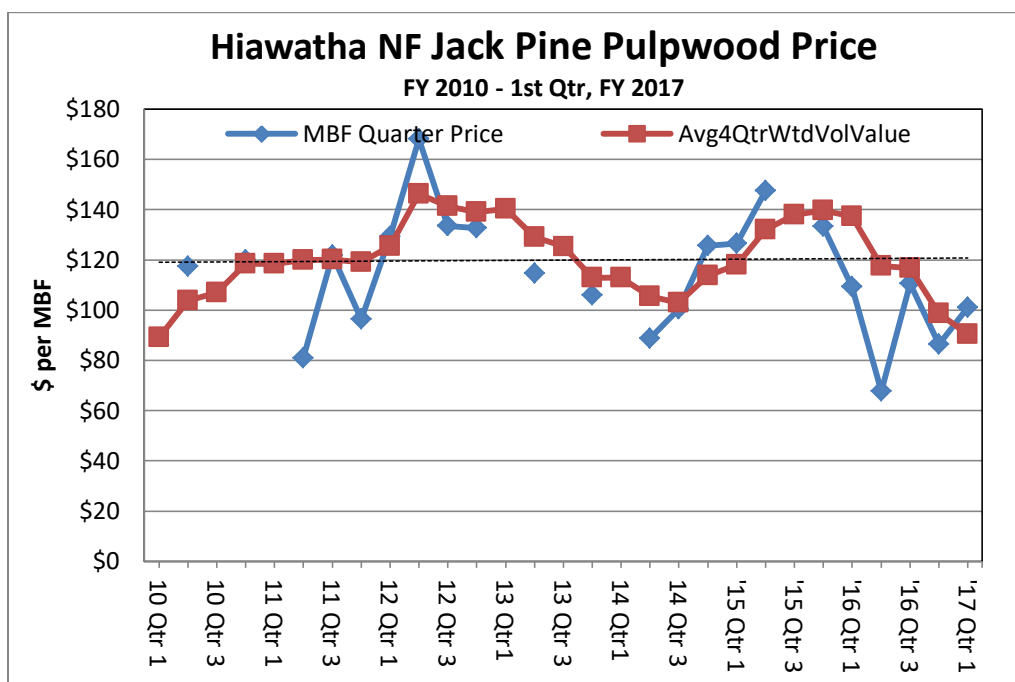
*There were no sales of aspen pulpwood in the 1<sup>st</sup> quarter. It had shot up to 2.8mmbf in the 4<sup>th</sup> quarter of FY 2016. Similarly, it was at 2.1mmbf in the 4<sup>th</sup> quarter of FY 2015 before dropping to 695mbf the next quarter. Aspen pulpwood sale volumes have been erratic; often there has been low or no sales in the 1<sup>st</sup> quarter of every fiscal year, followed by higher sales in the 2<sup>nd</sup> quarter. There also has been a downward sale volume trend over the past six years. Next quarter's sale volume can only go up!*



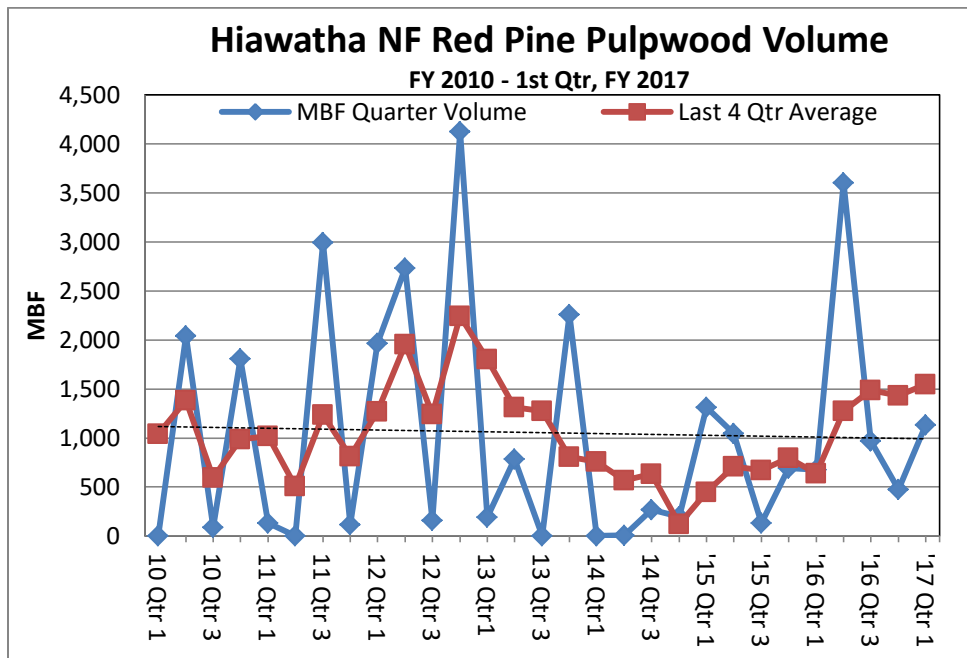
*With no sale volume, there is no 1<sup>st</sup> quarter price for aspen pulpwood. Last quarter's (4<sup>th</sup> quarter, FY 2016) price blipped up to \$32.65 per mbf after being close to \$24 for two quarters. It had hit a record \$103 per mbf price in the 1<sup>st</sup> quarter of FY 2016. The subsequent sharp drop in prices was not surprising, but it was steeper than expected. Additional increases in coming quarters – when there are sales! - can be expected.*



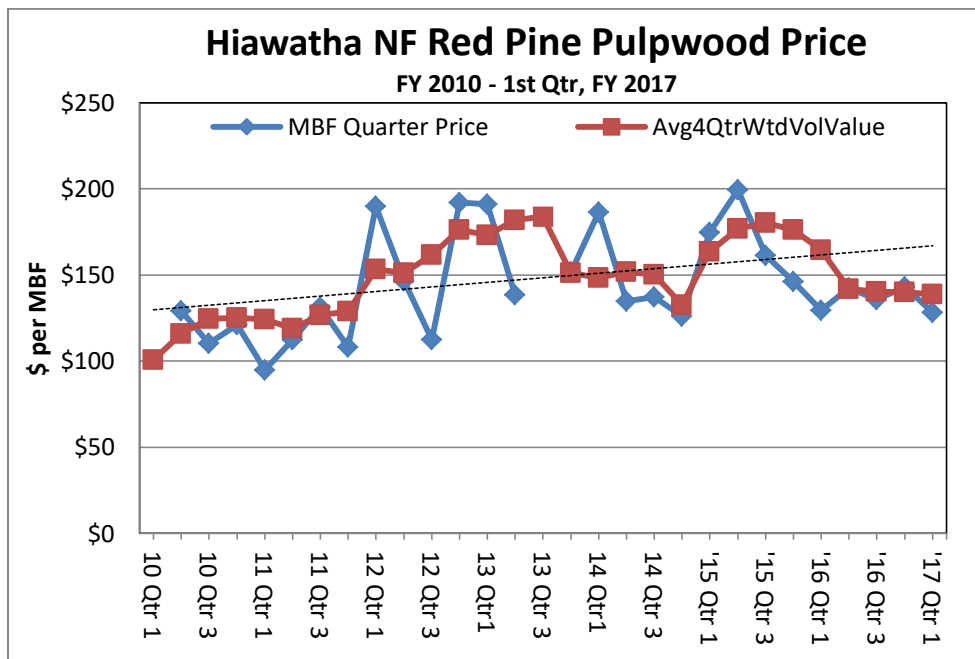
As can be seen in the graph, jack pine has had a diminishing - almost disappearing - role in Hiawatha timber sales. Jack pine pulpwood sales have been consistently at a very low level throughout FY 2016 and the 1<sup>st</sup> quarter of FY 2017. Sales were only 297mbf in the 1<sup>st</sup> quarter of FY 2016, followed by 80mbf in the 2<sup>nd</sup> quarter, 98mbf in the 3<sup>rd</sup> quarter, 149mbf in the 4<sup>th</sup> quarter, and now 39mbf in the 1<sup>st</sup> quarter of FY 2017. Quarterly sales have been below 500mbf for over three years except for the 2nd quarter of FY 2015 when they reached 985mbf. Sales in some upcoming quarter might exceed 1,000mbf; however, most quarters are likely to continue to have very negligible or no volumes.



The jack pine pulpwood price for the 1<sup>st</sup> quarter was \$101 per mbf, but like all the quarters in FY 2016, it is based upon very little volume. Two years ago, prices for several quarters exceeded \$120 per mbf, including the 2<sup>nd</sup> quarter FY 2015 jack pine pulpwood price which reached \$146 per mbf. The six-year price trend shown above (sitting on top of the \$120 price line) is essentially flat, but there really is not much of a basis for a trend line as there are about as many quarters without sales of jack pine as there have been quarters with sales over the past six years.



Red pine pulpwood sale volume rose from .5mmbf to over 1.1mmbf in the 1<sup>st</sup> quarter of FY 2017. It reached 3.6mmbf in the 2<sup>nd</sup> quarter last year, but that quarter's volume is an outlier in comparison to other quarterly sales in the past three years. The high FY 2016 2<sup>nd</sup> quarter volume did not reverse a slightly declining six-year volume trend. Although the declining sale volume trend is not nearly as steep as jack pine pulpwood's, it does portend limited volumes (under 1mmbf) are likely in most future quarters

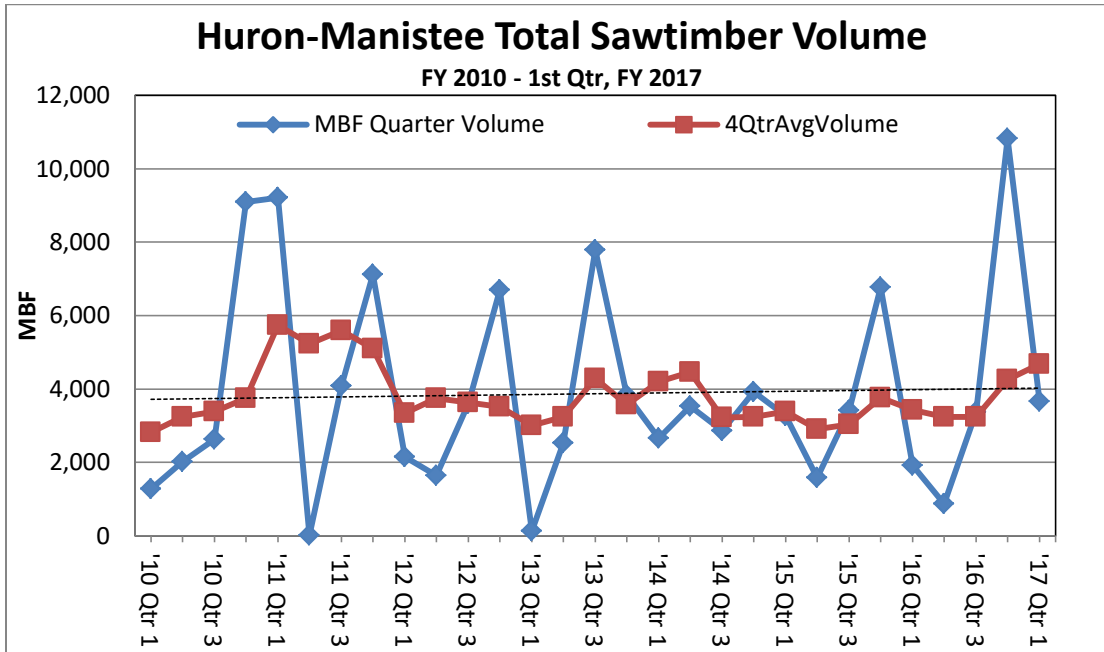


The 1<sup>st</sup> quarter red pine pulpwood price mildly decreased from \$143 to \$128 per mbf. The price has been quite stable now for six quarters, fluctuating between \$128 and \$146. It had gone from \$175 to \$200 per mbf between the 1<sup>st</sup> and 2<sup>nd</sup> quarters of FY 2015 before beginning a descent. Overall, prices have been on an upward trend over the past six years. However, if FY 2010 and FY 2011 were dropped, the most recent four-year price trend would be flat or slightly declining. It also should be noted that there has been very low or no sale volumes in many quarters over the past six years, which undercuts the significance of the price trend.

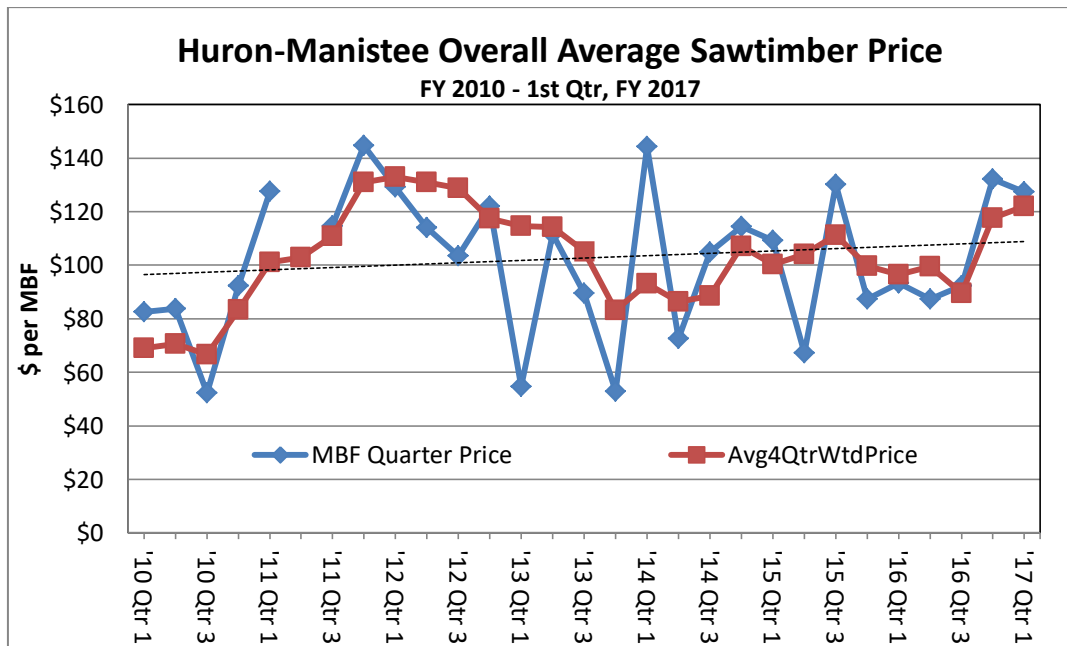


## Huron-Manistee National Forest Major Species Product Timber Sales, FY 2010 – 1<sup>st</sup> Qtr, 2017

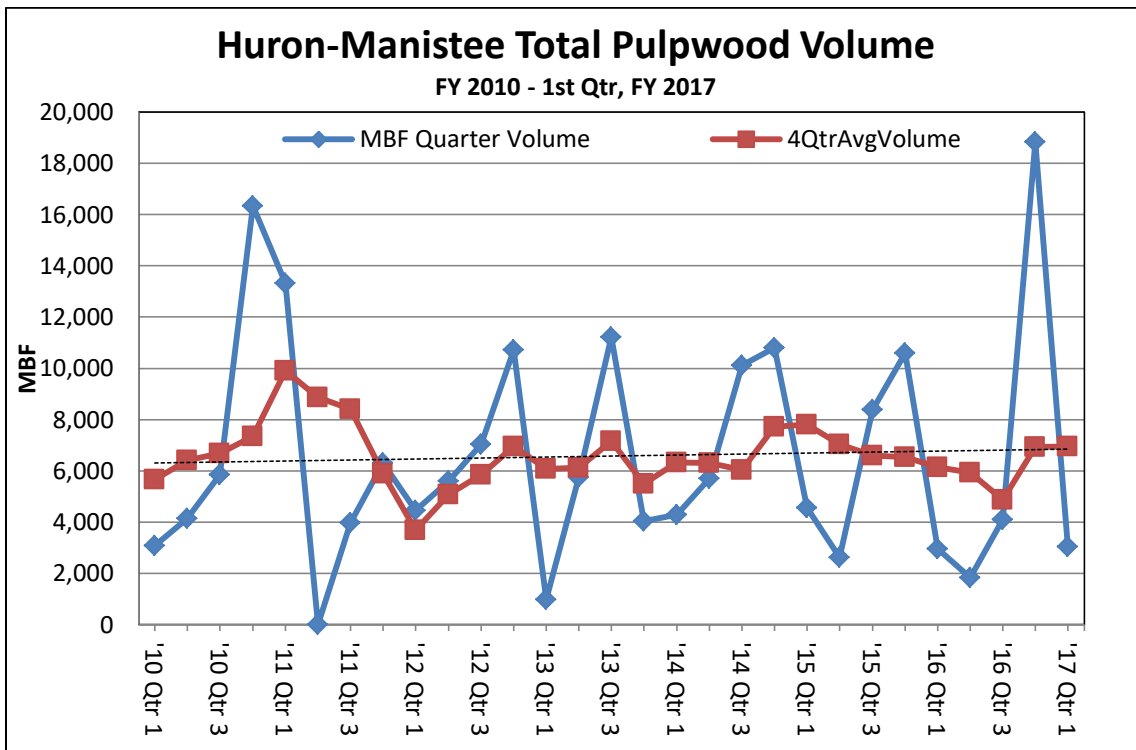
All graphs include a dotted trend line based upon the data set for the average of the last four quarters. Gaps in the blue quarter line indicate no sales in the quarter. The National Forests follow the federal fiscal year from October 1 through September 30. The most recent data included here is for the 1<sup>st</sup> quarter of FY 2017 (October through December, 2016). 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: <http://www.fs.fed.us/forestmanagement/products/cut-sold/index.shtml>



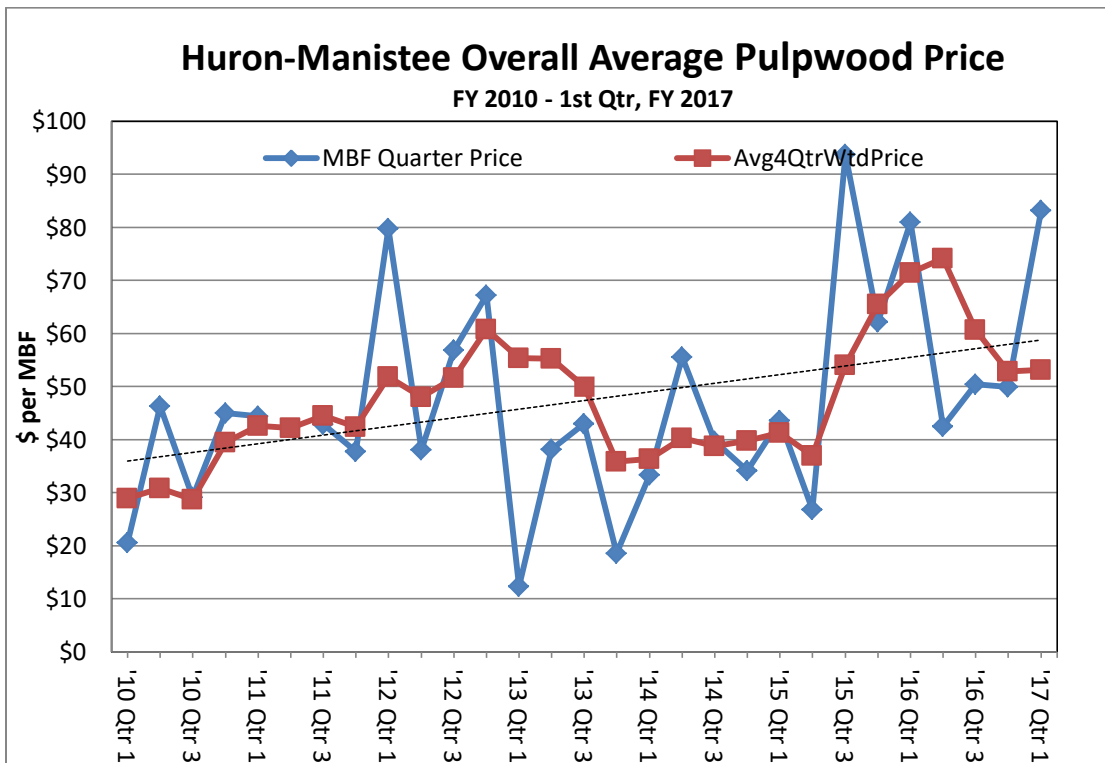
The Huron-Manistee (H-M) sawtimber sale volume rose from 3.375mmbf to a record 10.83mmbf in the 4<sup>th</sup> quarter of FY 2016 and then fell back to 3.65mmbf in the 1<sup>st</sup> quarter of FY 2017. There is a slight upward six-year trend. H-M sawtimber sale volume tends to peak in the fourth quarter and be lower in the 1<sup>st</sup> and 2<sup>nd</sup> quarters.



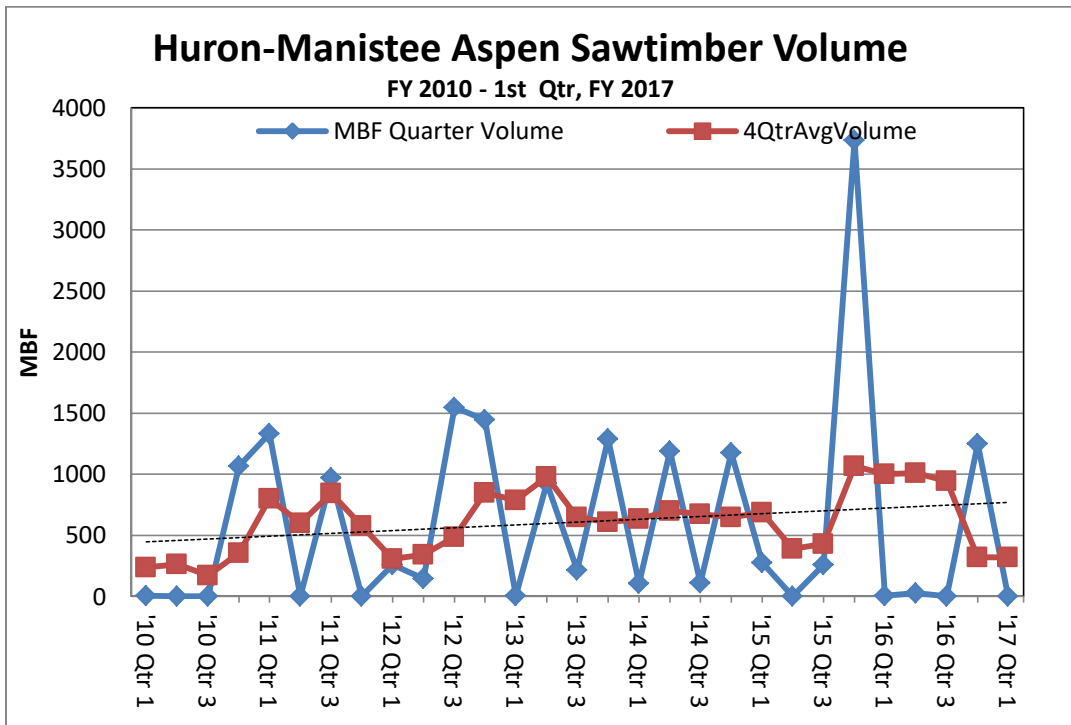
The overall average sawtimber price dipped in the 1<sup>st</sup> quarter, from \$132 to \$127 per mbf. The price was expected to fall more than that. Until the 4<sup>th</sup> quarter of FY 2016, prices had been relatively stable for four quarters. Sawtimber prices are greatly influenced by the mix of species and quality of products sold. Generally, red pine accounts for over half of the H-M sawtimber sale volume and it is the major influence on the overall average sawtimber price. It accounted for almost 90% of the volume in the 1<sup>st</sup> quarter - which is in part why the overall sawtimber price did not fall further.



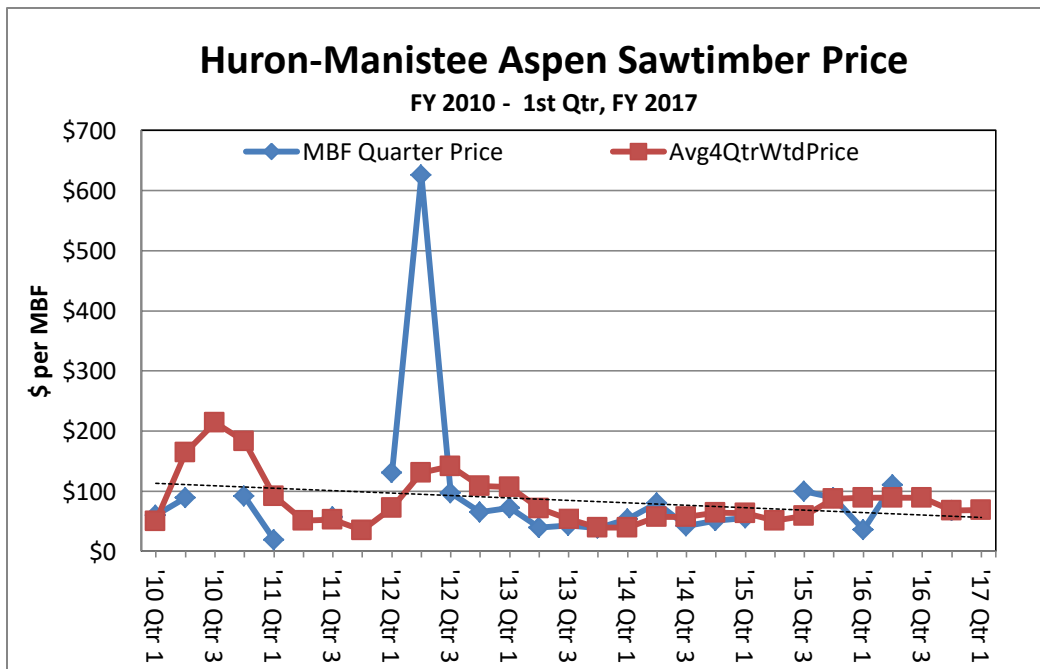
The 1<sup>st</sup> quarter H-M pulpwood sale volume fell dramatically – even more than the sawtimber volume, from a record 18.84mmbf to only 3.0mmbf. A sharp increase in the 4<sup>th</sup> quarter was expected due to the relatively low sales in the prior three quarters and a pattern of higher 4<sup>th</sup> quarter sales. A “dramatic drop” in sales for the 1<sup>st</sup> quarter was also expected. The six-year sale volume trend is still slightly increasing. Next (2<sup>nd</sup>) quarter volumes are likely to increase modestly.



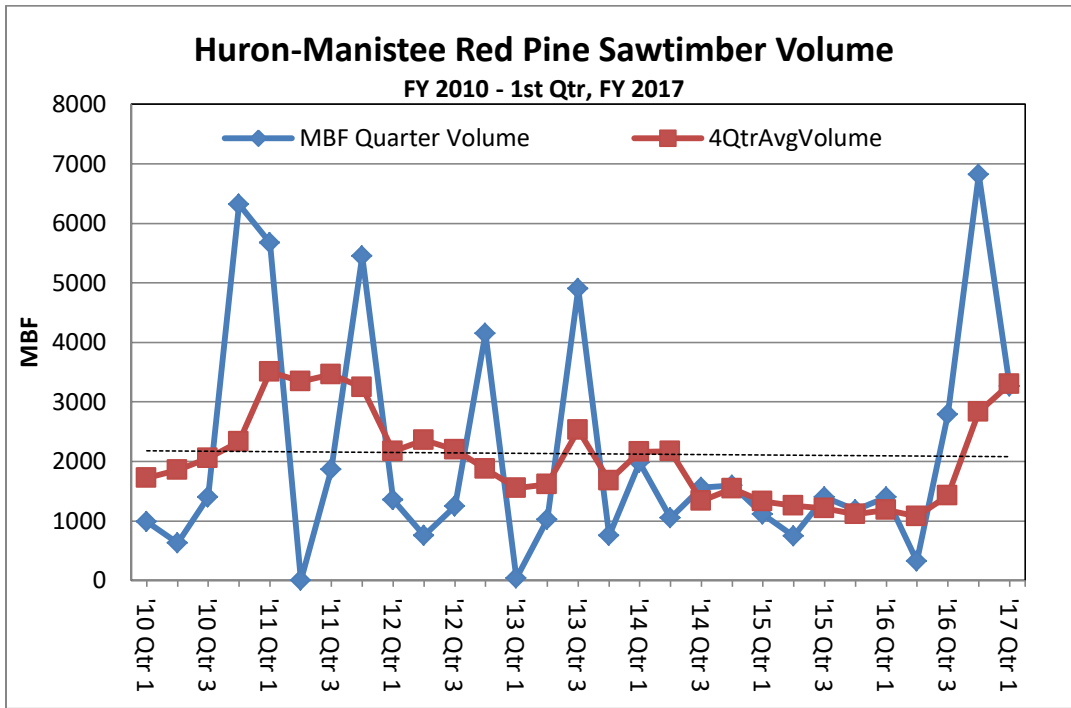
Pulpwood prices were expected to rise in the 4<sup>th</sup> quarter, but somewhat unexpectedly, significant increases were delayed until the 1<sup>st</sup> quarter. The overall average pulpwood price in the 1<sup>st</sup> quarter shot up from \$49.87 to \$83.21 per mbf. This reinforces a six-year upward trend in average H-M pulpwood prices. Next quarter’s prices are likely to moderate somewhat. H-M prices do not have as distinctive quarterly patterns and are not as seasonally predictable as the Ottawa’s and Hiawatha’s.



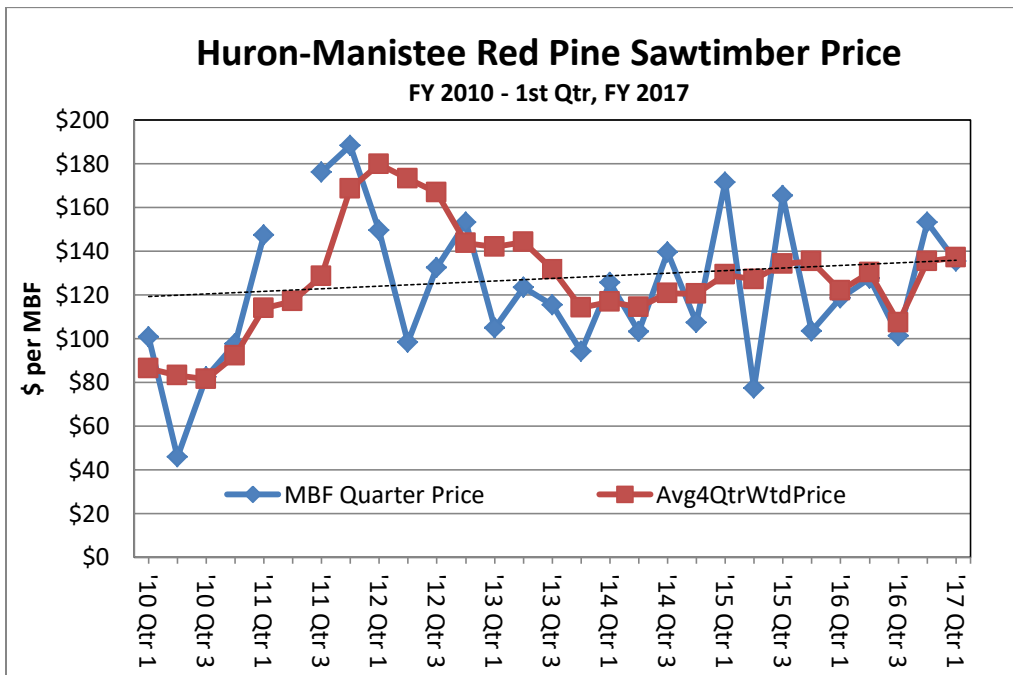
There were no aspen sawtimber sales in the 1<sup>st</sup> quarter. FY 2016 aspen sawtimber sales were only 8mbf in the 1<sup>st</sup> quarter, 27mbf in the 2<sup>nd</sup> quarter, zero in the 3<sup>rd</sup> quarter, and then 1.25mmbf in the 4<sup>th</sup> quarter. FY 2015 saw three quarters of below average sales and then a record 3.74mmbf sale volume in the 4<sup>th</sup> quarter. The six-year average quarterly volume is in the neighborhood of 500mbf. The increasing sale trend over the past six years was reinforced by sale volumes in the 4<sup>th</sup> quarters of FY 2015 and FY 2016. If the recent pattern holds, the next two quarters will also have very low sales.



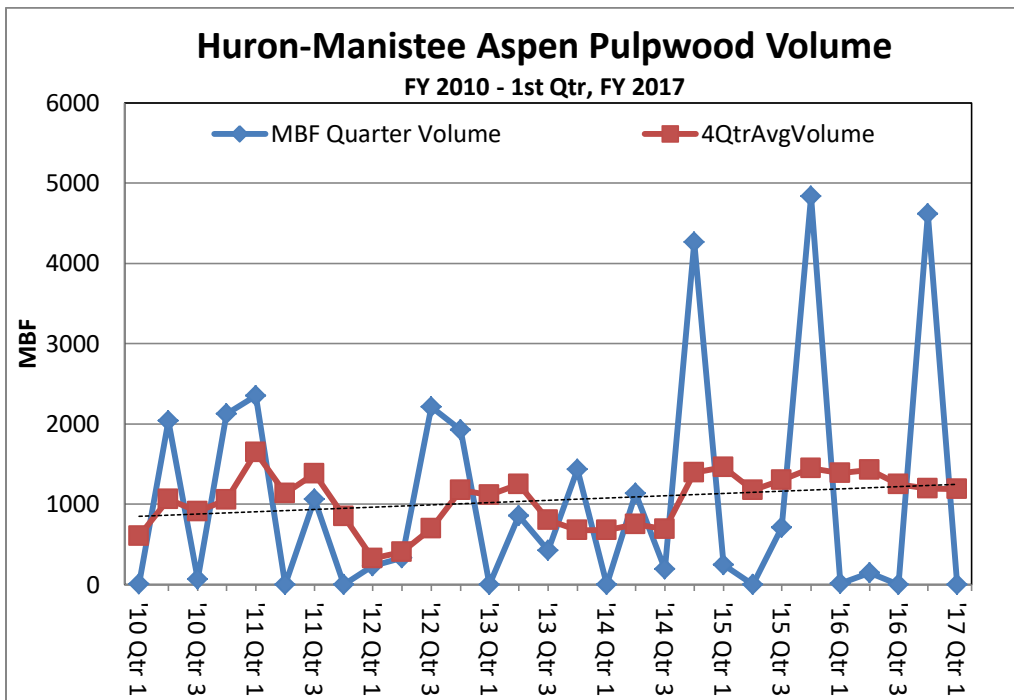
With no sales, there was no aspen sawtimber price in the 1<sup>st</sup> quarter. The 4<sup>th</sup> quarter aspen sawtimber price was \$67.59 per mbf (it is hidden by the red "Avg4QtrWtdPrice" in the above graph). The only other basis for a price is the 4<sup>th</sup> quarter of FY 2015 when the price averaged close to \$89 per mbf.



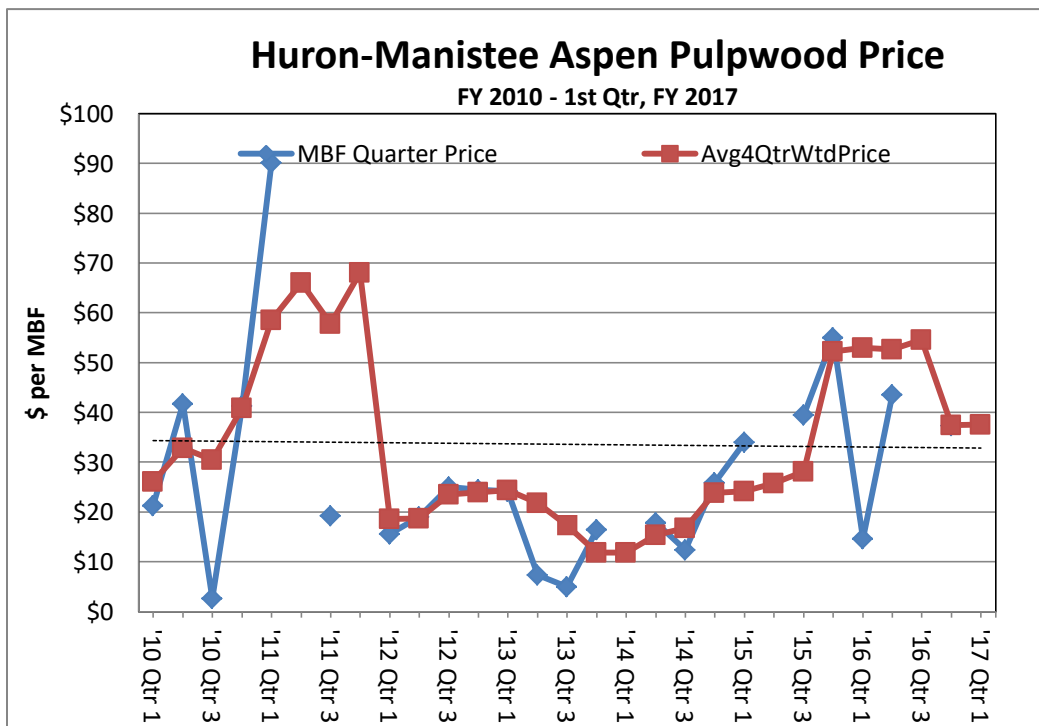
Red pine generally accounts for the majority of the sawtimber volume sold on the Huron-Manistee. Red pine sawtimber volume had been fairly stable for almost three years before it increased sharply to 2.784mmbf in the 3<sup>rd</sup> quarter of FY 2016 and then jumped even more to a record 6.825mmbf the next quarter. It fell to 3.26mmbf in the most recent (1<sup>st</sup>) quarter. These most recent three quarters have eliminated what had been a six-year downward sale volume trend; it is now virtually flat. It would not be surprising to see lower sale volumes in upcoming quarters re-establish a stronger downward trend despite an occasional, isolated jump in quarterly volumes.



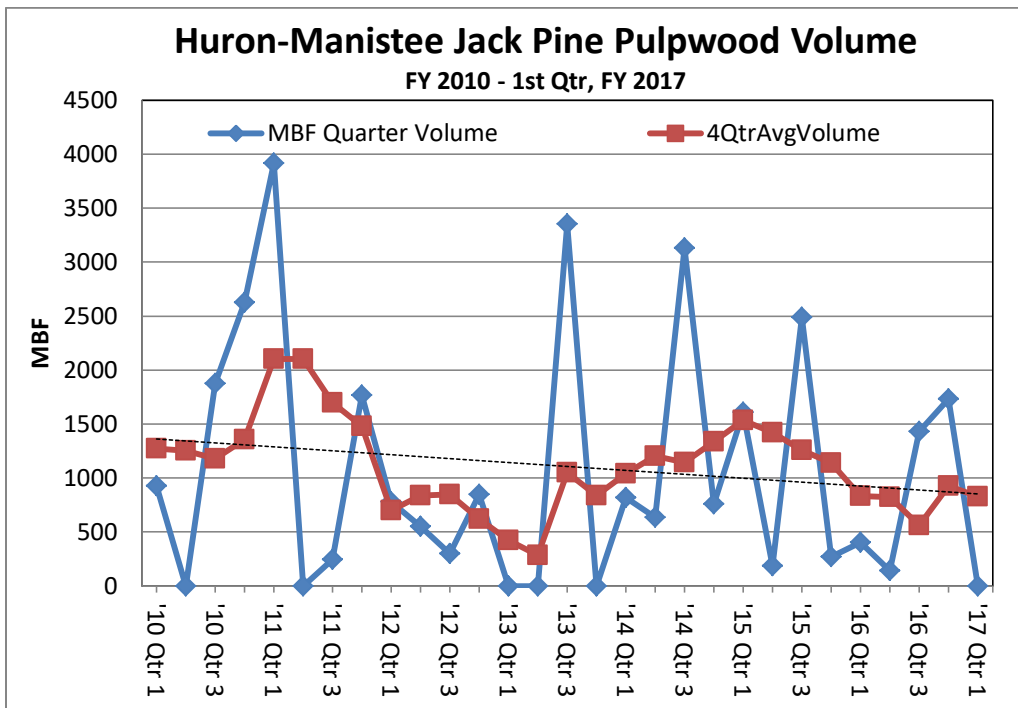
Red pine prices were expected to “retreat” from the 4<sup>th</sup> quarter jump in price to \$153 per mbf - and they did – to \$135 per mbf in the 1<sup>st</sup> quarter. They had large swings in FY 2015, from \$171 in the 1<sup>st</sup> quarter to \$77 in the 2<sup>nd</sup> quarter, back to \$165 in the 3<sup>rd</sup> quarter and then down to \$103 in the 4<sup>th</sup> quarter. There is a slight increasing price trend over the past six years. Prices for the 2<sup>nd</sup> quarter of FY 2017 are not expected to change much from the 1<sup>st</sup> quarter level.



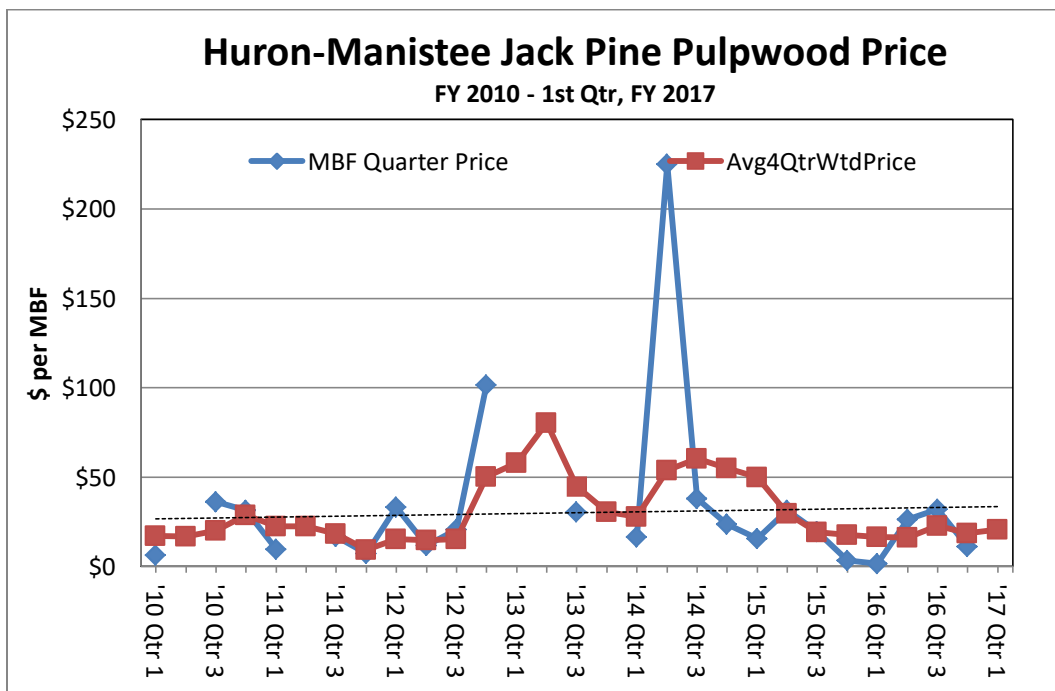
The pattern for quarterly aspen pulpwood volumes is similar to that for aspen sawtimber volumes, except there are higher and more peaks in volumes. Following three quarters of no or low aspen pulpwood sale volume, the FY 2016 4<sup>th</sup> quarter level jumped up to 4.6mmbf and then plummeted back to zero in the 1<sup>st</sup> quarter of FY 2017. This product has had a distinctive quarterly pattern the last three fiscal years of high sales in the 4<sup>th</sup> quarter and negligible or no sales the other three quarters. Given this pattern, it is fairly predictable that the next two quarters will be under 1mmbf. However, it is possible one of the upcoming quarters may fall between 1 and 2mmbf as they more often did between FY 2010 and 2013.



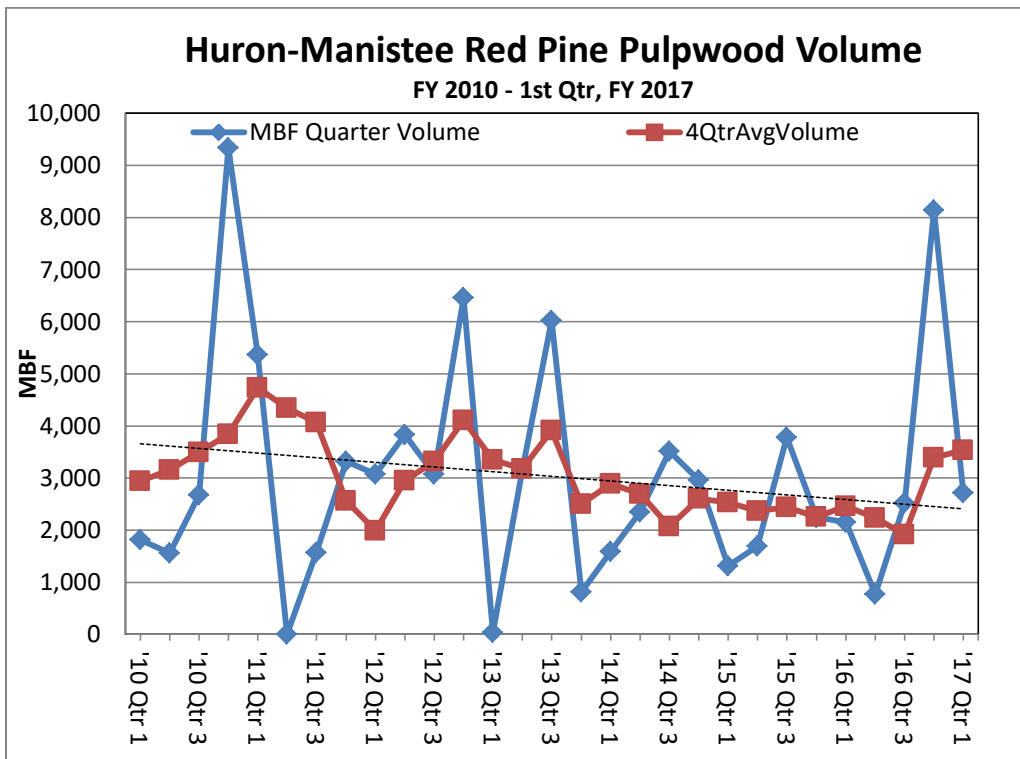
There is no 1<sup>st</sup> quarter aspen pulpwood price as there was no sale volume. The 4<sup>th</sup> quarter aspen pulpwood price is \$37.35 per mbf (it is hidden by the red "Avg4QtrWtdPrice" value in the above graph). It was at \$55 in the 4<sup>th</sup> quarter of FY 2015 on high volume, up from about \$40 per mbf in the 3<sup>rd</sup> quarter. The six-year price trend is slightly declining; however, prices for many quarters are based on low or no sale volumes.



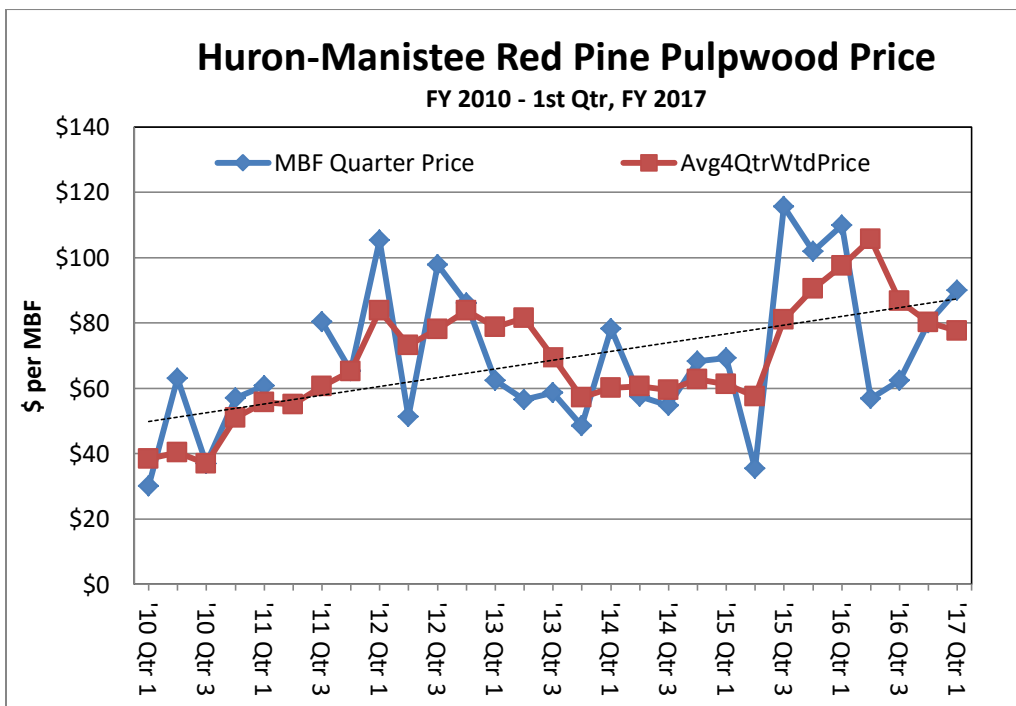
There was no jack pine pulpwood sale volume in the 1<sup>st</sup> quarter. Following three very low sale quarters, jack pine pulpwood sale volume rose from 143mbf to 1.433mbf in the 3<sup>rd</sup> quarter of FY 2016 and then rose again in the 4<sup>th</sup> quarter to 1.73mbf. Overall, jack pine pulpwood sale volume has been on a downward trend over the past six years and many quarters have sale volume well below 1mbf or zero. Also, as can be seen in the graph above, successive year's peaks tend to have been lower than prior years. 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. Sale volume is expected to remain negligible in coming quarters.



There was no volume or price in the 1<sup>st</sup> quarter. The last (4<sup>th</sup>) quarter jack pine pulpwood price fell from \$32 to only \$11 per mbf. In FY 2015, the price was \$15.80 in the 1<sup>st</sup> quarter, \$31.50 in the 2<sup>nd</sup> quarter, \$19.47 in the 3<sup>rd</sup> quarter, and \$3.50 in the 4<sup>th</sup> 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. The six-year price line is relatively flat, but there are many quarters with low or no sales and a few quarters with price anomalies which inhibit establishing a reliable price trend line.



Red pine pulpwood sale volume went from 2.5mmbf in the 3<sup>rd</sup> quarter of FY 2016, up to 8.14mmbf in the 4<sup>th</sup> quarter and then back down to 2.7mmbf in the most recent 1<sup>st</sup> quarter. This swing in sale volume is similar to large swings in volumes in FY 2010 and 2013. Until the most recent three quarters, sale volume swings from quarter to quarter had appeared to have moderated. There has been a declining sale volume trend over the past six years. Sales were predicted to drop sharply in the 1<sup>st</sup> quarter; now that they have, it is expected that sales will change only modestly in the next two quarters.



The 1<sup>st</sup> quarter red pine pulpwood price rose for the third quarter in a row, going from \$80 to \$90 per mbf. The price had been at record levels over \$100 per mbf before falling to \$57 in the 2<sup>nd</sup> quarter of FY 2016. Overall, prices for the past six years have seen a fairly steep increasing trend. Given the three quarters of rising prices and that prices are now above the trend line, prices are expected to not change much - but likely dip a bit - in upcoming quarters.