

Michigan Public Timber Markets, 1st Quarter (October – December), FY 2018

State Forest data – Sale volume fell very sharply in the 1st quarter of FY 2018. Bid-species-only volume fell from 319,000 to 176,000 cords, while total sale (bid & non-bid species) volume also decreased from 371,000 all the way down to 181,000 cords. Offered sales dropped from 380,000 to 261,000 cords. NLP bid species 1st quarter sale volume decreased from 163,000 to 140,000 cords. UP bid species sale volume plummeted, from 113,000 down to only 35,000 cords, one-fourth the NLP volume. Since reaching a high of \$70 per cord in the 3rd quarter of 21015, the overall State Forest average timber price has been generally on a decline. It fell to \$47.53 per cord in the 4th quarter of FY 2017, but rose back up to \$51.15 per cord in the 1st quarter of FY 2018.

NLP aspen pulpwood bid species sale volumes have declined for three quarters in a row; they went from 28,126 cords down to 26,578 cords. The 1st quarter NLP aspen pulpwood price remained unchanged at \$26.46 per cord. UP aspen pulpwood sale volume was at a UP record 30,583 cords in the 4th quarter, but it plummeted to 5,412 cords - a record low - in the 1st quarter. Meanwhile, its price went from \$42.06 to \$48.13 per cord. UP red pine pulpwood bid species sale volumes also dropped dramatically, from 10,008 to 3,958 cords while the NLP volume rose from 19,662 to 27,725 cords. The NLP red pine pulpwood price rebounded from \$53.50 to \$64.79 per cord while the UP price also rose from \$77.59 to \$83.53 per cord. NLP jack pine pulpwood bid species volume reached 22,702 two quarters ago, but fell to 4,991 cords and then to 3,951 in the most recent 1st quarter. For the same three quarters, UP jack pine pulpwood sale volume dropped back from 8,603 to 5,833 and then to 3,346 cords. Jack pine pulpwood cord prices changed little as prices in the UP remained close to \$55 per cord while they dropped slightly in the NLP, from just over \$23.00 down to just over \$20 per cord in the NLP. UP softwood pulpwood sale volume also fell sharply, from 22,921 to 7,584 cords while its price rose from \$28.53 to \$34.43 per cord. NLP Oak pulpwood sale volume declined further, from 12,212 to 10,410 cords while its average price declined from \$29.98 to \$19.59 per cord. Other hardwood pulpwood volume very sharply fell from a reported record of 94,332 cords in the 4th quarter back down to 33,400 cords. After declining for five quarters in a row, its price rose from \$25.37 to almost \$30 per cord in the 1st quarter. Statewide red pine sawtimber prices declined again and now are just over \$150 per mbf while volumes rose again in the 1st quarter from 11.6 to 12.6mmbf. UP sugar maple sawtimber prices dropped further, from just under \$500 to a record low \$363 per mbf as sale volume dropped down from 2000mbf to just 630mbf. The NLP sugar maple sawtimber price rose slightly, from about \$356 to \$378 per mbf as volume plummeted in parallel to the UP, from 1900 to 730mbf. NLP oak sawtimber volume also fell sharply from 6.1 to 2.3mmbf while its price barely changed from \$207 to \$210 per mbf.

National Forest data – All three National Forests had declines in their 1st quarter sawtimber and pulpwood outputs. Ottawa sawtimber sale volumes dropped sharply, from 3.95 to .44mmbf while its pulpwood volume fell even worse, from 21.4 to 1.6mmbf. Hiawatha sawtimber sale volume declined from 4.84 to 3.57mmbf while its pulpwood volume dipped from 11.7 to 11.3mmbf. Huron-Manistee (H-M) sawtimber volume dropped sharply from a high level of 12.64 to 4.37mmbf while its pulpwood volume dropped from 10.8 to 4.6mmbf.

The Ottawa's overall average sawtimber mbf price declined from \$192 to \$164 per mbf while its overall pulpwood mbf price also decreased from \$64.15 to \$37.51 per mbf. Ottawa sugar maple sawtimber sale volume dropped from 332 to only 79mbf as its price also dropped from \$652 down to \$344 per mbf. Its aspen pulpwood sale volume fell from a record 11.9mmbf to a low .3mbf while the price fell from \$74 to \$43 per mbf. The "hardwood-other" pulpwood volume declined from 6.1 to mmbf as its price dipped from \$46.64 to \$40.35 per mbf.

The Hiawatha's overall average sawtimber price fell from just over \$139 to just under \$90 per mbf in the 1st quarter. Its red pine sawtimber price fell from \$160 to \$74 per mbf, but that was on negligible volume. There was no reported jack pine sawtimber sales. "Hardwood-other" sawtimber sale volume increased, from 207 to 385mbf, as its price declined from \$113 to a new low of \$58 per mbf. "Hardwood-other" pulpwood volume edged up slightly, from 1.4 to 1.5mmbf while its average price was largely unchanged at \$32 per mbf. Aspen pulpwood sale volume went from a record 3.97 to 1.9mmbf as its price went from \$26.54 to \$35.59 per mbf. Once again, there were no sales of jack pine pulpwood. Red pine pulpwood sale volume fell from 1.3mmbf to only 26mbf, while its price went from an eight-year low average of \$48 up to \$64 per mbf on that very low volume.

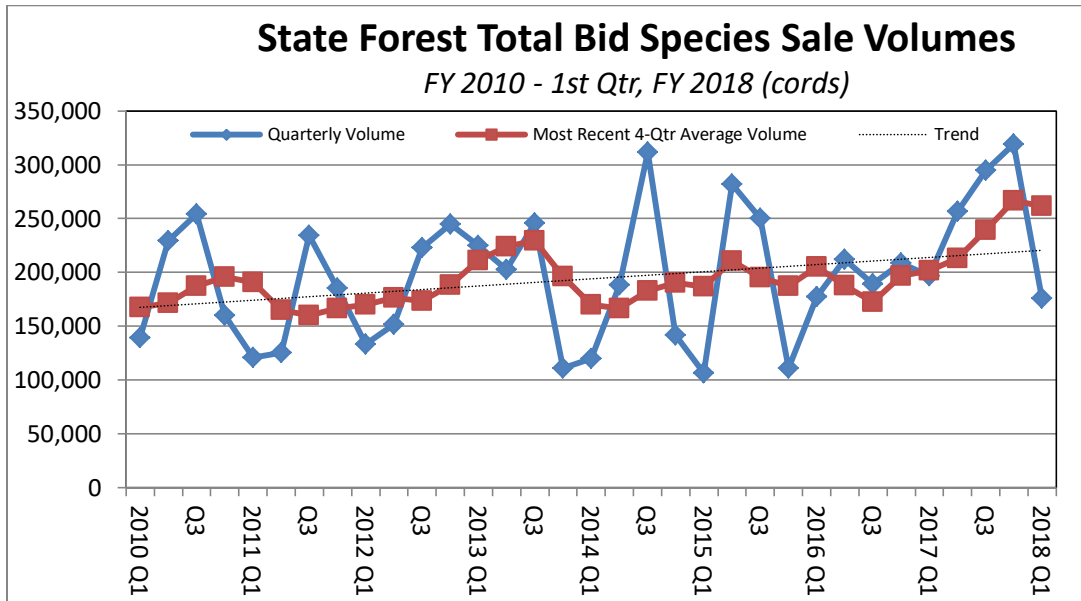
H-M average prices rose pretty sharply. Sawtimber prices rose from \$80 to \$120 per mbf while average pulpwood prices also rose from \$33.39 to \$58.84 per mbf. Sales of aspen sawtimber fell further, from 310 to 165mbf while prices were virtually unchanged at \$85 per mbf. Red pine sawtimber sale volume fell from the record high volume of 11.8 to 3mmbf as its price rose from \$80 to \$134 per mbf. Jack pine pulpwood sale volume fell further from 310mbf to a negligible 53mbf as the price fell from just over \$57 to \$20 per mbf for the low volume. H-M red pine pulpwood sale volume fell from 9 down to 2.1mmbf. Its price rose sharply from \$34.81 to \$93.38 per mbf.

State Forest Quarterly Timber Sales for Major Species & Products

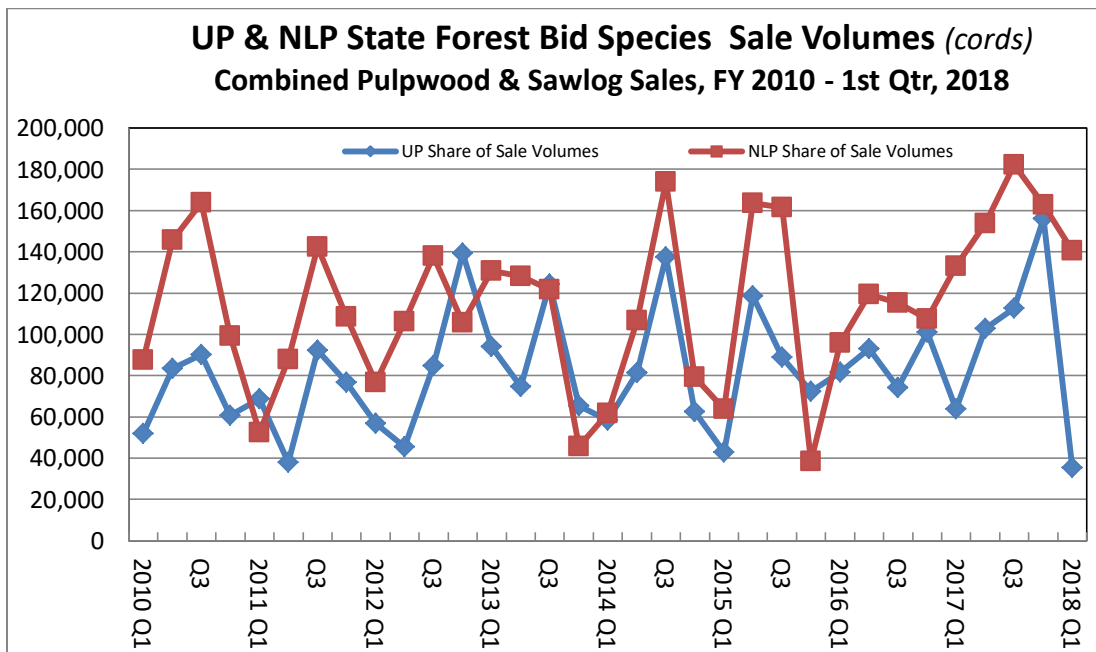
FY 2010 – 1st Quarter, FY 2018

Source: Michigan DNR, Forest Resources Division

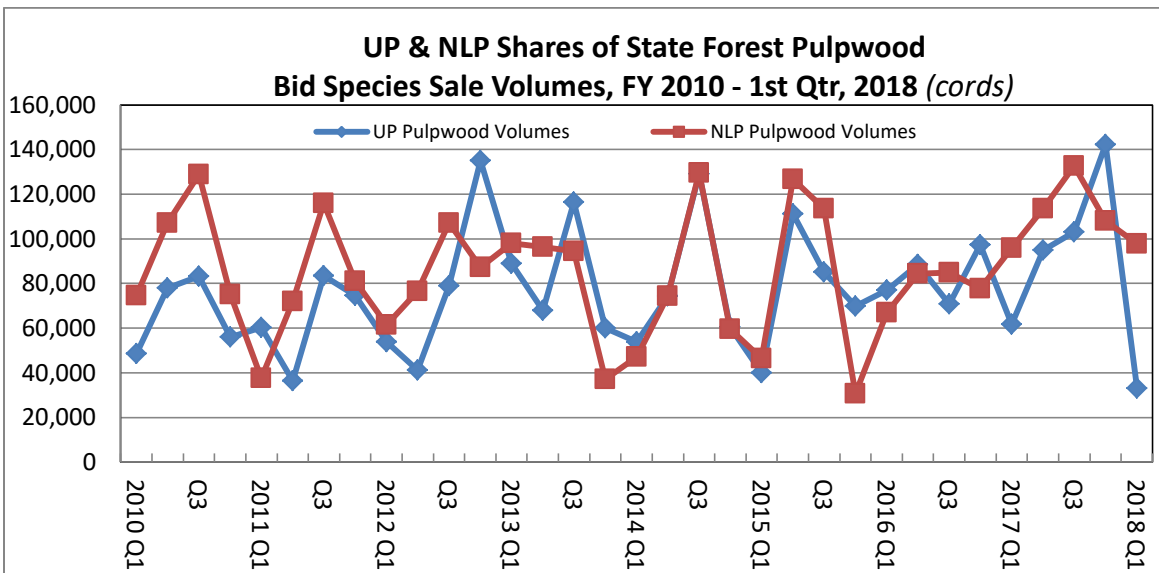
The State follows the federal fiscal year (October 1 through September 30). Graphs below show bid species sale volume and value data; total sale volumes and values are slightly more. The graphs often include a dotted trend line based upon data for the average of the most recent four quarters (labeled as "Avg4QtrVolWtdPrice"). This average eliminates variability in quarterly data due to seasonal issues and variation in quarterly sales through taking volume into account. It likely represents 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. All reported values are subject to slight revisions.



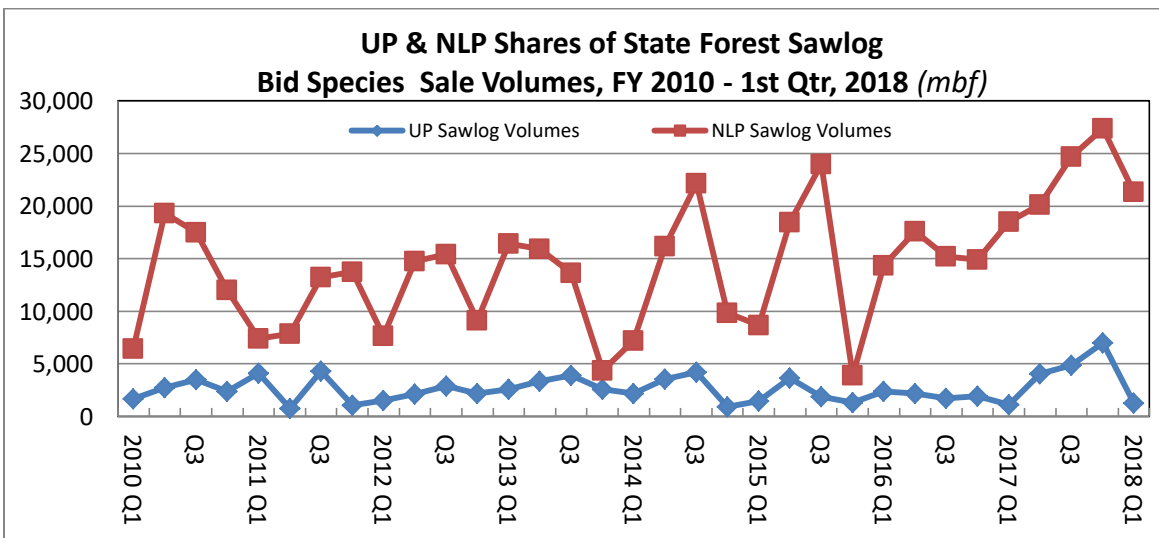
Significant quarterly volume increases in fiscal year 2017 have been sharply reversed. Total State Forest sale volume for bid species fell from 319,000 to 176,000 cords in the 1st quarter. Total sale volume for all bid and nonbid species fell from 371,000 to 181,000 cords while total offered sales fell from 380,000 to 261,000 cords. Lower volumes are often seen in the first quarter, especially after high 3rd and 4th quarter volumes, but the 1st quarter declines are sharper than usual.



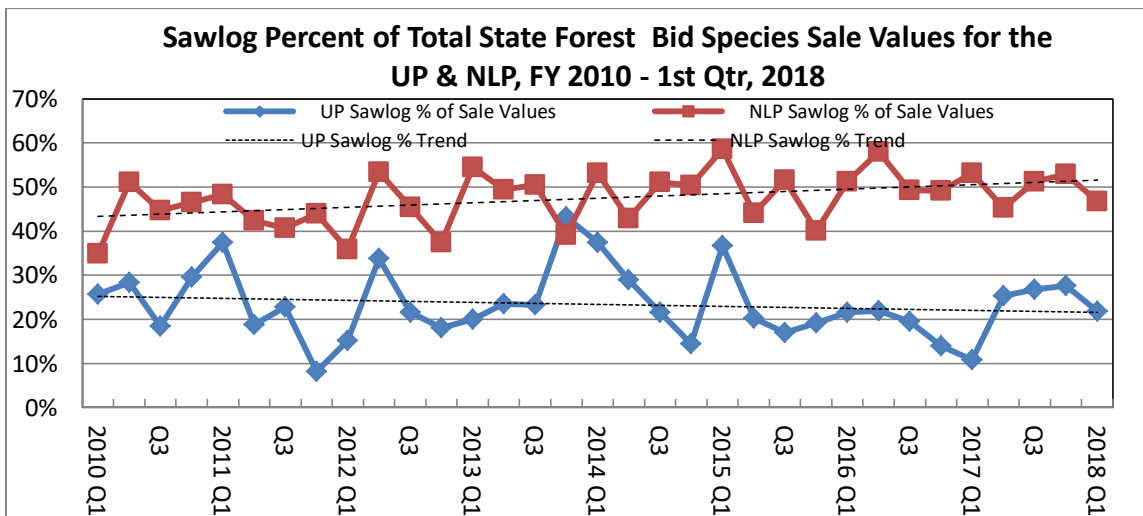
UP bid species sale volumes plummeted to their lowest levels in over eight years, from 156,000 to 35,000 cords. The NLP declined from 163,000 to 140,000 cords. The NLP generally has higher, more variable sale volumes from quarter to quarter, but the dramatic UP drop this quarter matches or exceeds most quarterly changes in the NLP. The high amount of offered sales in excess of total sale volume (261,000 vs. 176,000 cords) will contribute to higher sales in future quarters.



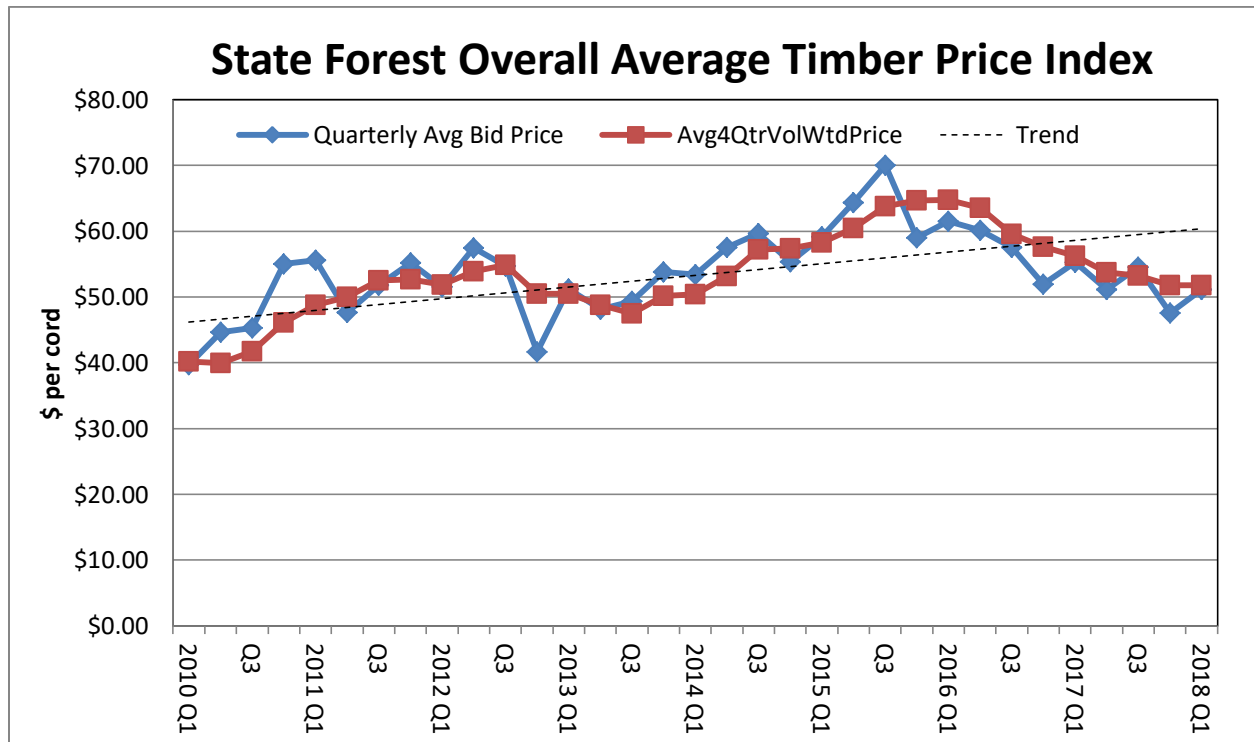
Pulpwood accounts for about 80% of total State Forest bid species sale volume. UP pulpwood sale volumes crashed in the 1st quarter, from a record 142,200 cords to 33,000 cords while NLP volume fell from 108,000 to 98,000 cords.



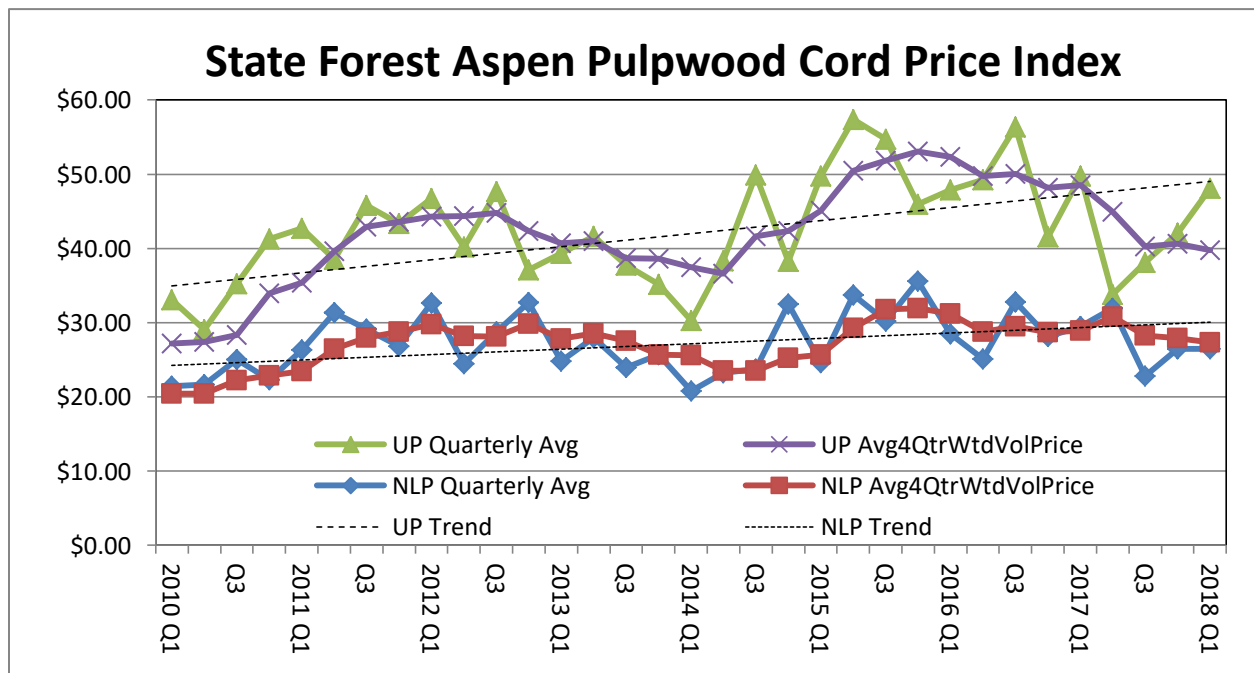
Both peninsulas had record sawlog output in FY 2017. NLP sawlog volumes are often much higher than the UP's; its 4th quarter record volume of 27.4mmbf fell to 21.4mmbf while the UP record sawlog volume of 6.9mmbf fell to 1.3mmbf.



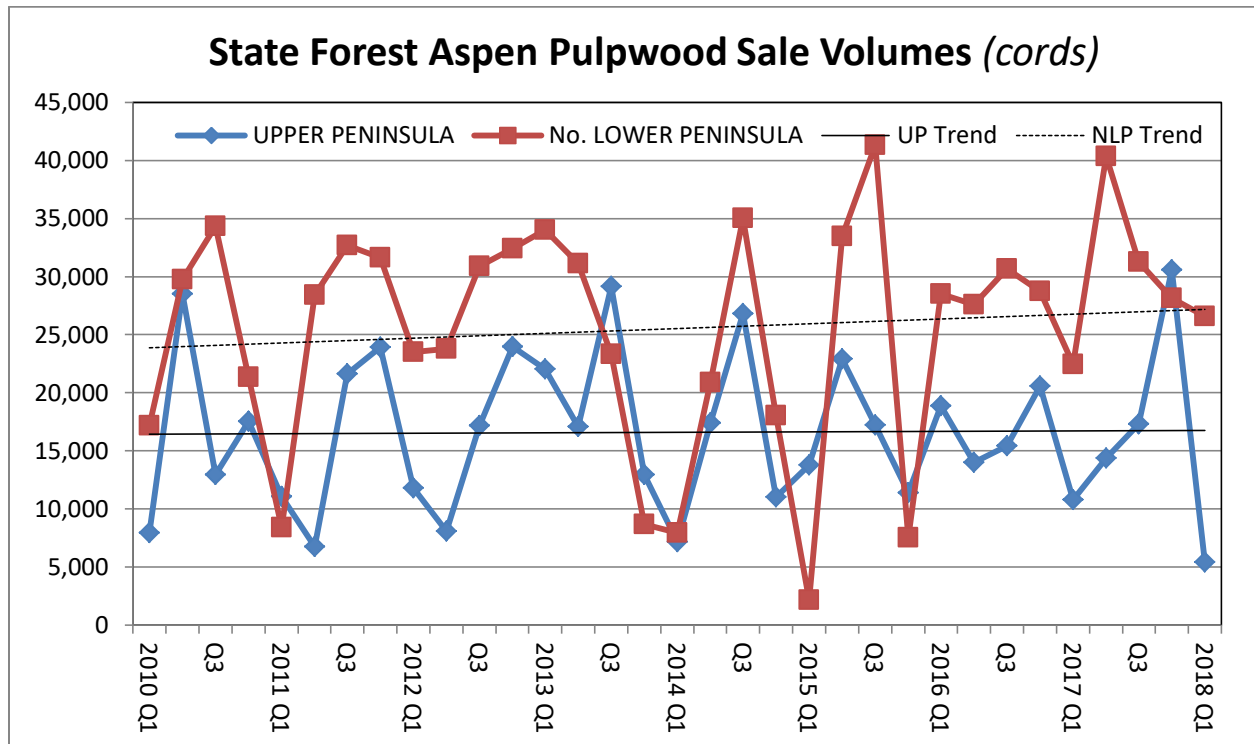
The sawlog percent of NLP bid species sale values dipped below 50% in the 1st quarter. The UP sawlog percent of sale values also dropped from 28% to 22%; it hit a low of 11% in the 1st quarter of FY 2017 before jumping above 25%.



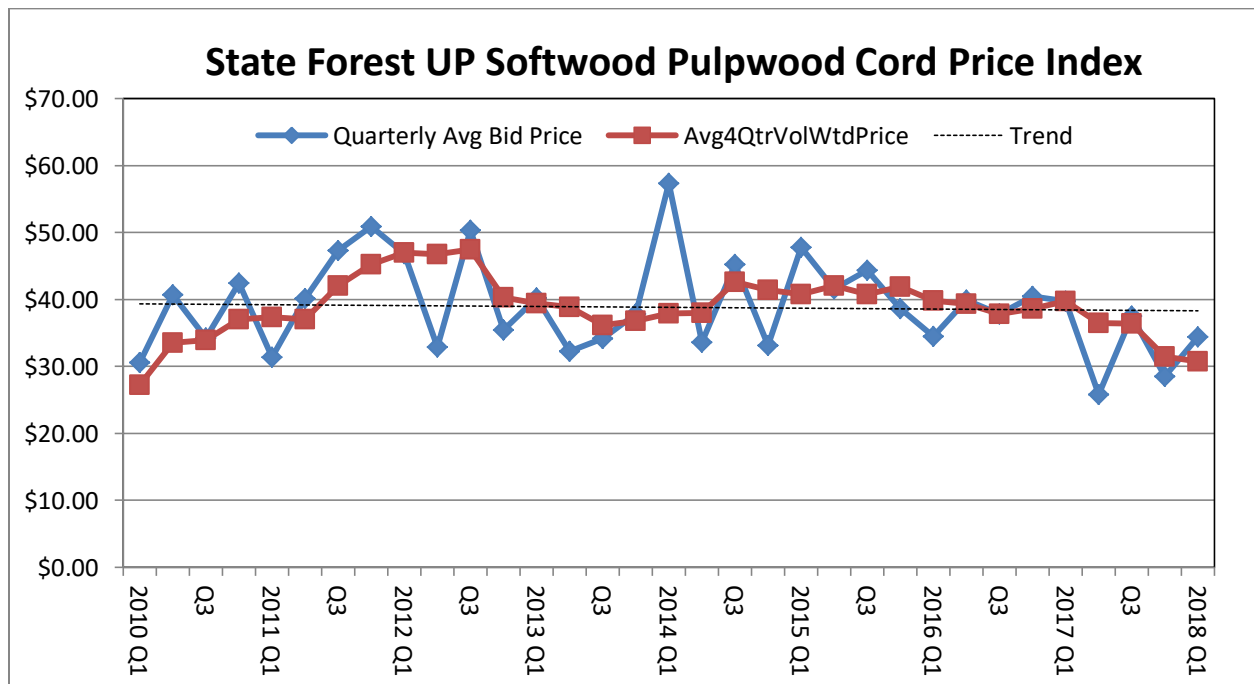
The 1st quarter overall average timber cord price index rebounded a bit from a four-year low of \$47.53 to \$51.15 per cord. The quarterly price was at a record level of \$69.99 per cord in the 3rd quarter of FY 2015 and has been mostly declining since then. This is in contrast to the eight-year quarterly price trend shown above which has been mildly increasing. With this being the sixth quarter in a row that the price has fallen below the quarterly price trend, higher prices can be expected in upcoming quarters. However, higher level of sales, sales without bids, and proportionately more lower-value product sales will temper increases in the average timber price.



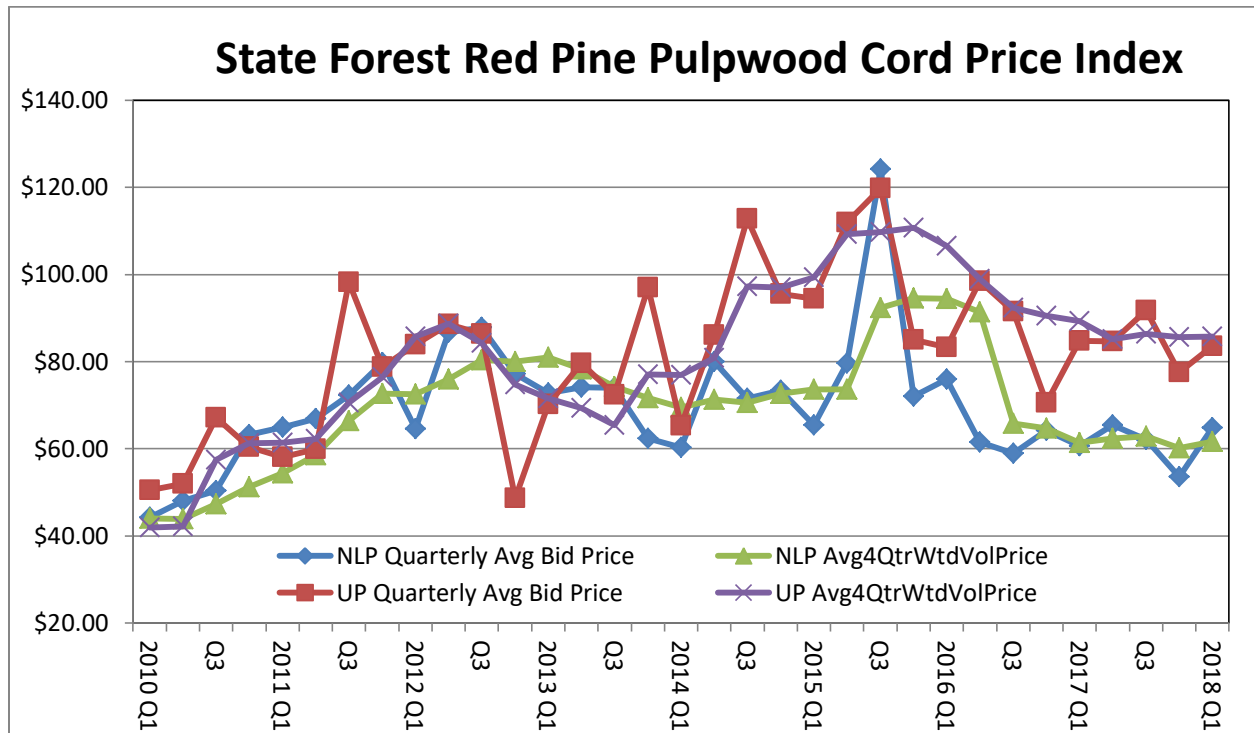
Regional aspen pulpwood prices moved in different directions in the 1st quarter. The UP average cord price rose for the third time, from \$42.06 to \$48.13 per cord. It had fallen to \$33.80 per cord in the 2nd quarter of FY 2017 before starting its climb. The average NLP aspen pulpwood cord price was unchanged in the 1st quarter at \$26.47. The FY 2017 2nd quarter saw very close prices across the two peninsulas, but the 3rd quarter saw the gap come back by the UP price going up while the NLP price went down. 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.



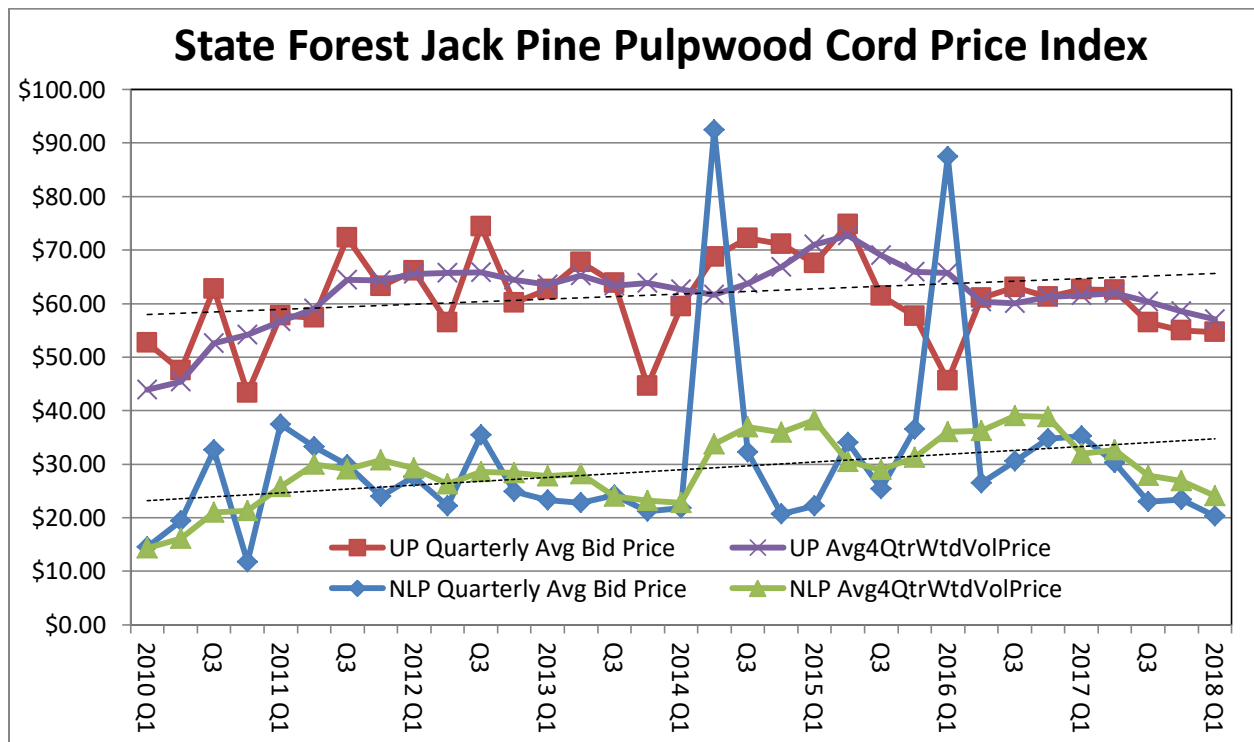
The NLP has tended to have wider swings in aspen pulpwood quarterly sale volumes over the past seven years, but this quarter saw a much bigger swing in UP sales. 4th quarter UP volume shot up from 17,290 cords to a UP quarterly record of 30,583 cords, but then sales plummeted more than they have in a long while – down to an 8-year record low of 5,412 cords. The NLP volume declined from 28,126 to 26,578 cords. This new NLP level is in line with its eight-year trend line; while the UP level is dramatically below its trend line. Sale volumes will certainly rise somewhat in the UP in coming quarters while it is hoped that the NLP volumes remain relatively steady unlike its erratic quarterly sale pattern between FY 2014 and FY 2016.



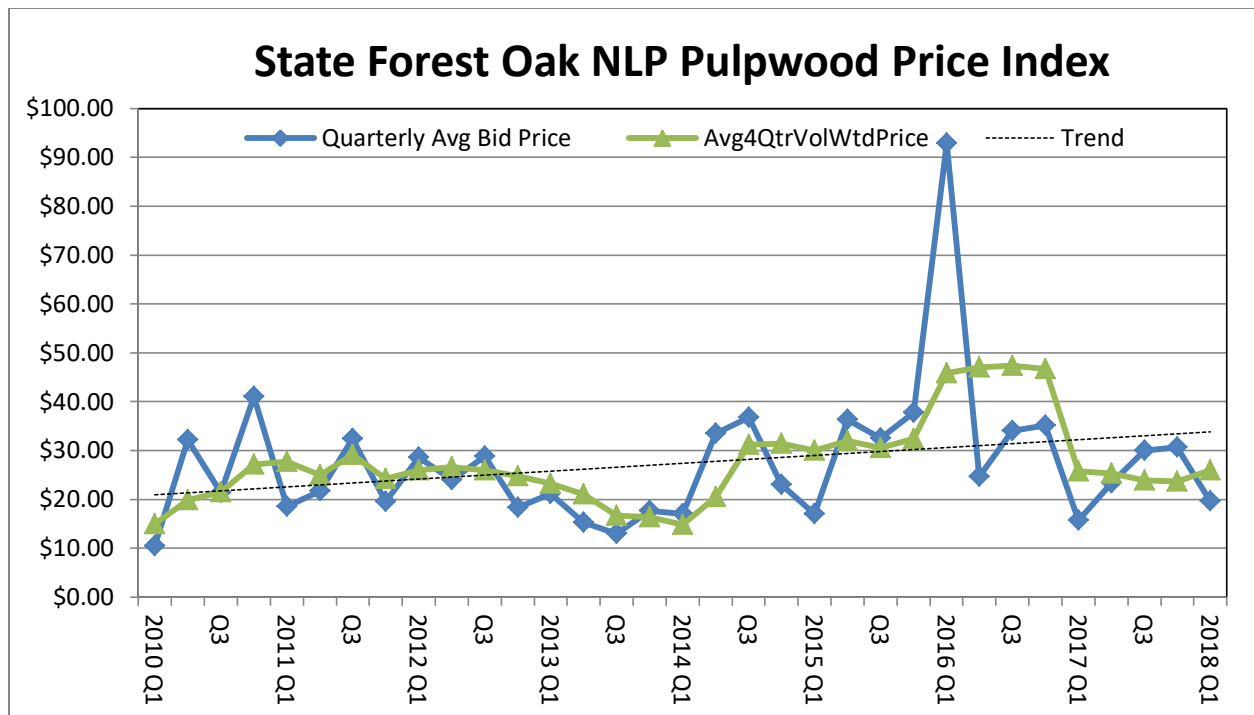
The UP normally accounts for close to 90% of what is sold as “softwood pulpwood,” but that dropped to 76% in the 1st quarter as UP pulpwood sale volumes fell. The UP softwood pulpwood cord price rose from \$28.53 to \$34.43 per cord in the 1st quarter as volume fell from 22,921 to 7,584 cords. Generally, 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 eight years; the recent 2nd and 4th quarter FY 2017 prices are rare exceptions to this range. Quarterly sale volumes often do fluctuate though, from under 10,000 cords to over 30,000 cords. The eight-year price trend is quite flat.



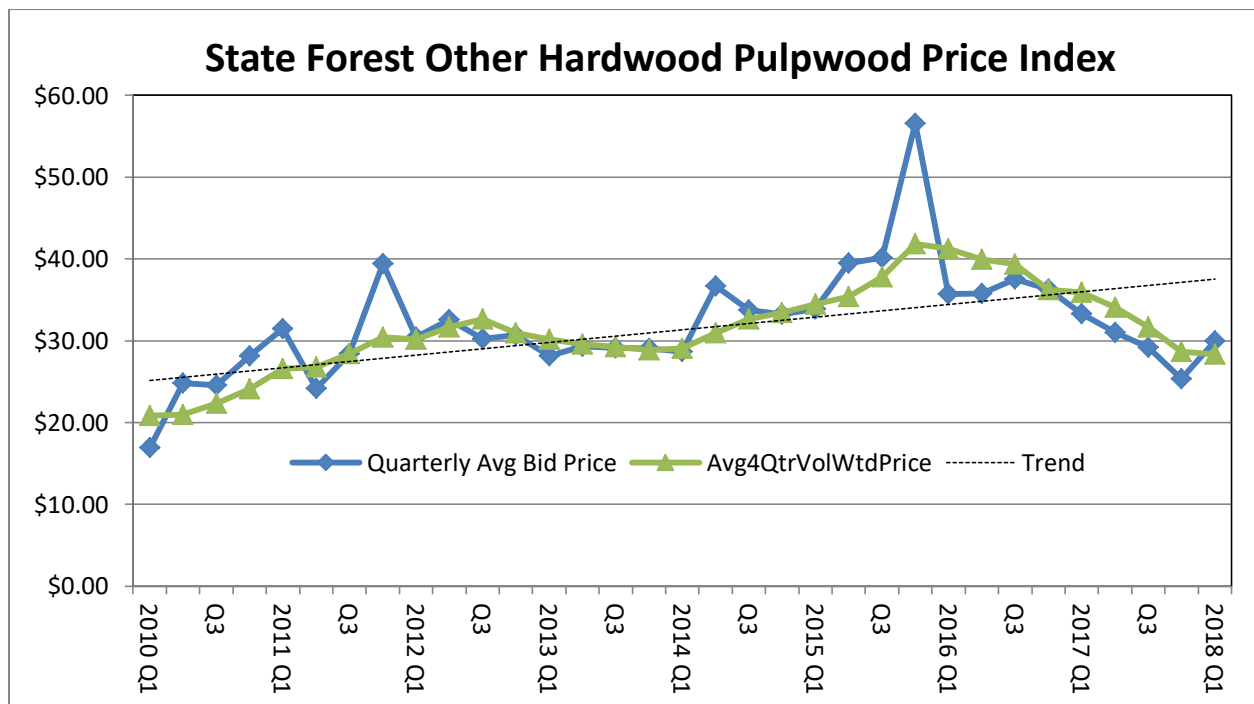
The FY 2018 1st quarter NLP red pine pulpwood price rebounded from \$53.50 to \$64.79 per cord as sale volume also went up from 19,662 to 27,725 cords. The price reached \$124 per cord in the 3rd quarter of FY 2015 before dropping back to \$72 the next quarter. It has been relatively stable since then. The UP generally has higher RP pulpwood prices than the NLP. The UP price also went up in the 1st quarter, from \$77.59 to \$83.53 as volume fell from 10,008 to 3,958 cords.



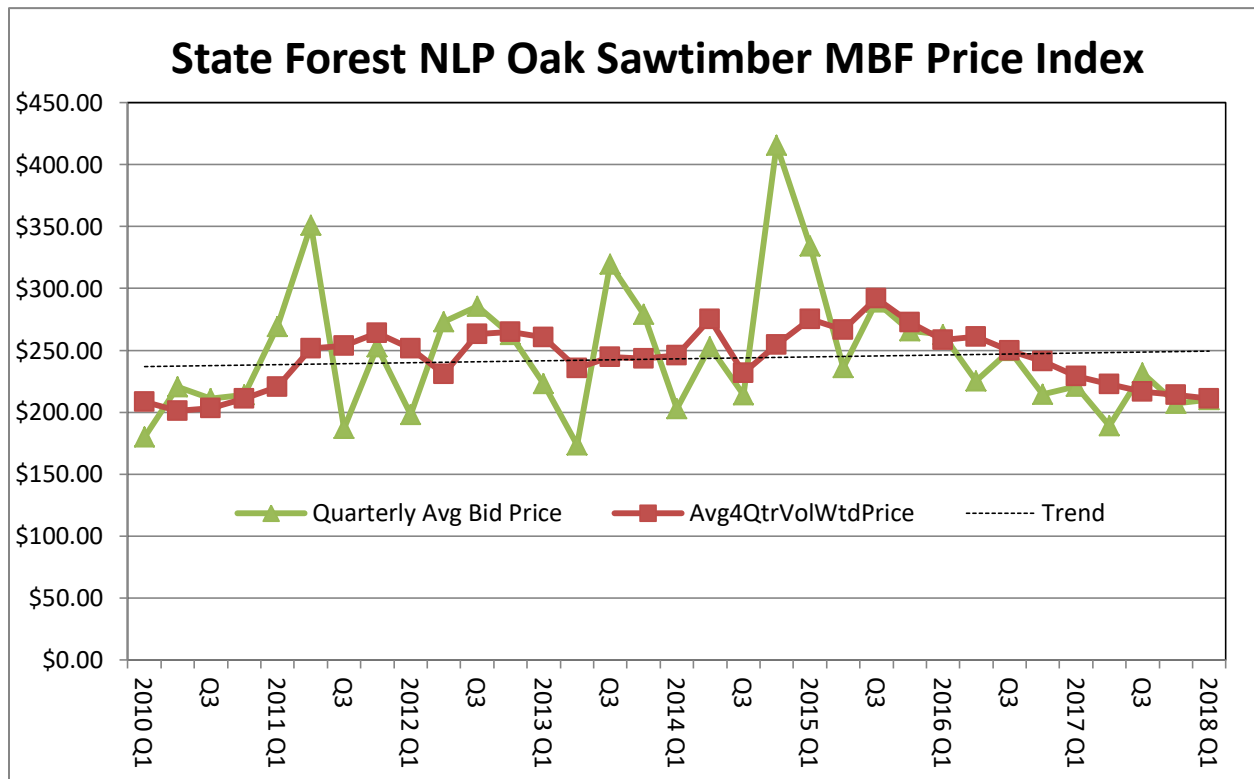
Jack pine pulpwood 1st quarter cord prices dipped slightly from \$54.98 to \$54.65 per cord in the UP while they decreased from \$23.41 to \$20.31 per cord in the NLP. The UP price has often been two to three times the NLP price. Jack pine sale volumes are often highly volatile from quarter to quarter in both peninsulas. In the most recent quarter, they dropped back from 5,833 to 3,346 cords in the UP while falling further in the NLP from 4,991 to 3,951 cords. They had been at 22,702 cords in the NLP in the 3rd quarter of FY 2017. Both peninsulas have slightly increasing seven-year price trends.



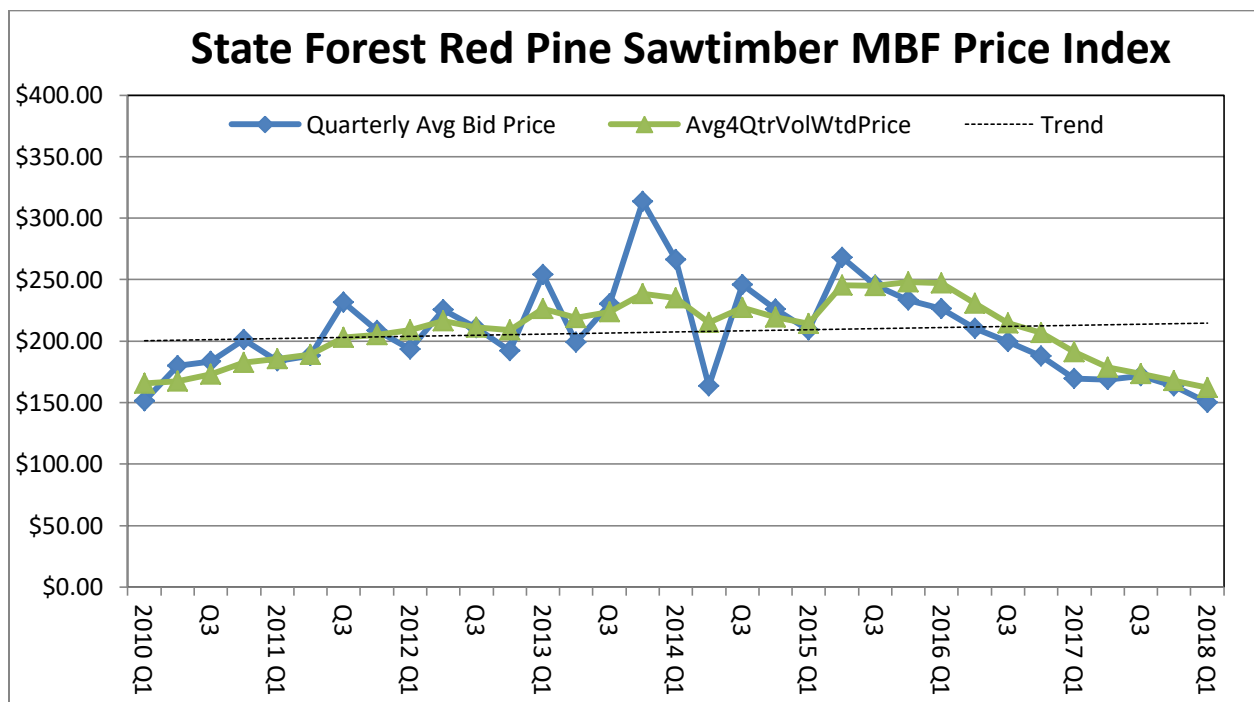
The NLP oak pulpwood price fell sharply in the 1st quarter of FY 2018, from \$30.62 to \$19.59 per cord on a volume of 10,410 cords. It was at a low \$15.69 per cord one year ago. The price hit a peak in the FY 2016 1st quarter at \$92.84 per cord, more than double any price achieved in the past eight years, but then it dropped to \$24.67 in the next quarter, rose to \$34.01 in the 3rd quarter, and was little changed at \$35.12 in the 4th quarter. The average price over the past eight years has been under \$30.00 per cord. There is an increasing eight-year price trend, in large part due to the price peak in the 1st quarter of FY 2016.



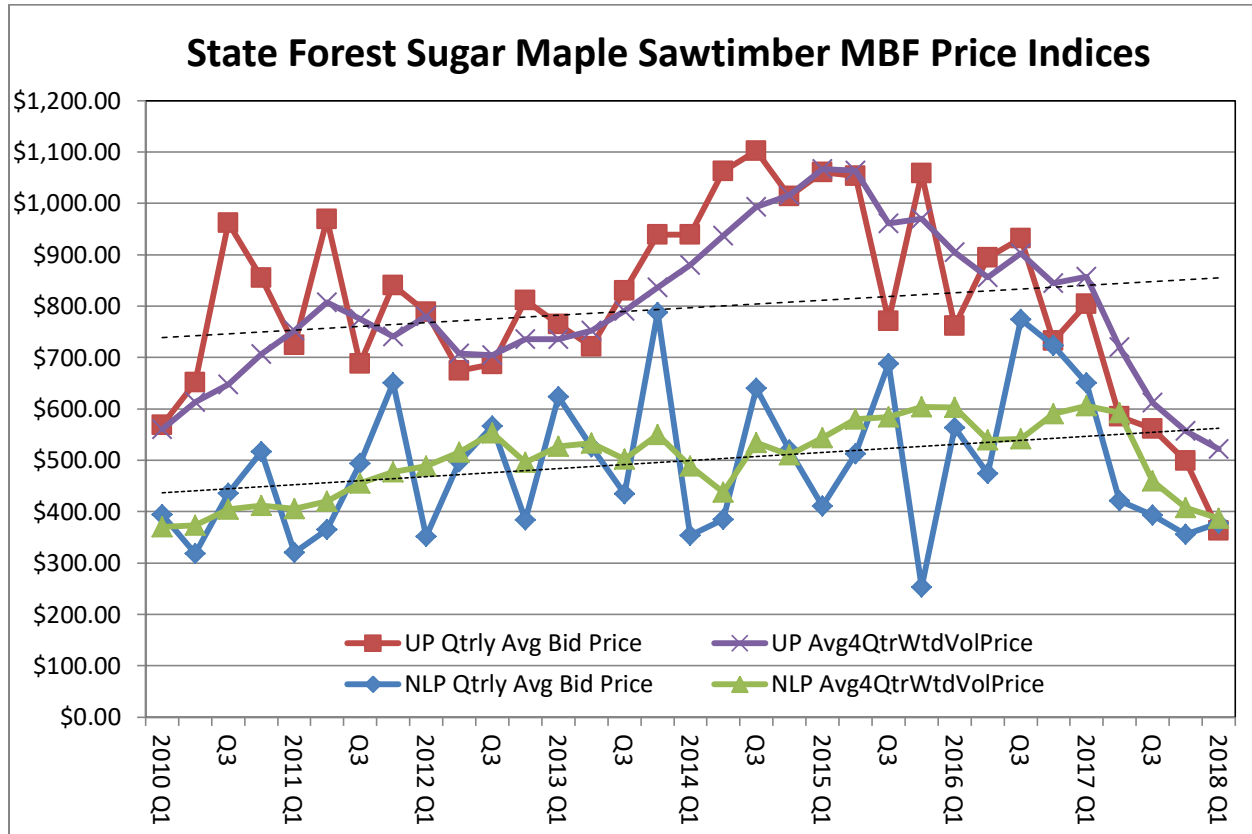
The “other hardwood pulpwood” cord price rose to almost \$30.00 per cord in the 1st quarter after experiencing 5 quarters of steady, modest declines. It hit a record high price of \$56.55 per cord in the 4th quarter of FY 2015. Bid species sale volume more than doubled from 28,537 to 61,933 cords in the 2nd quarter of FY 2017, then hit a 69,233 cord record volume in the 3rd quarter, only to be topped by 94,332 cords in the 4th quarter before falling back to 33,400 cords in the most recent (1st) quarter. The average quarterly volume for the past six years is 40,000 cords. The product has an increasing price trend.



NLP oak sawtimber prices rose very slightly in the 1st quarter, from \$207 to \$210 per mbf as sale volume dropped sharply from a record 6.1 to 2.3mmbf. Overall, there has been a very slight increasing price trend for the past eight years. However, prices have been mostly trending downward since they reached a high of \$415 per mbf in the 4th quarter of FY 2014. Sale volumes over the past seven years have averaged about 3mmbf per quarter.



State Forest red pine sawtimber prices have been fairly steadily declining for almost three years, reaching just over \$150 per mbf in the most recent (1st) quarter. The eight-year price trend is very slightly increasing and the average price for the period is just above \$200 per mbf. Sale volume rose again from 11.6 to 12.9mmbf in the 1st quarter. The average quarterly sale volume for the past eight years is under 8mmbf.

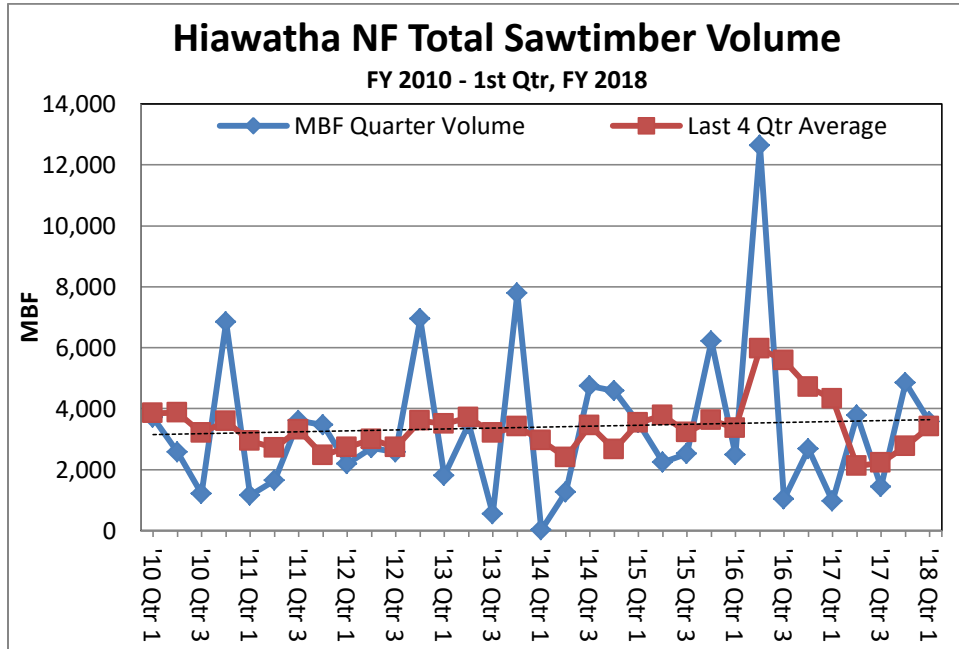


After five quarters of declines, NLP sugar maple sawtimber prices rose slightly in the 1st quarter of FY 2018 from \$356.05 to \$377.68 per mbf as volume dropped sharply from 1.85mmbf down to .73mmbf. The price was \$774.24 per mbf in the 3rd quarter of FY 2016 before prices began their descent. The most recent (1st) quarter UP price decreased again, from \$499.43 to \$363.07 per mbf, as sale volumes dropped from 2.07mmbf down to .63mmbf. Most quarters the UP sugar maple sawtimber price is significantly higher than the NLP's, but that has not been the case over the past two years. The UP average price reached \$1058 per mbf in the 4th quarter of FY 2015 and had been above \$1000 per mbf for a string of five quarters before that. The NLP price reached a six-year peak of \$787 in the 4th quarter of FY 2013 and a price of \$774 per mbf more recently in the 3rd quarter of FY 2016. With the recent narrowing of price differences, the slope of the UP and NLP eight-year increasing price trends look similar, with the UP price trend close to \$300 per mbf above the NLP price trend. The UP's eight-year average sale volume is close to 750mmbf while the NLP's is closer to 600mmbf; both peninsulas had quarterly sale volumes well above these averages in the 2nd, 3rd, and 4th quarters of FY 2017, but fell back towards these averages in the 1st quarter of FY 2018.

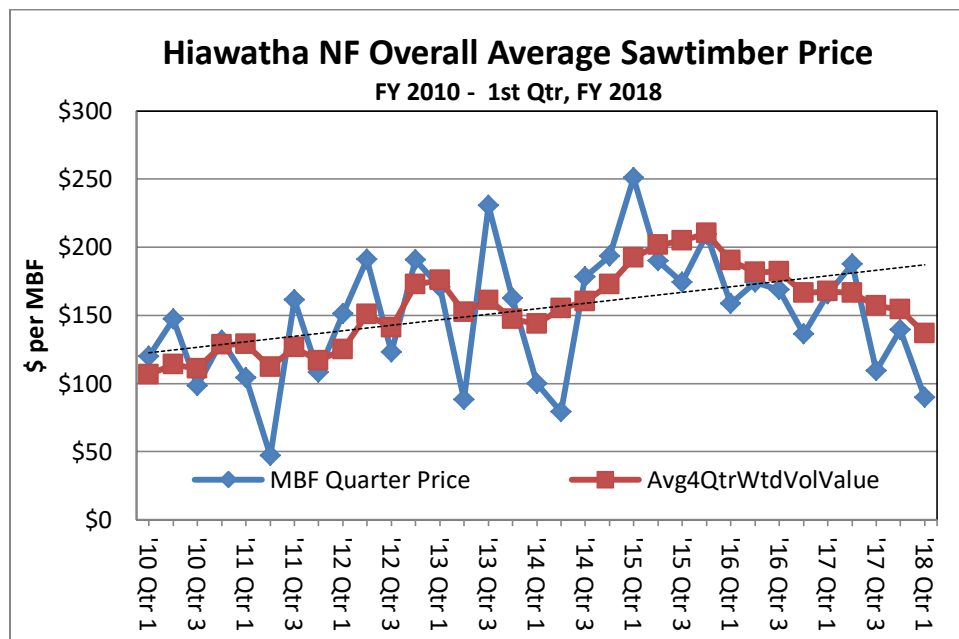
Hiawatha National Forest Major Species Product Timber Sales, FY 2010 – 1st Qtr, 2018

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 1st quarter of FY 2018, covering October through December of 2017 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:

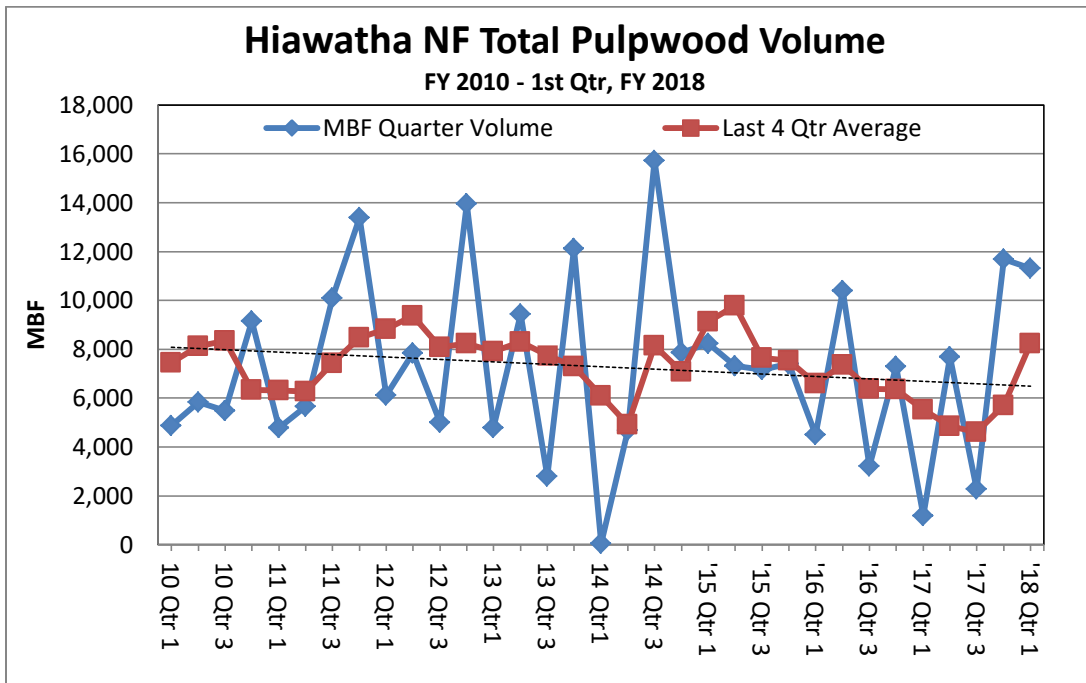
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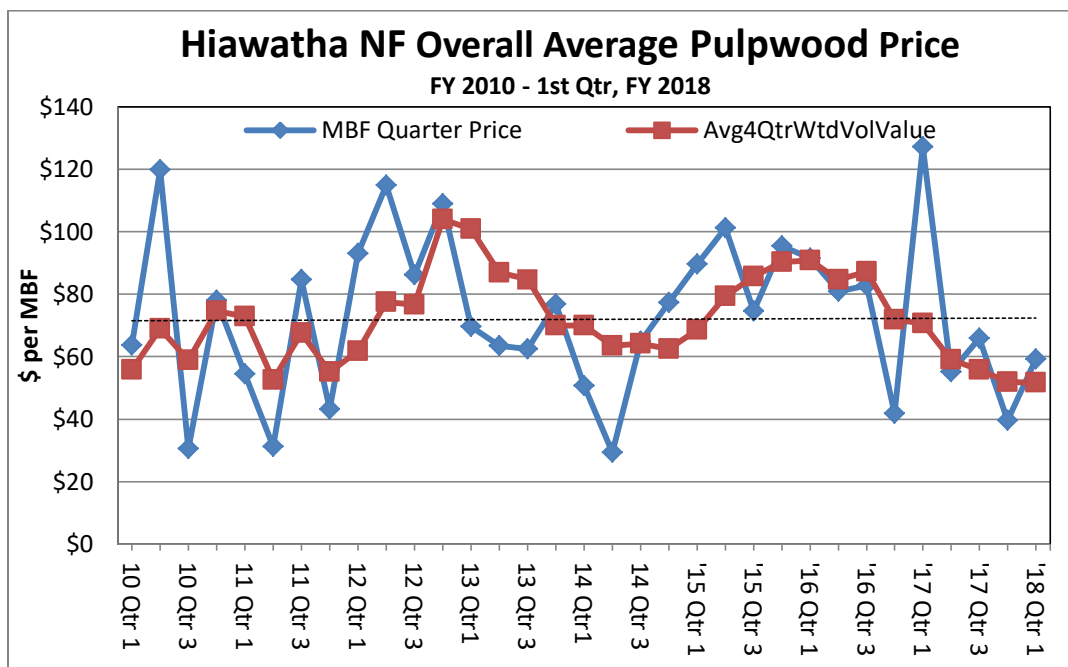
Hiawatha sawtimber sale volume fell from 4.84 to 3.57mmbf in the 1st quarter. Sale volumes are often highest in the 4th quarter and drop in the 1st quarter. Sales were at a record 12.6mmbf volume in the 2nd quarter of FY 2016, followed by five quarters of sale volumes under 4mmbf. While there will be several upcoming quarters with lower sales, there should also be a “breakout” quarter with higher sales as well. The 8-year trend of sawtimber sale volume is very slightly increasing, in large part due to that record 2nd quarter record volume in 2016. The most recent (1st) quarter is right on the trend line.



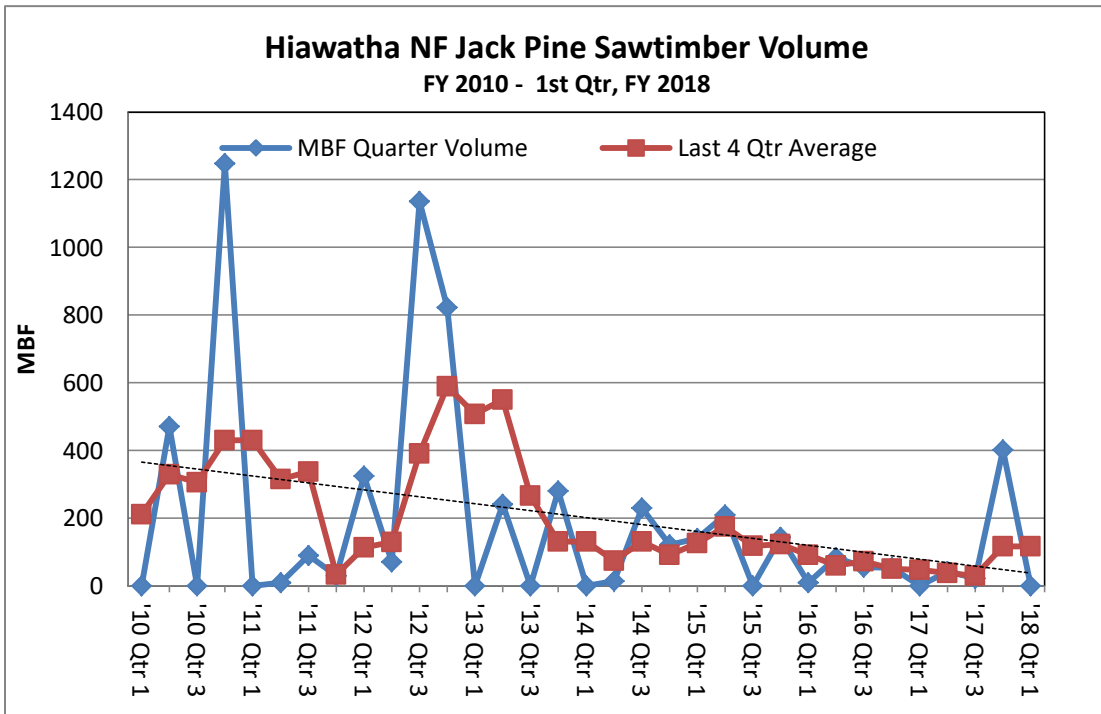
Average Hiawatha sawtimber prices fell sharply from \$139.23 to \$89.69 per mbf in the 1st quarter. They have been on somewhat of a downhill slide since they peaked at \$250 in the 1st quarter of FY 2015. The average sawtimber price is strongly influenced by the mix of species and products offered. With prices well below the 8-year trend line, they may be expected to rebound in coming quarters unless significant negative economic changes occur.



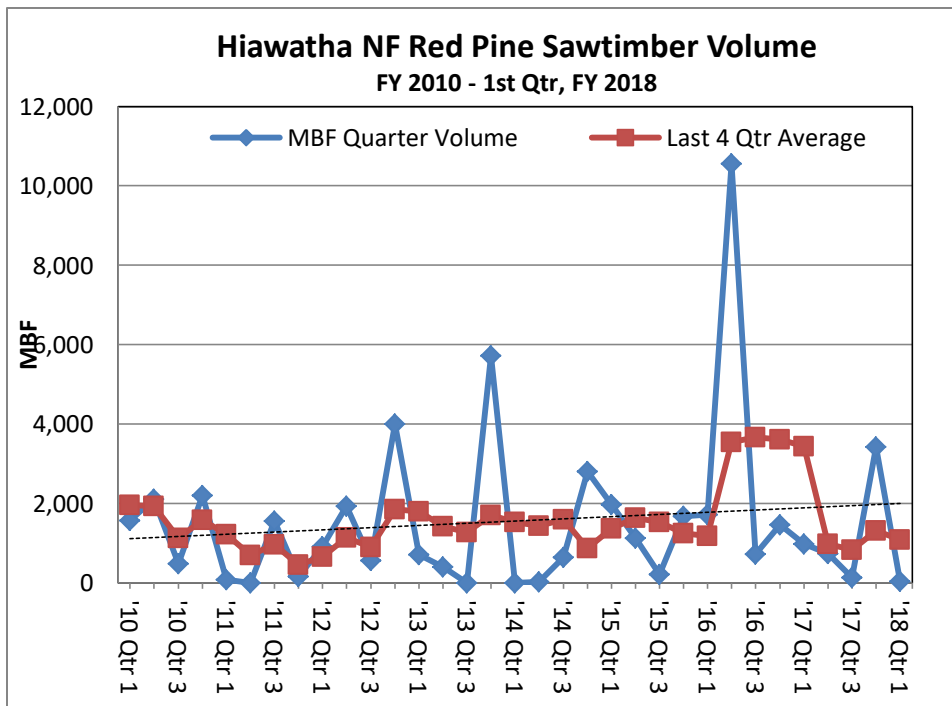
Although total pulpwood volume dipped from 11.7 to 11.3mmbf in the 1st quarter, this decline was much less than expected. There have not been two back-to-back high volume quarters quite like the most recent quarters. Along with other Forests, the Hiawatha often has its lowest quarterly sales in the 1st quarter and large increases in sales from one quarter to the next are more often than not followed by large declines in the next quarter. In this regard, the 1st quarter dip in sales was very modest. Hiawatha pulpwood sale volume had been zigging and zagging up and down for the past two years similar to what it did between fiscal years 2012 and 2014. For the past eight years, the highest sale volume was 15.73mmbf in the 3rd quarter of FY 2014. The eight-year quarterly sales trend is slightly falling. Next (2nd) quarter's sales volume is expected to decline more.



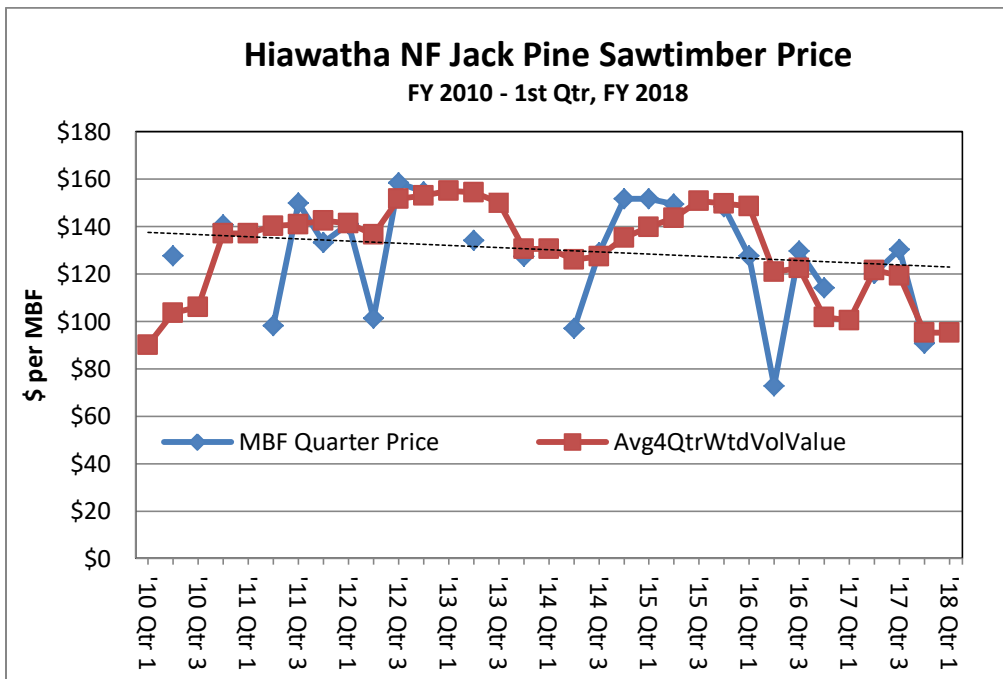
Against a backdrop of high volumes, the Hiawatha overall pulpwood price fell from \$65.85 to \$39.54 per mbf in the 4th quarter and then rebounded to \$59.16 in the 1st quarter. A sharp rise in the 1st quarter FY 2017 to a record average pulpwood price of \$127 per mbf was followed by almost as sharp of a decline in the 2nd quarter to \$55.07 per mbf. With the lower values for the past three quarters, the eight-year trend line is flat. Prices were expected to increase at least slightly in the 1st quarter - and they did, but recent high sale volumes should moderate future price increases.



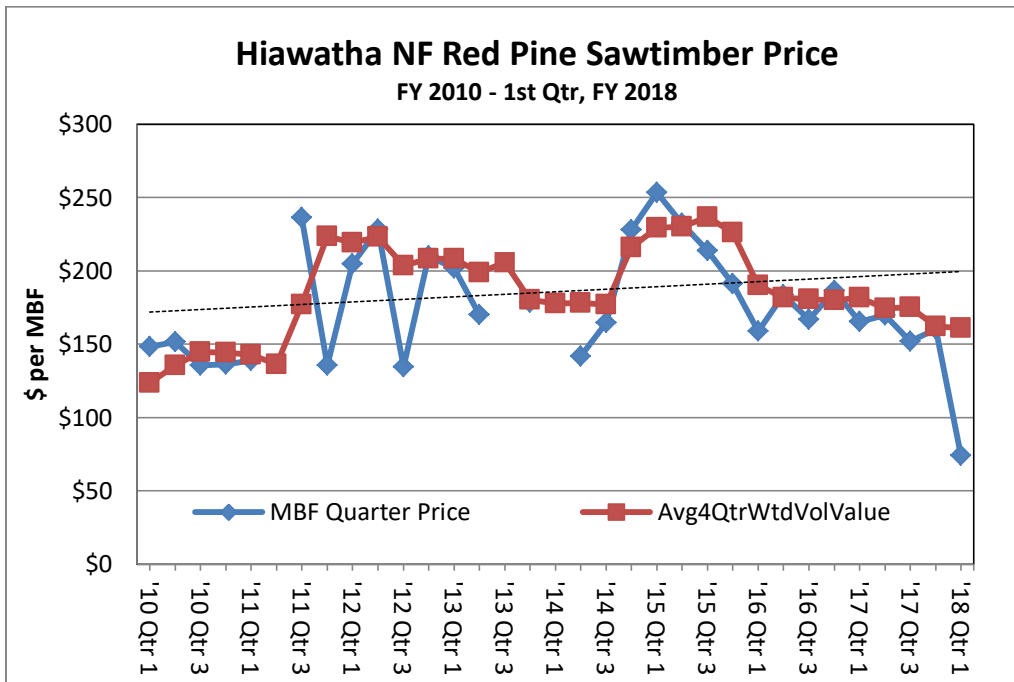
There were no sales of jack pine in the 1st quarter, Hiawatha jack pine sawtimber sale volume reached 401mbf in the prior quarter, but that was after more than two years of negligible sales. The highest volume sold in the past eight years (1.25mmbf) was in the 4th quarter of FY 2010; sales also exceeded 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. Sale volumes are likely to continue to be negligible in most upcoming quarters.



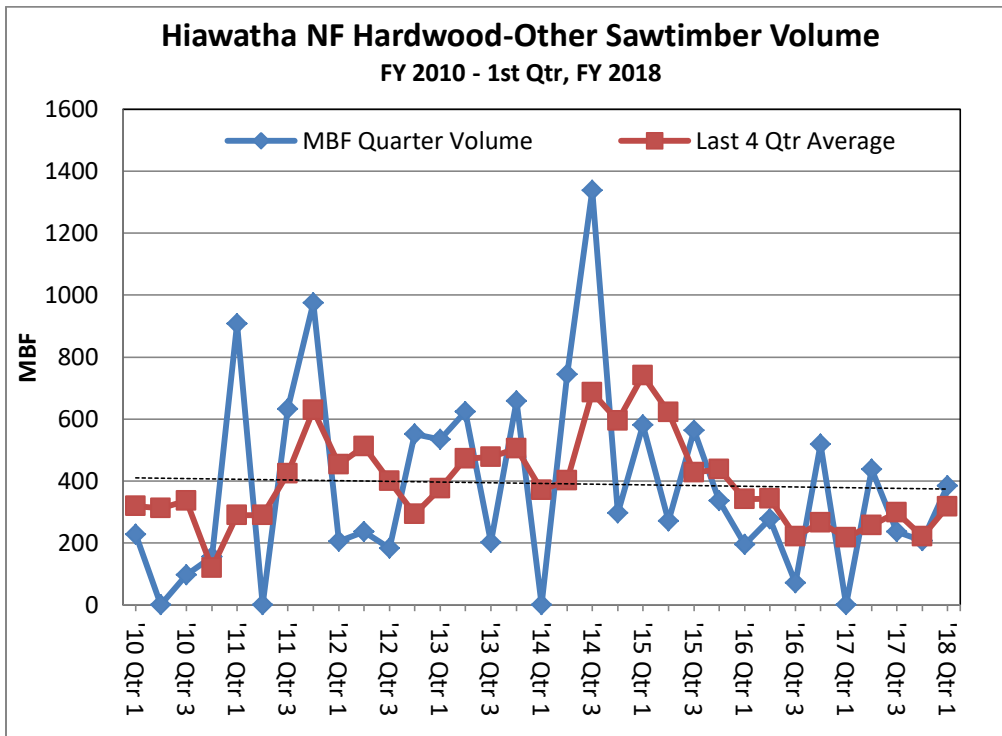
Only 28mbf of Hiawatha red pine sawtimber was reported to be sold in the 1st quarter, down from 3.4mmbf sold in the 4th quarter. Eight times as much red pine sawtimber as jack pine sawtimber has been sold on the Hiawatha since FY 2010. Sales hit a record level of 10.56mmbf in the 2nd quarter of FY 2016, but then there were five quarters under 2mmbf. There is an increasing eight-year sale trend, but without the record volume of FY 2016's 2nd quarter, the trend would be flat.



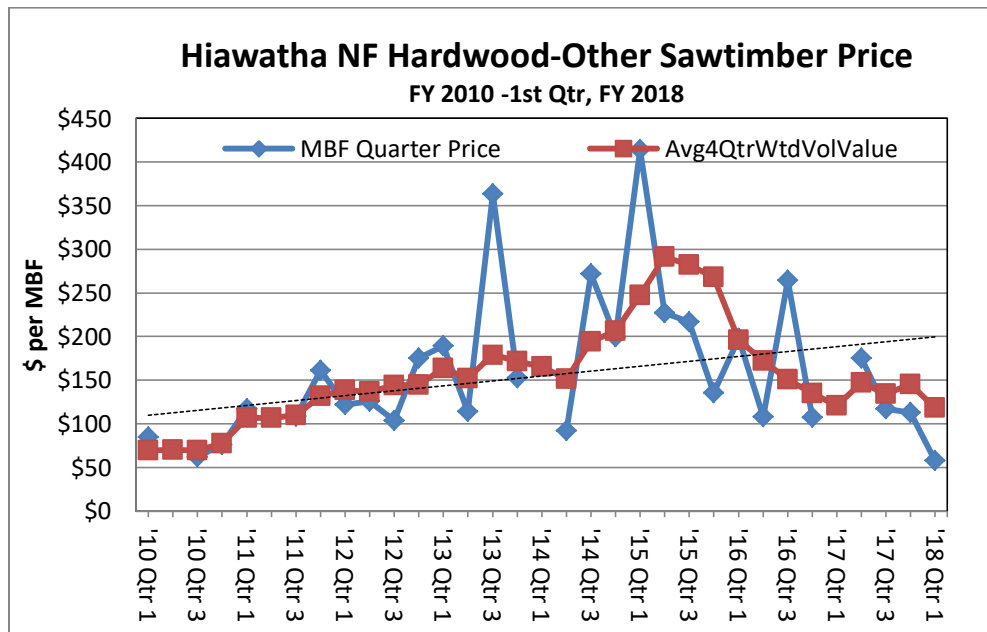
There is no 1st quarter price for jack pine sawtimber as there were no sales. The 4th quarter price for jack pine sawtimber dropped fairly sharply from \$130.49 to \$90.69 per mbf on the higher volume. This lower quarterly price helped what had been a relatively flat, stable price trend to become a negative price trend. However, the price trend is based upon many quarters with negligible or no sales.



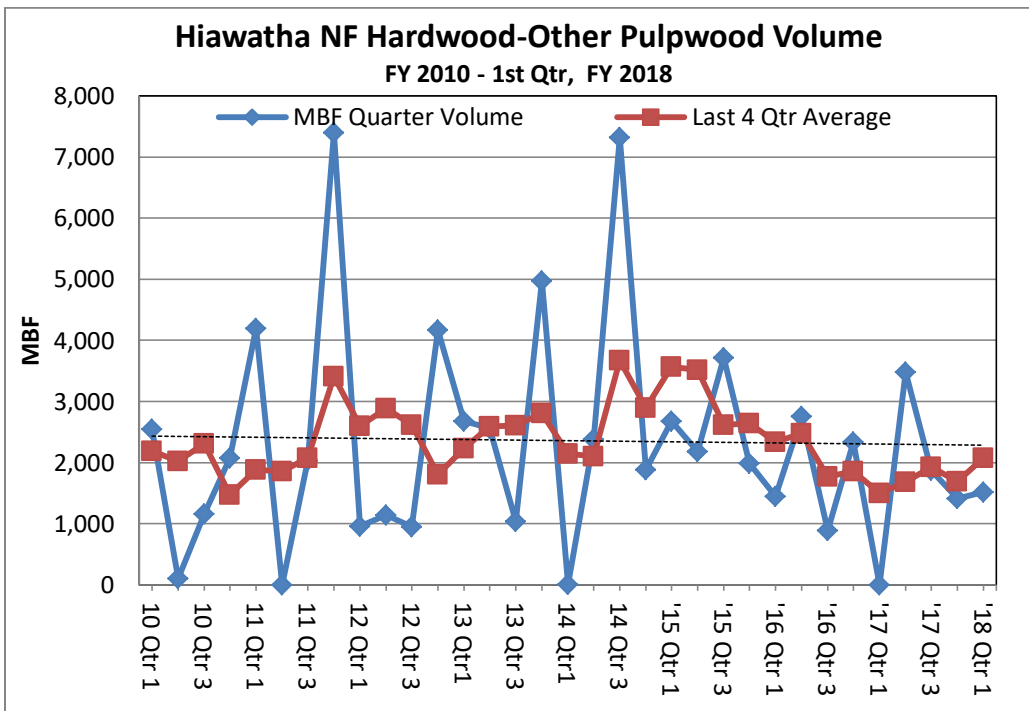
The red pine sawtimber price dropped to a very low \$74.14, but that was on very negligible (28mbf) volume. It was at \$160.14 per mbf in the 4th quarter of FY 2017 with 3.4mmbf of sale volume. The price reached \$253 per mbf in the 1st quarter of FY 2015, its highest level in years. It then declined for four straight quarters before stabilizing. Up until the most recent (1st) quarter, the price has ranged between \$150 and \$190. The overall eight-year price trend has been moderately increasing; however, like jack pine sawtimber, the trend is based upon many quarters with little or no sales.



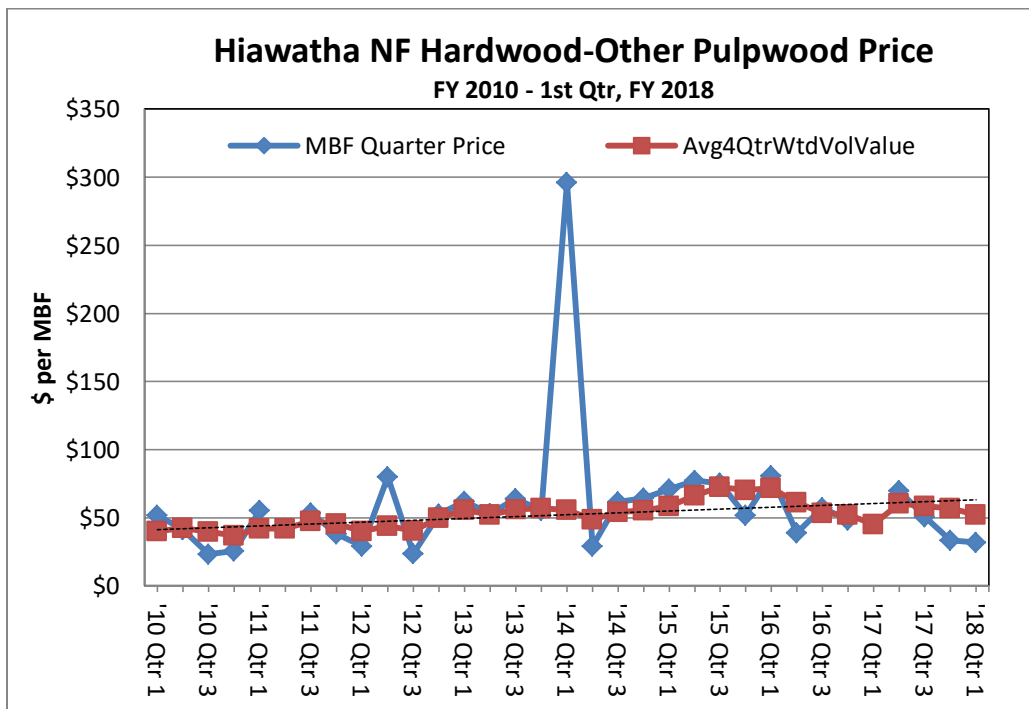
Hiawatha's "hardwood-other" sawtimber sale volume rose from 207 to 385 mbf in the 1st quarter. Quarterly sale volume reached a seven-year record level of 1.3mmbf in the 3rd quarter of FY 2014, but no quarter has reached even 600mbf since then. With the most recent low volume quarters, the eight-year sale volume trend has become negative. The most current (1st) quarter is right in line with the eight-year trend line.



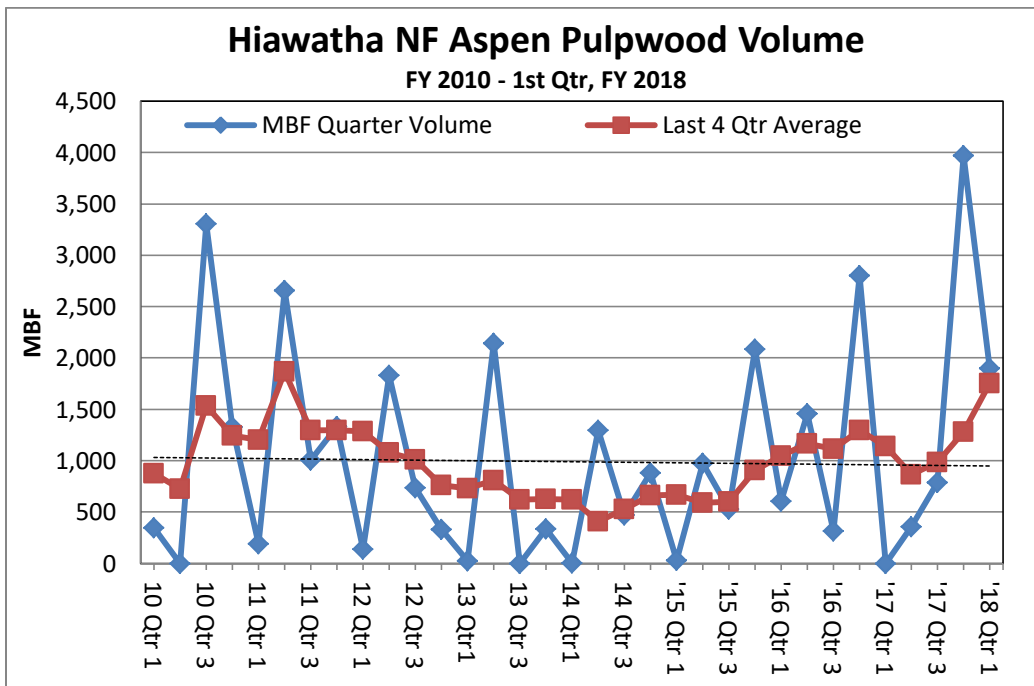
The 1st quarter "hardwood-other" sawtimber price dropped sharply, from \$112.67 to an eight-year record low \$57.85 per mbf, putting a lot of distance between it and the eight-year trend line. Despite some relatively low prices in recent quarters, the quarterly price trend has risen fairly steeply over the past eight years. However, there has been a fairly sharp declining trend over the past three years. Future quarters with sale volumes are likely to be associated with increasing prices.



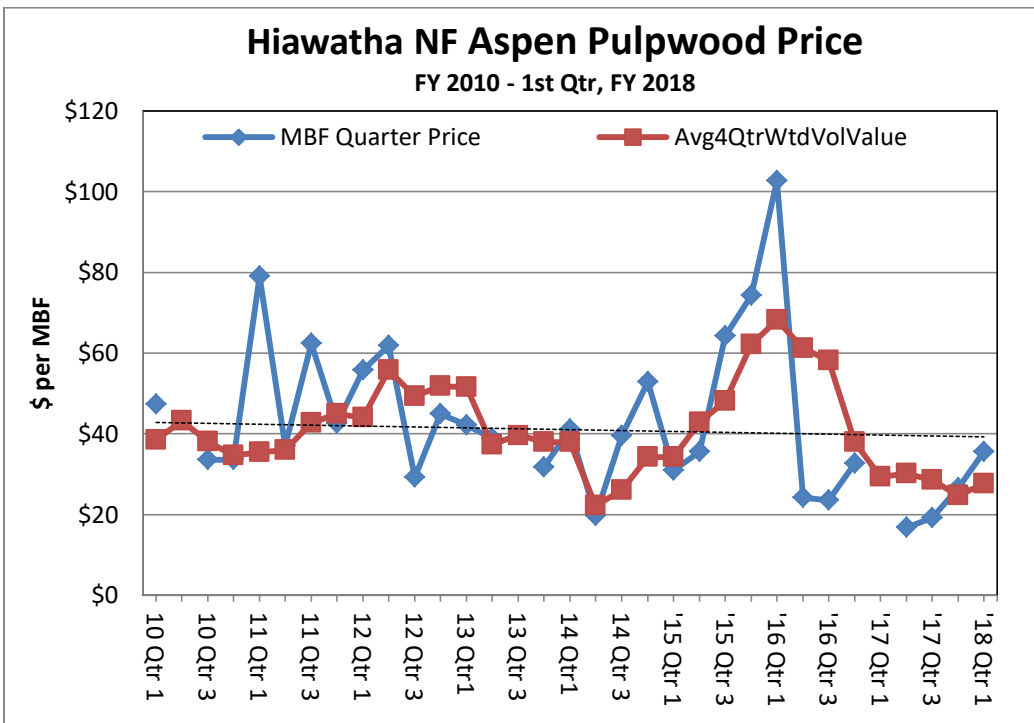
Hardwood-other pulpwood sale volume edged up from 1.4 to 1.5mmbf in the 1st quarter. Sale volumes have been close to 7.5mmbf twice in the last eight years. Like so many other Hiawatha timber products, the eight-year sale volume trend has turned slightly negative due to lower volumes in recent quarters. Like hardwood-other sawtimber, the shorter three to four-year trend has been quite negative. The erratic nature of volumes from quarter-to-quarter appears to be moderating.



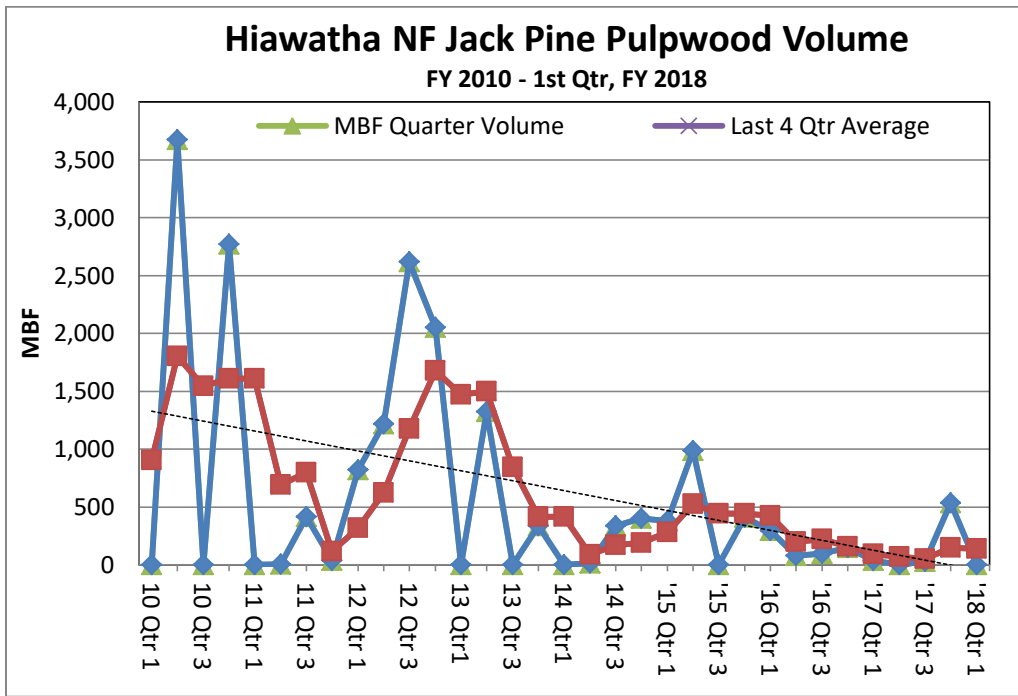
The price for “hardwood-other” pulpwood dipped to \$31.77 per mbf; it had been \$50.64 per mbf in the 3rd quarter of FY 2017 before declining to \$33.46 in the 4th quarter. The 1st quarter FY 2014 price is an anomaly or error. Other than this major exception, the price has largely fluctuated in a fairly narrow range around \$50 over the past six years, dropping as low as \$30 and rising as high as \$80. There has been a very modest increasing price trend for the period.



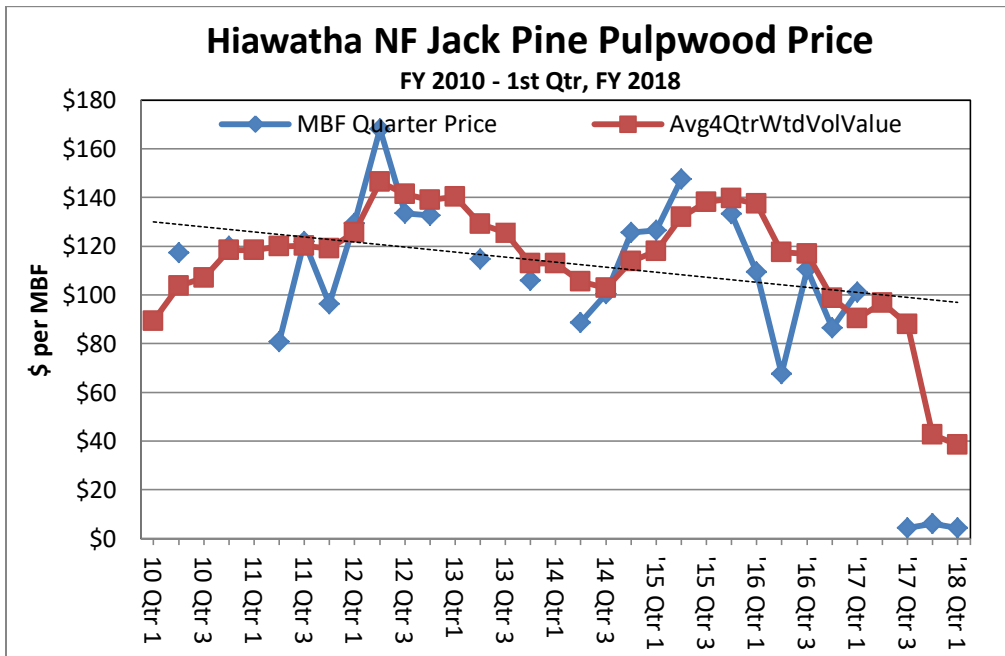
Sales of aspen pulpwood fell from an eight-year quarterly record of 3.97mbf in the 4th quarter of FY 2017 to 1.9mmbf in the 1st quarter of FY 2018. There was no sale volume in the 1st quarter of FY 2017 after which there were two modest increases. Aspen pulpwood sale volumes have been erratic, although sales have peaked in the 4th quarter for the past three years. There has been a slight downward sale volume trend over the past eight years.



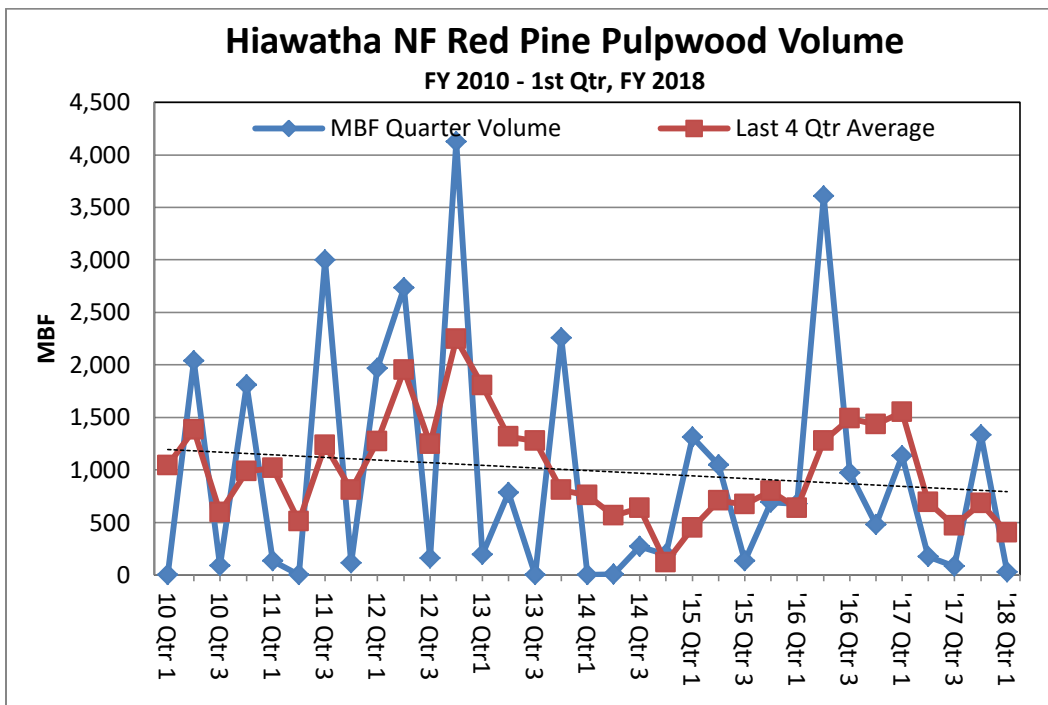
The 1st quarter price increased from \$26.54 to \$35.59 per mbf, the third quarterly price increase in a row. The price hit a record \$103 per mbf price in the 1st quarter of FY 2016. The subsequent drop in prices was not surprising, but was steeper than expected and prices have been below \$40 per mbf ever since then. The eight-year price trend is quite flat and close to \$40 per mbf.



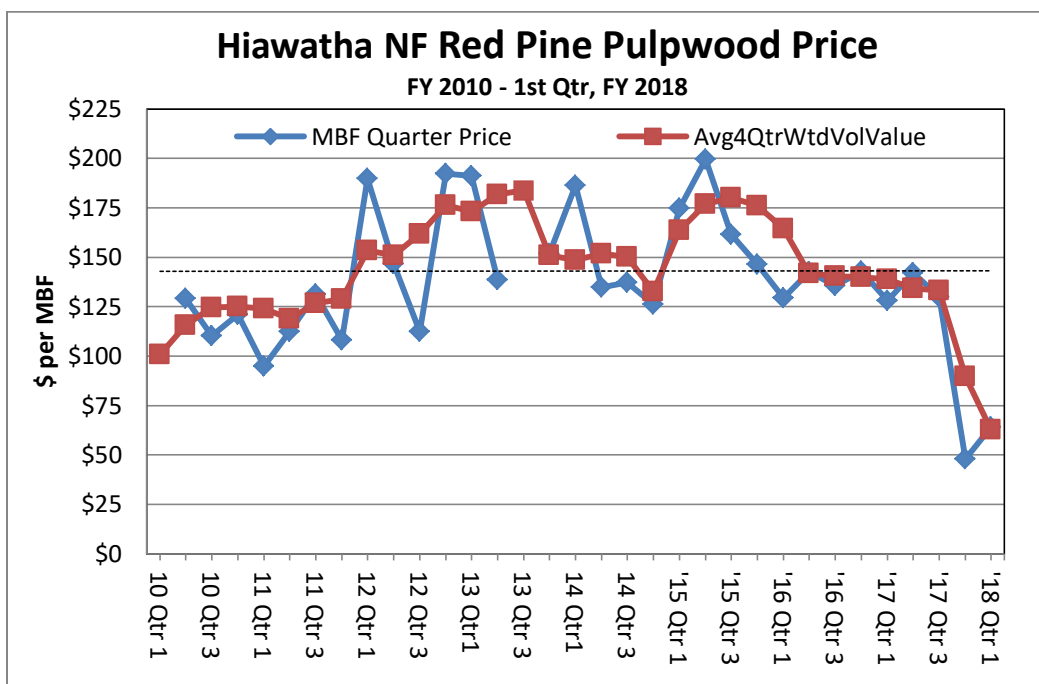
There were no sales of jack pine pulpwood in the 1st quarter. The jack pine pulpwood volume graph is very similar to the jack pine sawtimber graph – there frequently are no or negligible sales. Jack pine has had a diminishing - almost disappearing - presence in both sawtimber and pulpwood Hiawatha timber sales. There were 536mbf of jack pine pulpwood sales in the 4th quarter of FY 2017. Up until then, quarterly sales had been below 500mbf for four years except for the 2nd quarter of FY 2015 when they reached 985mbf. Sales in some upcoming quarter might reach or exceed that level; however, most quarters are likely to continue to have very negligible or no volumes.



With no sales, practically speaking, there is no 1st quarter jack pine pulpwood price although there is a price reported of \$4.45 per cord. The 4th quarter jack pine pulpwood price is reported to have been \$6.01 per mbf. The jack pine sale volume has been so low for so many quarters that any associated prices are quite suspect. The eight-year trend line is declining, but there really is not much of a basis for a trend line as there are as many quarters with no or negligible sales of jack pine as there have been quarters with credible levels of sales over the past six years.



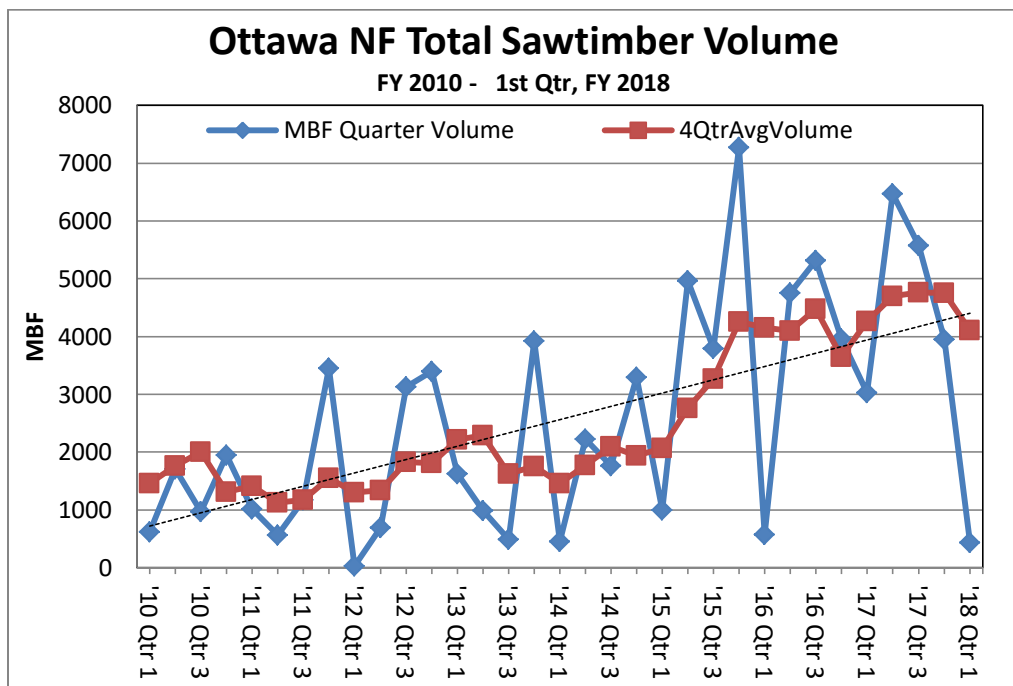
Red pine pulpwood sale volume fell back from 1.3mmbf to a negligible 26mbf in the 1st quarter. Sale volume reached 3.6mmbf in the 2nd quarter of FY 2016, but that quarter's volume is an outlier in comparison to other quarterly sales in the past four years. The high FY 2016 2nd quarter and most recent 4th quarter volumes did not reverse a slightly declining eight-year volume trend. Although this trend is not nearly as negative as jack pine pulpwood's, it does portend limited volumes (under 1mmbf) are likely in most future quarters



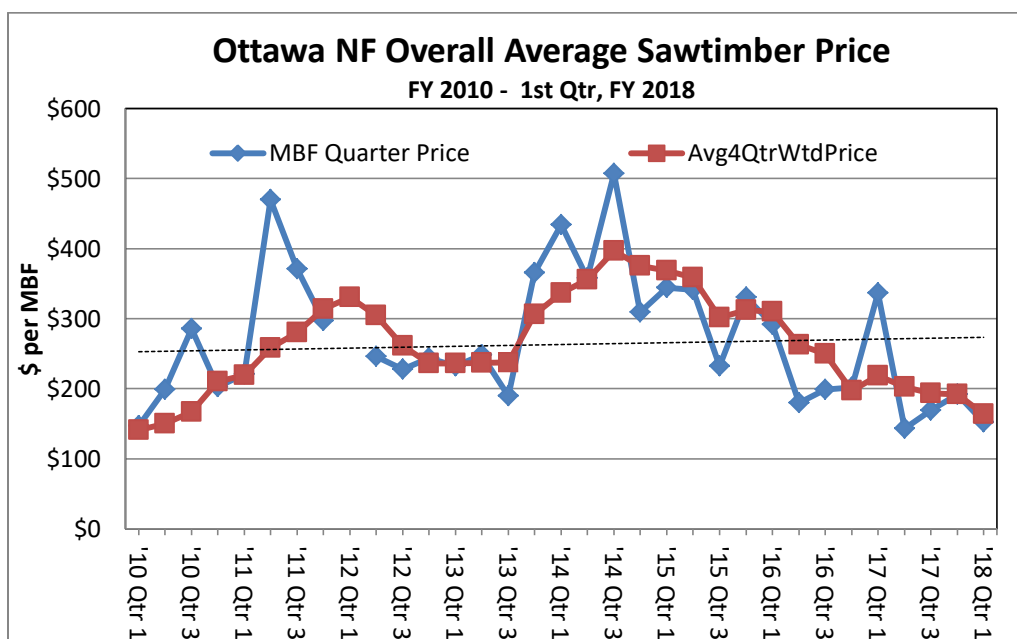
The 1st quarter red pine pulpwood price increased from \$47.89 to \$63.97 per mbf. Before falling to \$47.89, the price had been relatively stable for two years, fluctuating between \$125 to \$140. Before that, it went from \$175 to \$200 per mbf between the 1st and 2nd quarters of FY 2015. The eight year price trend is very flat; however, if FY 2010 and FY 2011 were dropped, the price trend would be declining. It also should be noted that there has been very low or no sale volumes in many quarters over the past eight years, which undercuts the significance of the price trend.

Ottawa National Forest Major Species/Product Timber Sales, FY 2010 – 4th Qtr, 2017

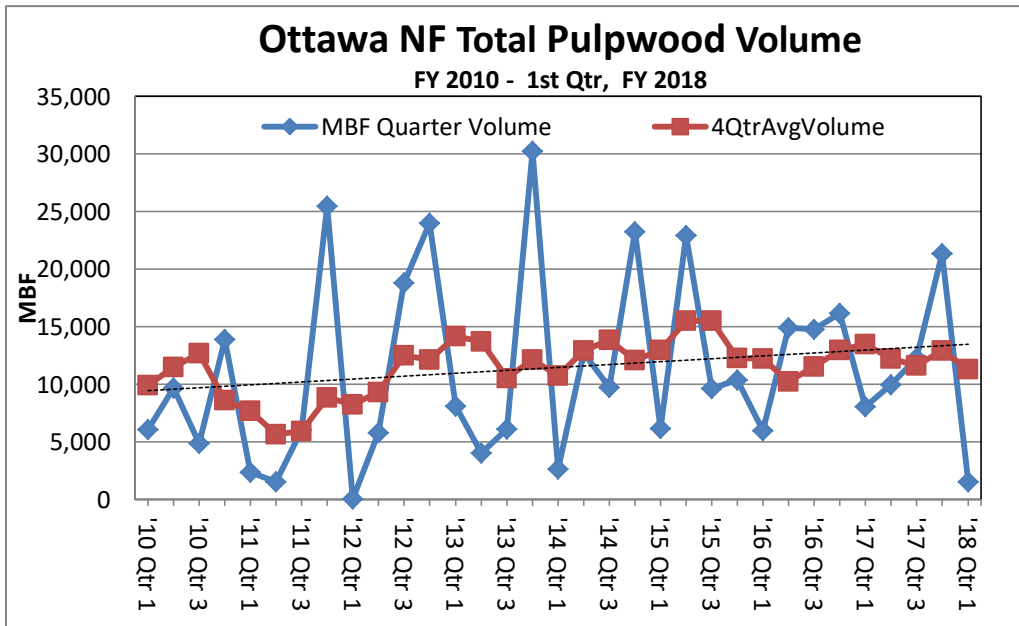
All graphs include a dotted trend line based upon the data set for the average of the last four quarters. Gaps in the blue quarter line indicate no sales in the quarter where the gap occurs. The National Forests follow the federal fiscal year from October 1 through September 30. The sale data included here goes through the fourth quarter of FY 2017 (July - September, 2017). 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>



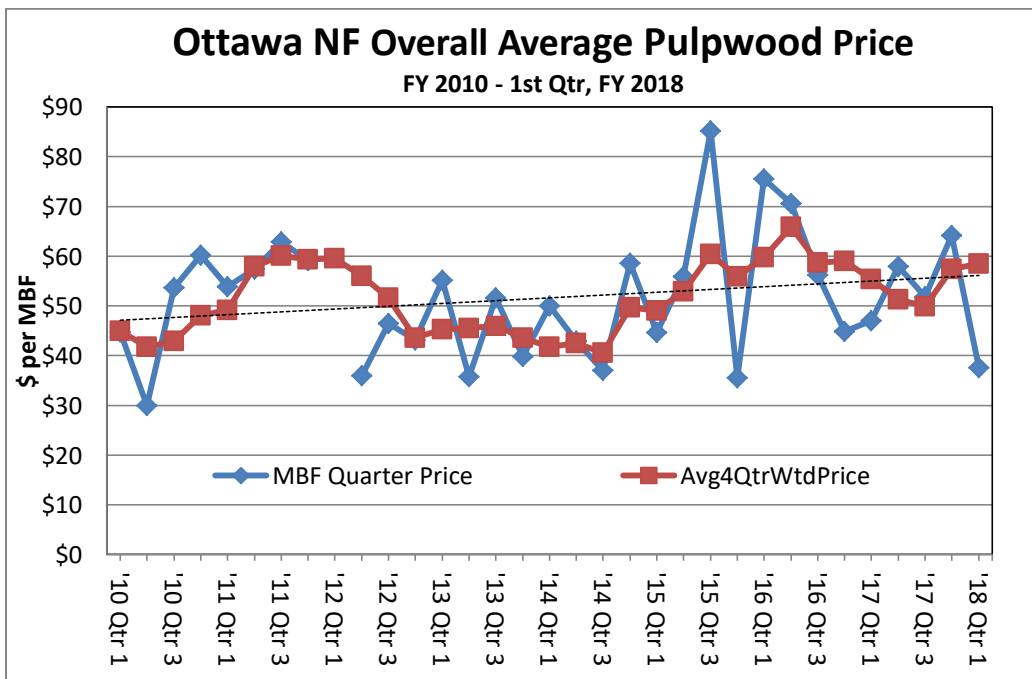
Total Ottawa sawtimber sale volume plummeted further from 3.95 to .44mmbf in the 1st quarter. It was at 6.4mmbf in the 2nd quarter of FY 2017. It was at a similar low of .6mmbf in the 1st quarter of FY 2016, but until the most recent quarter it had rebounded and been above 3mmbf ever since. Ottawa's sawtimber seven-year sale volume trend is increasing much more than the Hiawatha's or Huron-Manistee's, although Ottawa's volumes from quarter-to-quarter are somewhat erratic.



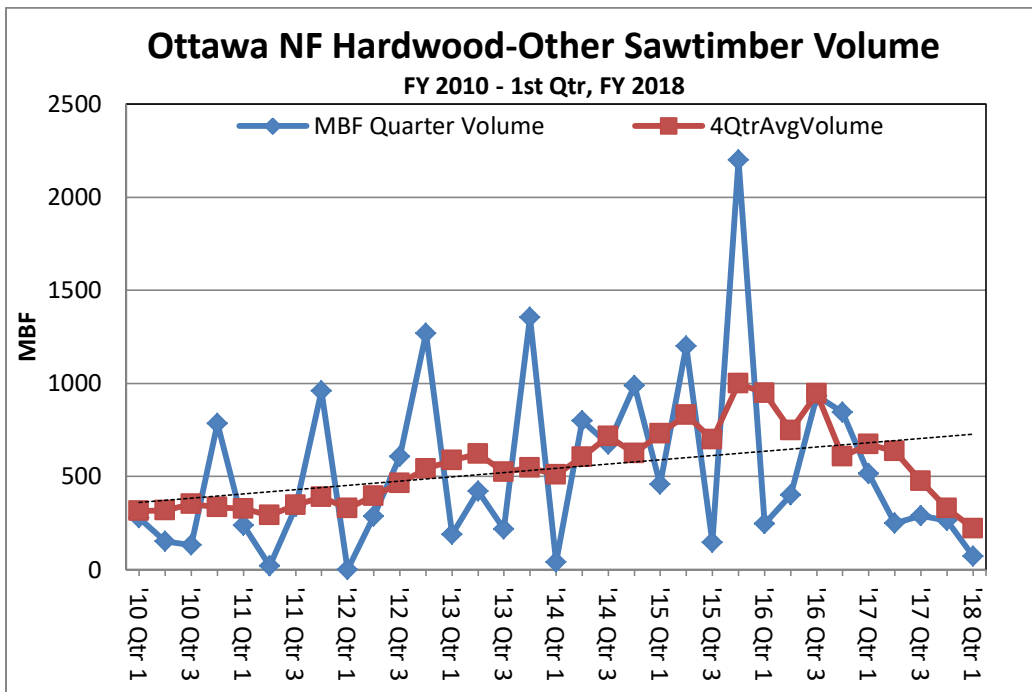
The overall average sawtimber price declined from \$192 to \$164 per mbf in the 1st quarter. There is a very slight increasing eight-year price trend, but the trend over the past three years is decidedly downward. The Ottawa sawtimber price trend is greatly influenced by sugar maple volumes and prices.



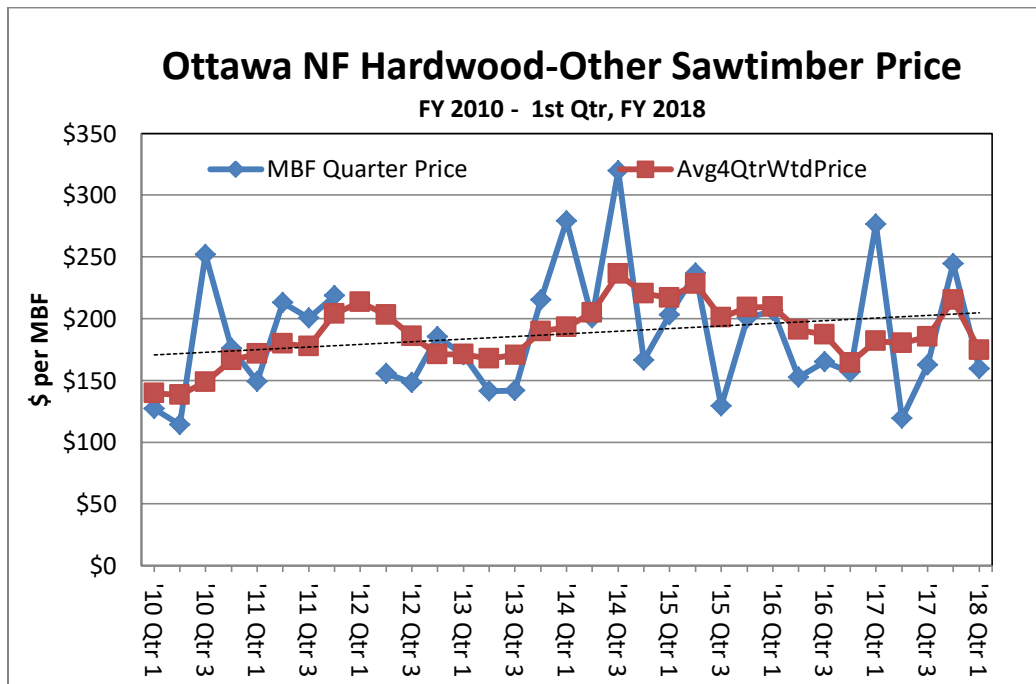
Total pulpwood sale volume rose sharply from 12.3 to 21.4mmbf in the 4th quarter, but then the volume fell even more sharply to 1.6mmbf in the 1st quarter to its lowest level in six years. It had been rising for three quarters, starting from a base of 8mmbf in the 1st quarter of FY 2017. The record high level for the past seven years was over 30mmbf reached in the 4th quarter of FY 2013. The eight-year sale volume trend has been on a modest incline. Ottawa sawtimber and pulpwood volumes have been generally highest in the 4th quarter and have often dropped sharply in the 1st quarter. Pulpwood sale volumes for the 2nd and 3rd quarters often fall between the other two quarters' volumes.



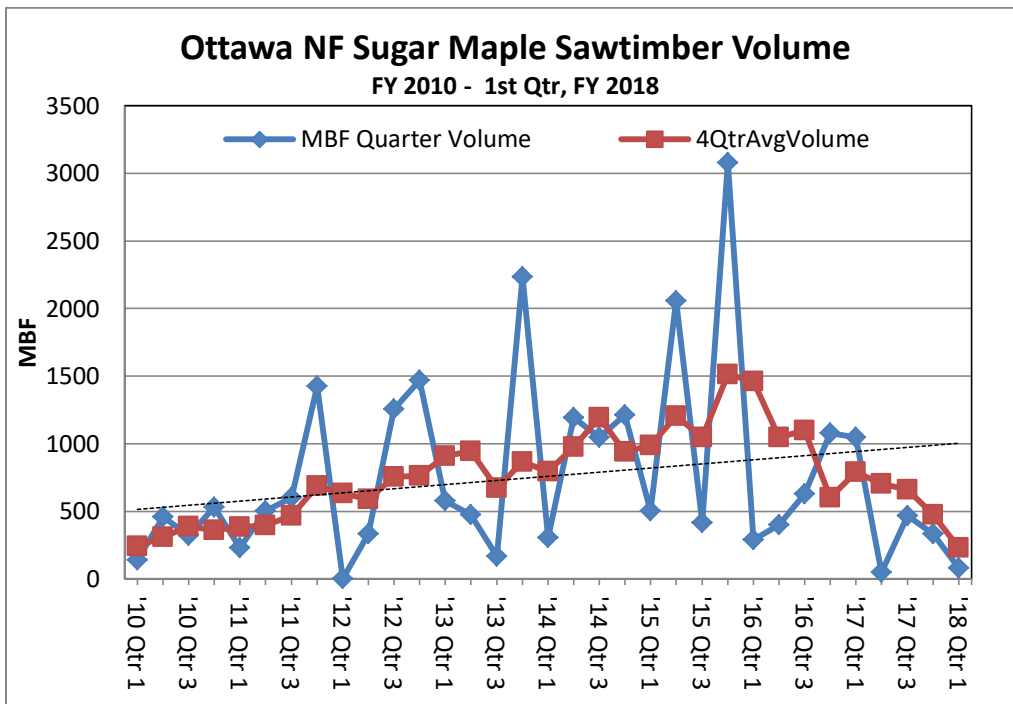
The 4th quarter overall average pulpwood price rose from \$51.88 to \$64.15 per mbf but then fell sharply (along with the volume) to only \$37.51 per mbf. This fall in price was larger than expected. Prices had plunged from a six-year peak of \$85.22 to \$35.56 per mbf between the 3rd and 4th quarters of FY 2015 before rebounding to \$75.52 in the 1st quarter of FY 2016. But fairly large swings in pulpwood prices are the exception, not the rule, for the past eight years; swings in pulpwood volumes are much greater than the price swings. There is a mildly increasing eight-year price trend. Next (2nd) quarter's overall average pulpwood price is expected to moderately increase.



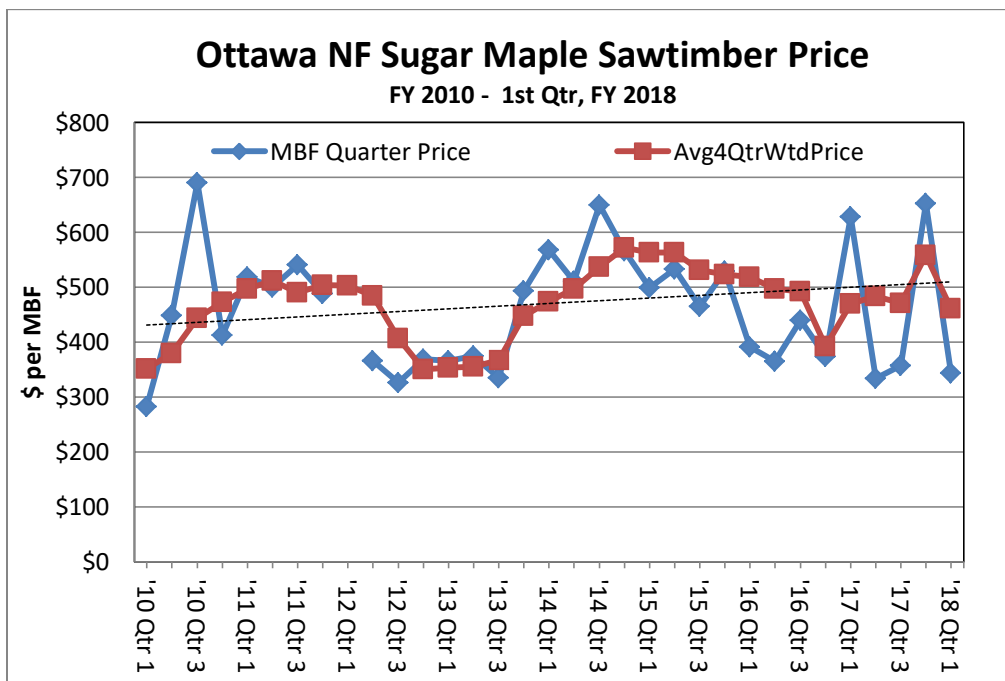
The hardwood-other sawtimber sale volume fell from 263 to only 72mbf in the 1st quarter. This was somewhat unexpected as the sale volume had been below the seven-year trend line for the previous four quarters. Sale volume reached a record 2.2mmbf level in the 4th quarter of FY 2015. In contrast to recent declines and lower volume levels, the sale volume trend has been increasing over the past seven years, largely influenced by the FY 2015 4th quarter. While sales have been below the trend line in recent quarters, they have also been less erratic than what they were a few years ago. Sale volumes almost certainly will tick upward in an upcoming quarter.



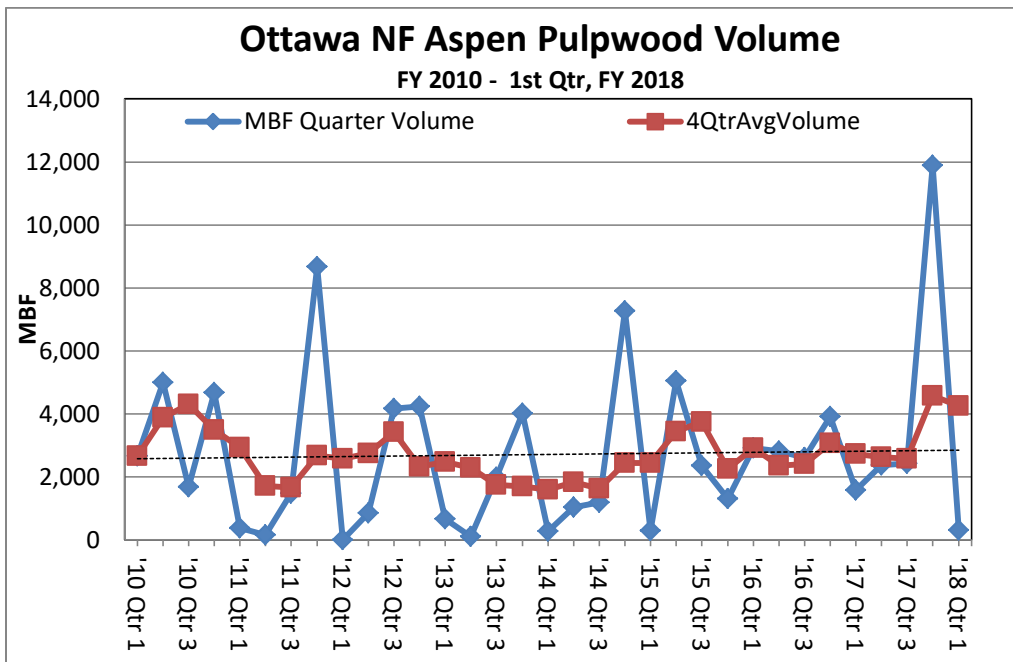
The hardwood-other mbf sawtimber prices dropped back from \$245 to \$159 per mbf. They had fallen from \$276 per mbf in the 1st quarter of FY 2017 to a low \$119 per mbf in the 2nd quarter. They were at a record high of almost \$320 mbf in the 3rd quarter of FY 2014 before dropping sharply to \$166 the following quarter. Overall, there is a modestly increasing price trend line for the past eight years. Prices were predicted to fall in the 1st quarter following two quarters of increases; now they are expected to more likely increase in the upcoming (2nd) quarter.



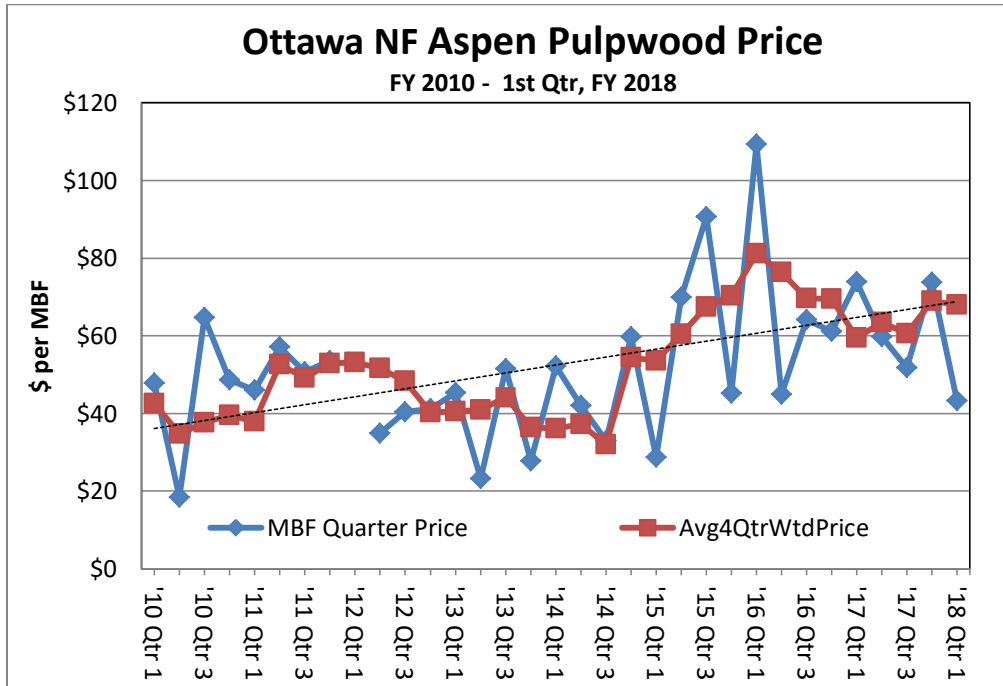
FY 2018 1st quarter Ottawa sugar maple sawtimber sale volume fell further from 332 to 79mbf. The past four quarters have been unexpectedly low, comprising the four lowest consecutive quarters in the past eight years. As with most Ottawa timber products, it is typical for the 1st quarter to have the lowest sale volume and the 4th quarter to have the highest volume. Sugar maple sawtimber sale volumes hit an eight-year record of 3.1mmbf in the 4th quarter of FY 2015 after which most FY 2016 and 2017 sawtimber quarterly volumes have been quite low. While upcoming quarters are not likely to achieve past heights, sales for some quarters should exceed at least 1mmbf.



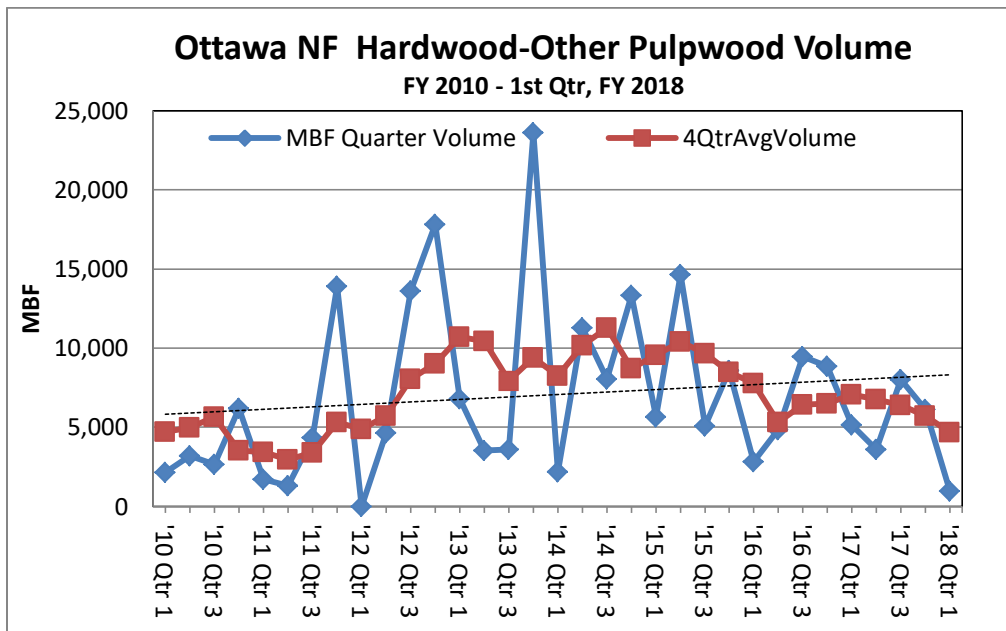
The sugar maple sawtimber price shot up from \$357 to \$652 per mbf and then came right back down again to \$344 per mbf in the most recent 1st quarter. This is almost identical to what it did one year earlier. It was at \$690 back in the 3rd quarter of FY 2010 and at \$650 in the 3rd quarter of FY 2014. There is a mildly increasing price trend over the past eight years. It is very likely prices will increase again in upcoming quarters.



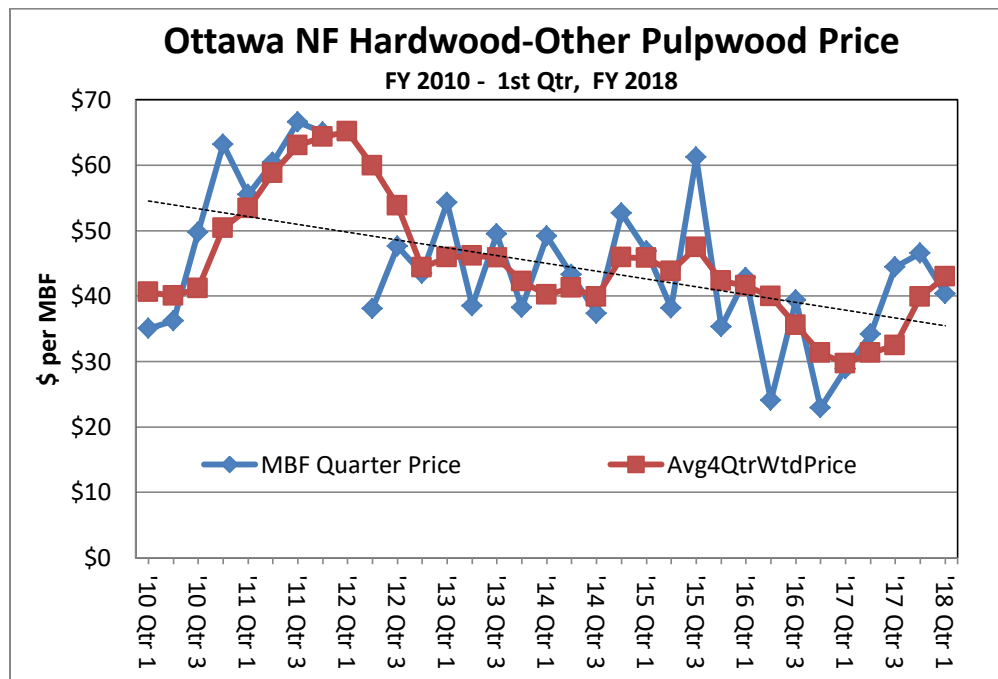
Aspen pulpwood sale volume hit a record 11.9mmbf record in the 4th quarter of FY 2017 but then plummeted back to a negligible .3mmbf in the 1st quarter of FY 2018. Before it hit the 4th quarter record, it had been in a fairly narrow range between 1.3 and 4mmbf for nine quarters. Prior to these quarters, 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 frequently than at sale values in a middle range. Sales have been as high as 8.7mmbf in the 4th quarter of FY 2011 and 7.3mmbf in the 4th quarter of FY 2014. The sale volume trend is quite flat. Sales will undoubtedly recover to above a 2mmbf level in some upcoming quarters.



The 1st quarter aspen pulpwood price decreased from \$74 to \$43 per mbf. The 1st quarter FY 2016 aspen pulpwood price shot up to a record \$109 per mbf, but the price came right back down to \$45 again in the 2nd quarter of FY 2016. The following six quarters – through the 4th quarter of FY 2017 – saw prices fluctuate within a \$50 to \$75 range. 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. Mostly price increases should be expected in upcoming quarters.



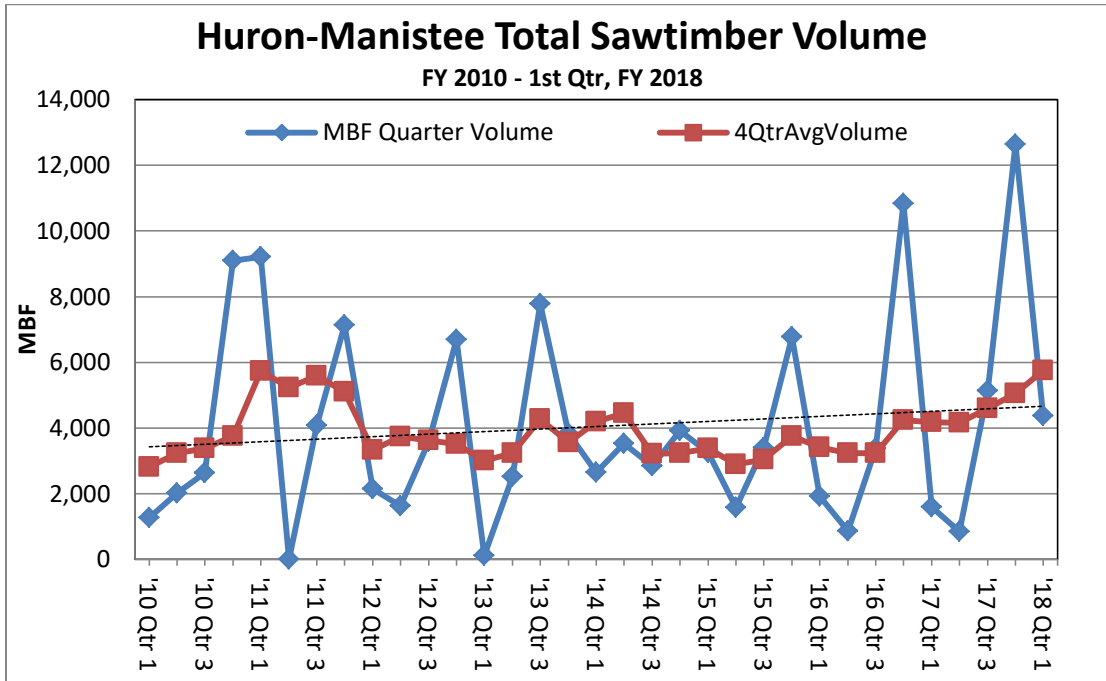
Hardwood-Other pulpwood 4th quarter sale volume declined from 8 to 6.1mmbf and then to only 1mmbf in the 1st quarter. Sale volume hit a record high 23.6mmbf in the 4th quarter of FY 2013. Volume changes from quarter-to-quarter have moderated in recent years compared to what they were in FY 2011 through FY 2013. Volumes have trended upward in the past eight years, but the trend for the past four years has been downward.



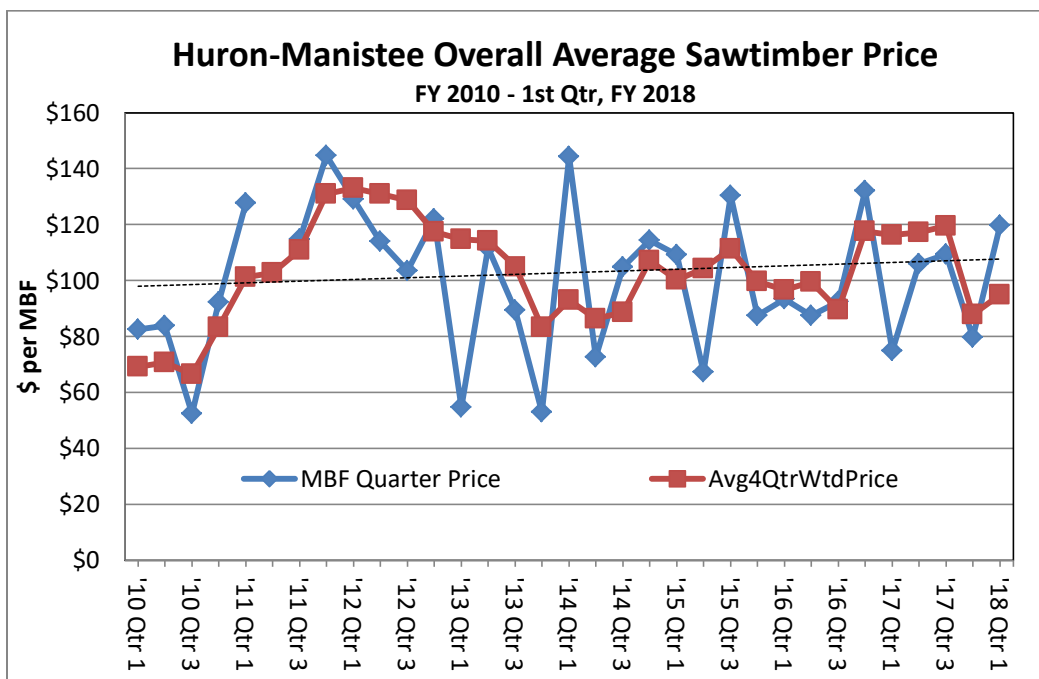
The 4th quarter FY 2017 hardwood-other pulpwood mbf price decreased modestly, from \$46.64 to \$40.35 per mbf. The decrease was expected in part because there had been four quarterly price increases in a row and the price was well above the eight-year price trend line. The price was over \$61 per mbf before falling in the 4th quarter of FY 2015 to \$35. The eight-year price trend is declining, particularly influenced by higher prices in FY 2010 and FY 2011 and the low prices in the 2nd and 4th quarters of FY 2016. Next (2nd) quarter's price is likely to decline as well.

Huron-Manistee National Forest Major Species Product Timber Sales, FY 2010 – 1st Qtr, 2018

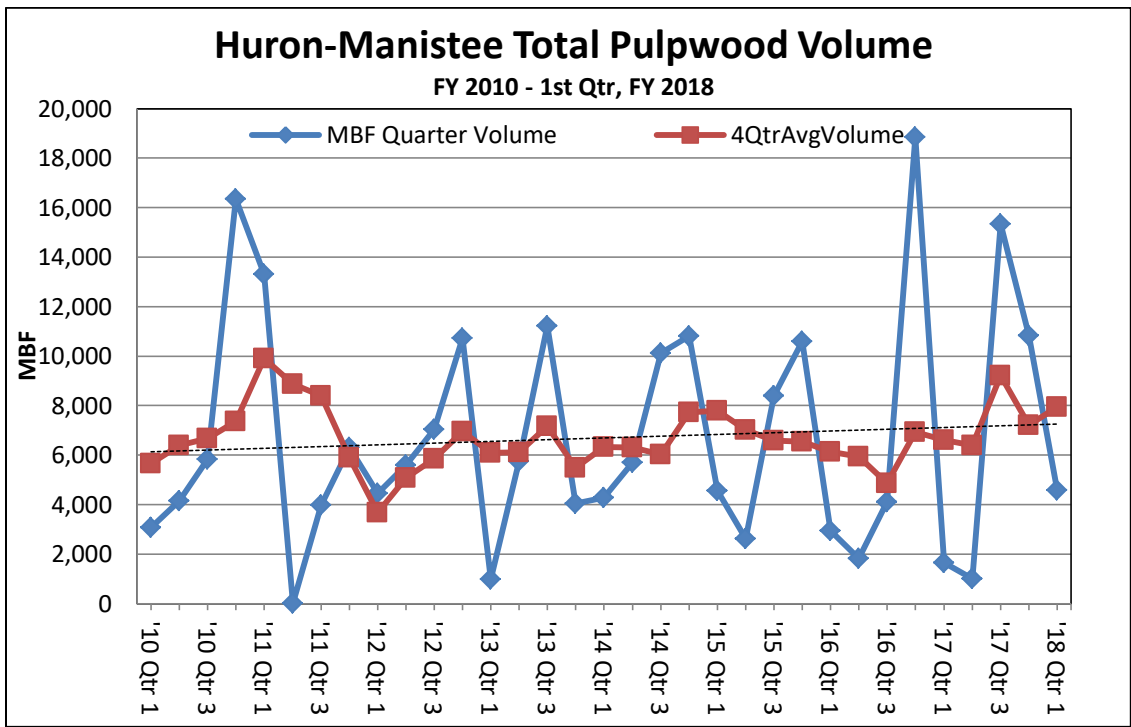
Graphs include a dotted trend line based upon the data set for the average of the last four quarters. Gaps in the blue quarter line indicate no sales in the quarter. The National Forests follow the federal fiscal year from October 1 through September 30. The most recent data included here is for the 1st quarter of FY 2018 (October through December, 2018). 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>



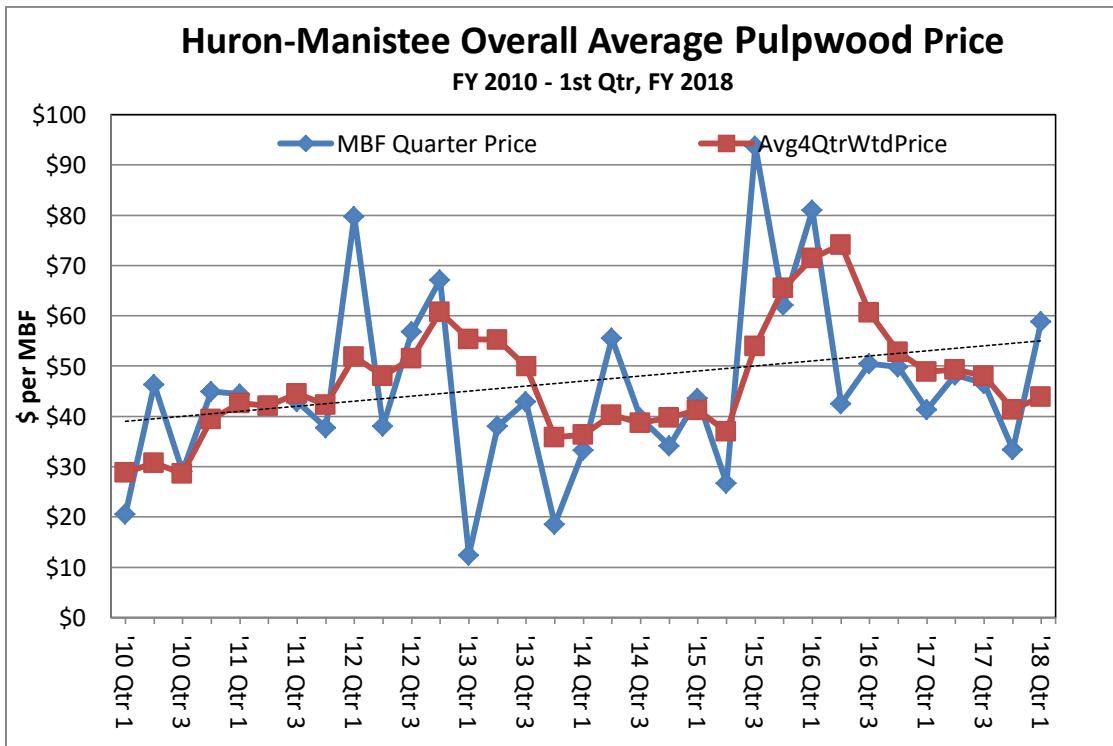
The Huron-Manistee (H-M) sawtimber sale volume hit an eight-year record of 12.64mmbf and then dropped to 4.37mmbf in the 1st quarter. The drop was not as much as it was after previous peaks. The eight-year volume trend is increasing. H-M sawtimber sale volume often peaks in the fourth quarter and then is lower in the 1st and 2nd quarters. If this pattern holds, the upcoming (2nd) quarter volume should see another more modest decline.



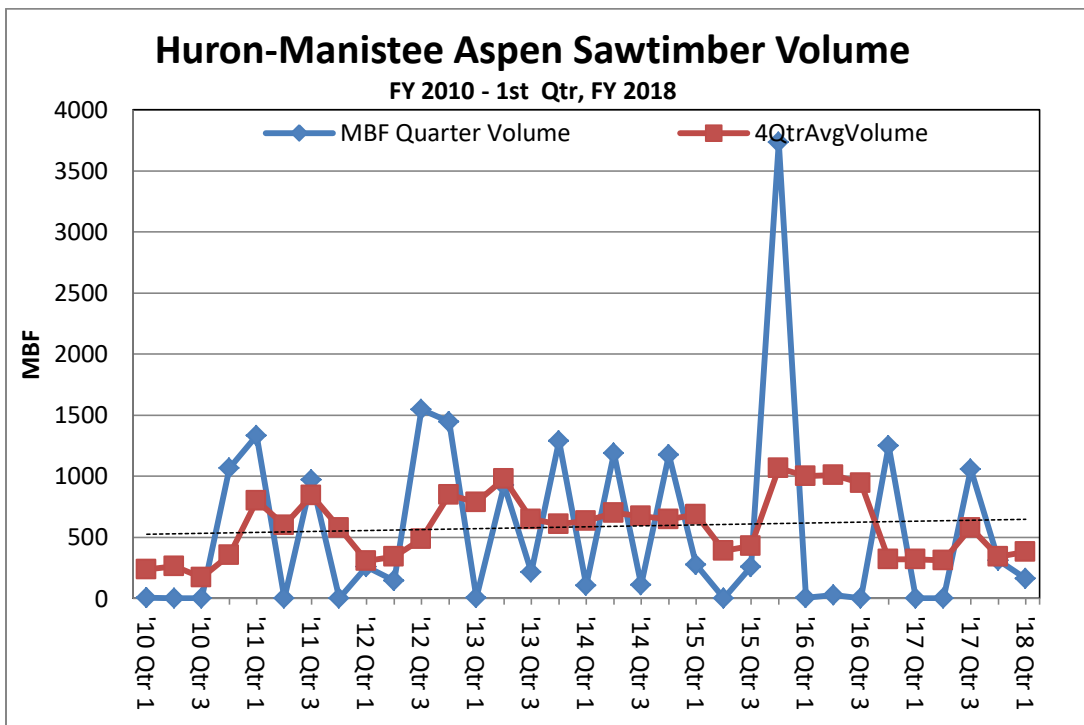
The 1st quarter overall average sawtimber price jumped from \$80 to \$120 per mbf. Generally, red pine accounts for over half of the H-M sawtimber sale volume and it is the major influence on the overall average sawtimber price.



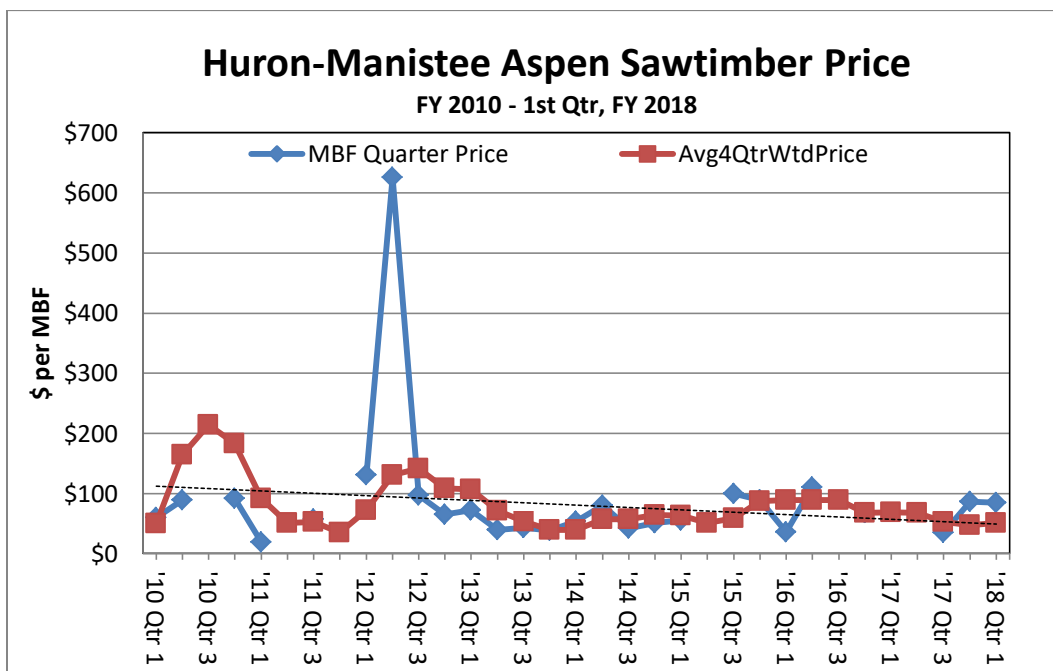
H-M quarterly pulpwood sale volume dropped from 10.8 and then to 4.6mmbf in the 1st quarter. A drop was expected. The sale volume seesawed dramatically from almost 19mmbf in the 4th quarter of FY 2016 to under 2mmbf in the first two quarters of last year and then to over 15mmbf in the 3rd quarter. A sharp increase in the FY 2016 4th quarter was expected due to the relatively low sales in the prior three quarters and a pattern of higher 4th quarter sales. The dramatic drop in sales for the first two quarters of FY 2017 exceeded expectations. Next quarter may go up or down moderately.



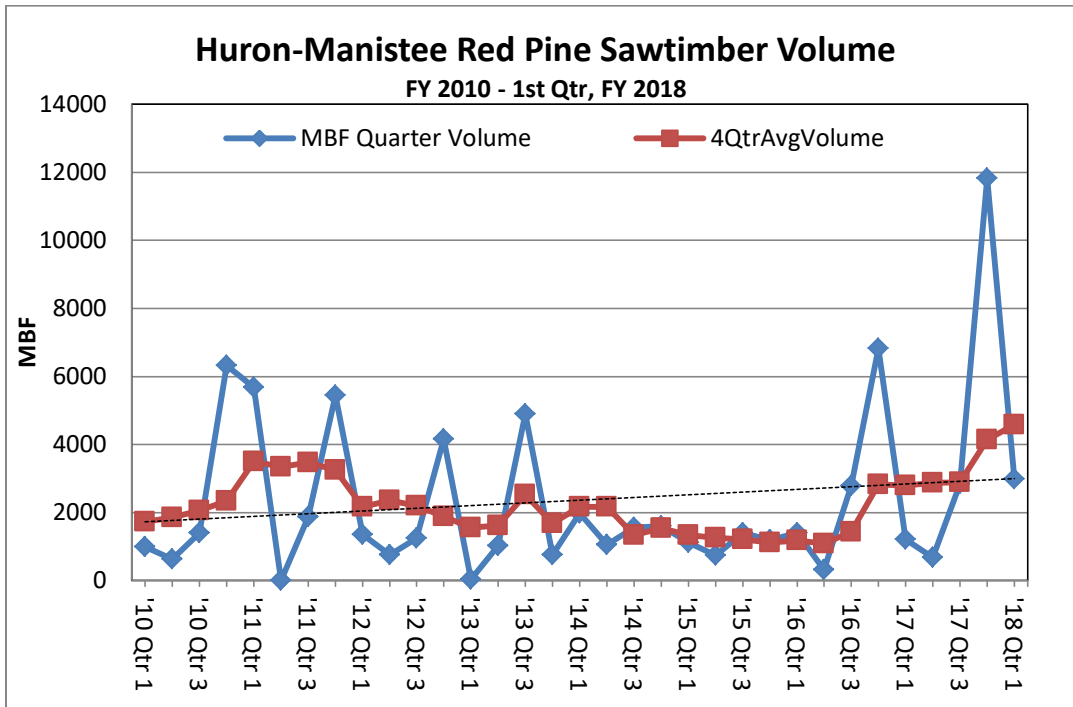
Average H-M pulpwood prices jumped up from \$33.39 to \$58.84 per mbf in the 1st quarter. This was somewhat expected. Prices had remained relatively stable and below the eight-year trend for seven quarters, bouncing back and forth between \$40 and \$50 per mbf before falling to \$33.39 and then rebounding to \$58.84. H-M pulpwood prices do not have as distinctive of quarterly patterns and are not as seasonally predictable as other forest products of the National Forests. With the latest price above the eight-year trend line, it would not be surprising if there are declines in future quarters..



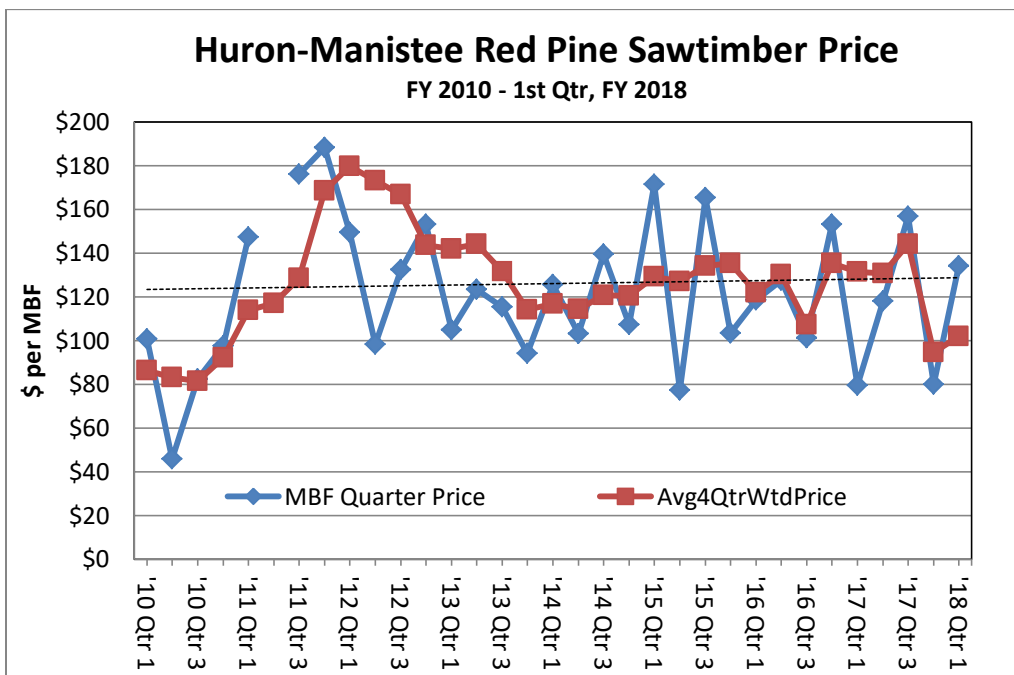
H-M quarterly aspen sawtimber sale volumes have fallen from 1,058mbf to 310mbf and then to 165mbf in the most recent (1st) quarter. This followed no aspen sawtimber sales in the 1st or 2nd quarters of FY 2017. Low or no aspen sawtimber volume in the first two quarters of the fiscal year has been typical for the H-M. FY 2016 aspen sawtimber sales were low through three quarters and then reached 1.25mmbf in the 4th quarter. FY 2015 also saw three quarters of below average sales and then a record 3.74mmbf sale volume in the 4th quarter. There is a slightly increasing sale trend over the past eight years. Sale volumes will likely be quite low in the upcoming (2nd) quarter.



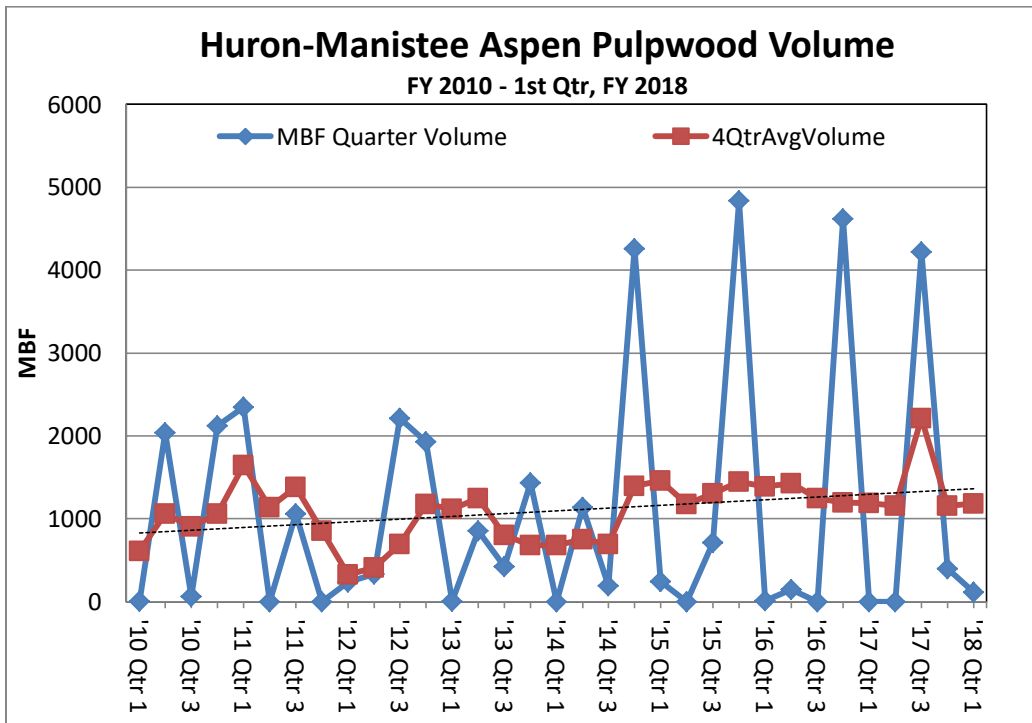
The 1st quarter aspen sawtimber prices are virtually unchanged at \$85 per mbf. There was no aspen sawtimber price in the 1st or 2nd quarters of FY 2017 as there were no sales. The last time there was appreciable sale volume was in the 4th quarter of FY 2015 when the volume was over 3.7mmbf and the price averaged close to \$89 per mbf. Many of the quarters have had little or no sale volume, so prices are somewhat suspect.



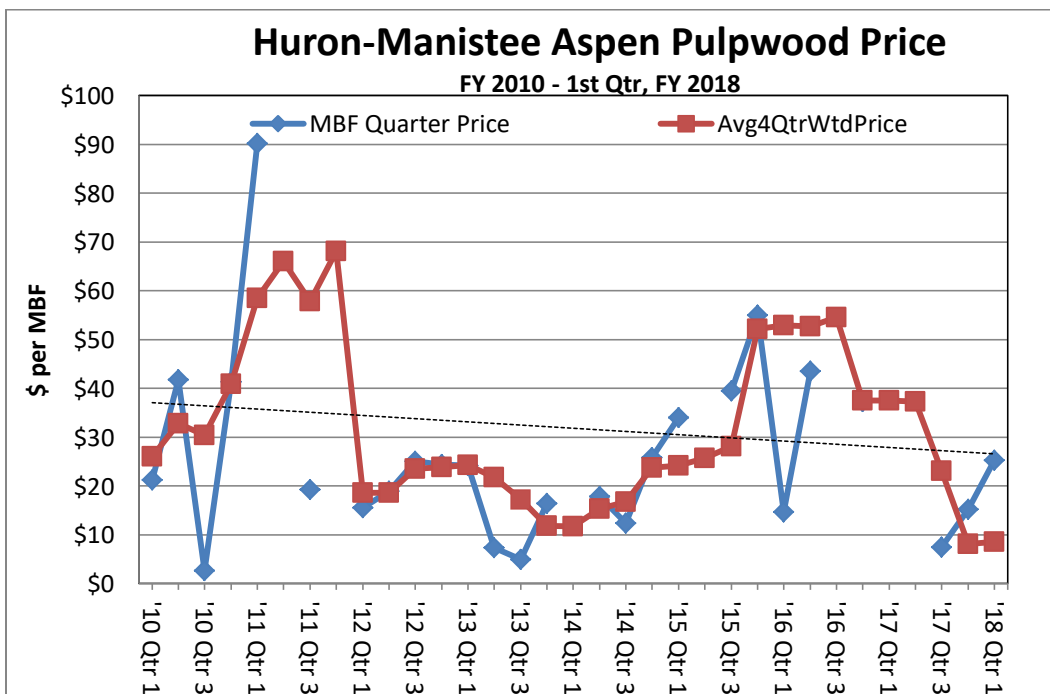
Red pine sawtimber volume hit a record 11.8mmbf in the 4th quarter of FY 2017 and then plummeted down to 3mmbf in the 1st quarter of FY 2018. Sale volumes had been fairly stable for almost three years before increasing to 2.8mmbf in the 3rd quarter of FY 2016 and then jumping even more to what was then a record 6.8mmbf the next quarter. They fell to only 1.2mmbf and then to .7mmbf in the first two quarters of FY 2017 before rebounding in the 3rd quarter. Before the record 4th quarter FY 2017 sales, there had been a slight downward sale volume trend, but the 4th quarter flipped that to an increasing trend. The most recent volume is right on the trend line; next (2nd) quarter's volume may be up or down a bit.



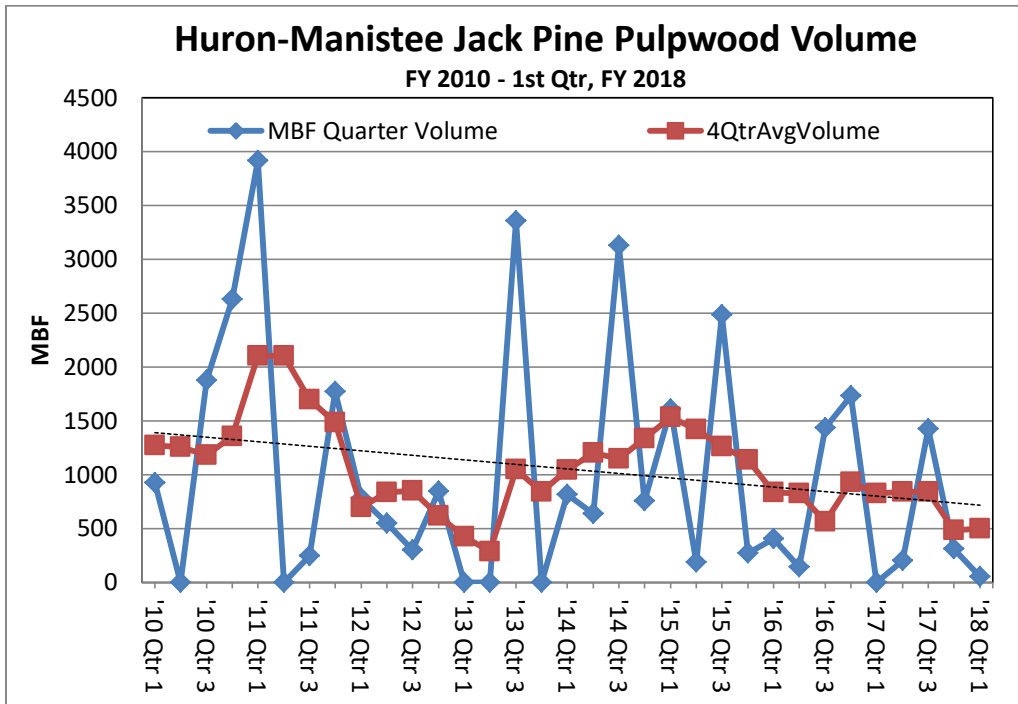
Red pine sawtimber prices fell back from \$157 to \$80 per mbf in the 4th quarter on record sale volume. They rebounded to \$134 in the 1st quarter as volumes fell to one quarter of the record volume. They have been seesawing back and forth most quarters between roughly \$80 and \$160 for several years now. Based upon this pattern, it was predicted that the price was slated to rebound upward and it did. Based upon the same pattern, next (2nd) quarter's price should drop.



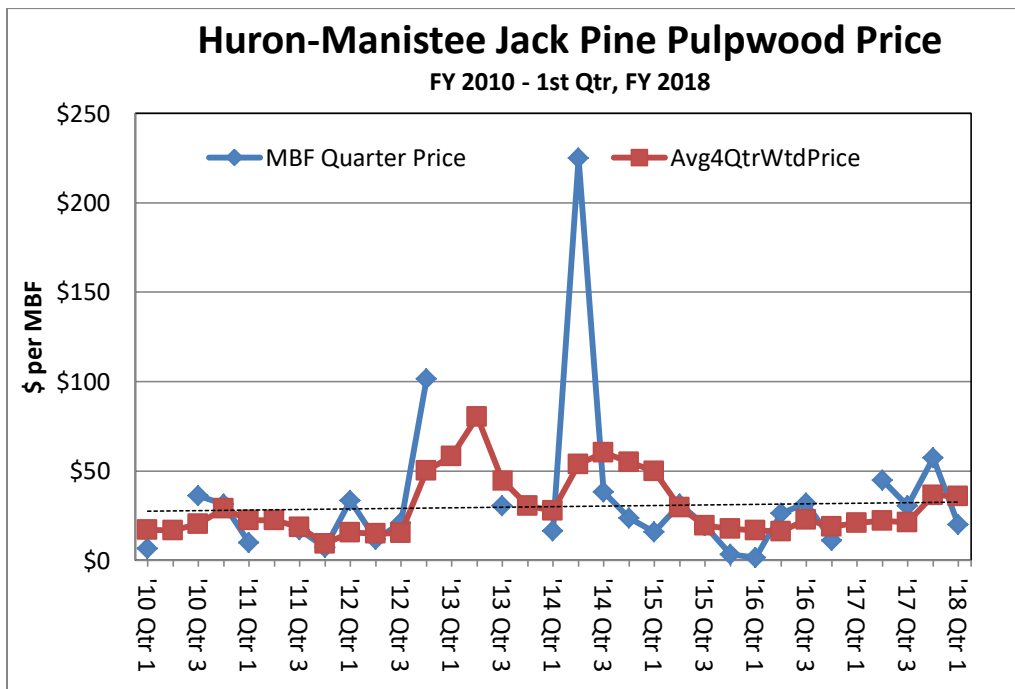
The pattern for quarterly aspen pulpwood volumes is similar to that for aspen sawtimber volumes, except there are bigger swings in the pulpwood volumes. The most recent 4th quarter sale volume plummeted from a 3rd quarter level of 4.2mmbf down to .4mmbf and then the 1st quarter volume fell further to .1mmbf. The prior three fiscal years saw high sales in the 4th quarter and negligible or no sales the other three quarters, but high sales took place in the 3rd quarter of FY 2017. It will be surprising if the upcoming 2nd quarter sales exceed 1mmbf.



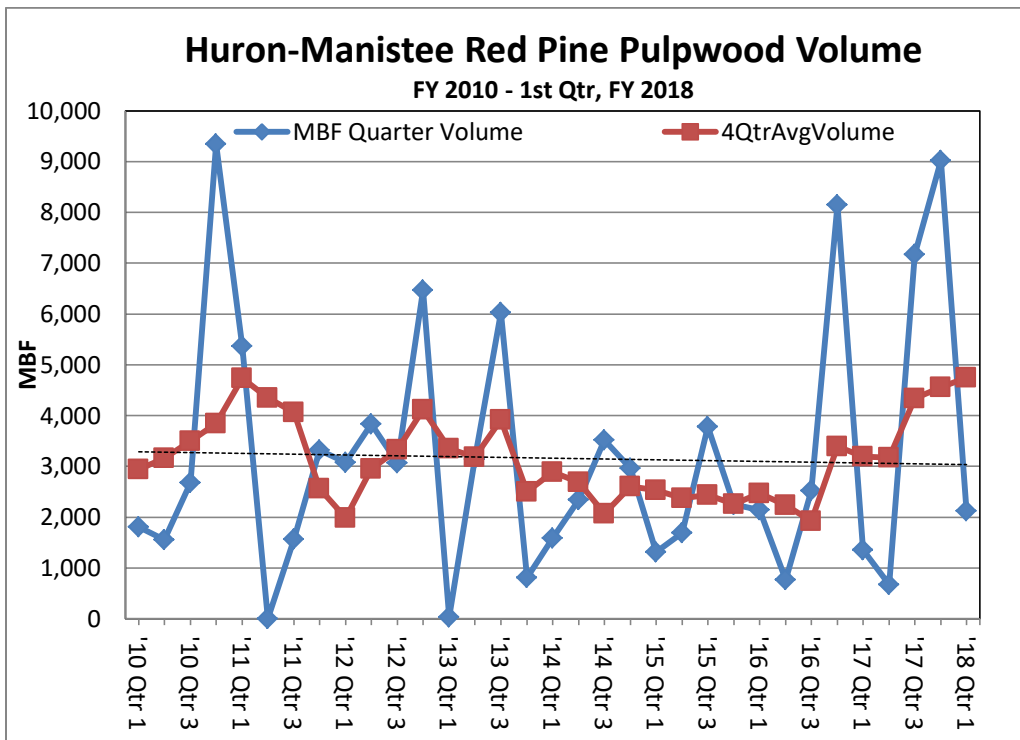
The 1st quarter aspen pulpwood price rose again, from \$15.26 to \$25.29 per mbf. It had been at \$7.49 in the 3rd quarter with much higher sale volumes. There are no 1st or 2nd quarter FY 2017 prices as there were no sale volumes. The 4th quarter, FY 2016 aspen pulpwood price was \$37.35 per mbf (it is hidden by the red "Avg4QtrWtdPrice" value in the above graph). It was at \$55 in the 4th quarter of FY 2015 on high volume, up from about \$40 per mbf in the 3rd quarter. The eight-year price trend is slightly declining; however, prices for many quarters are based on low or no sale volumes.



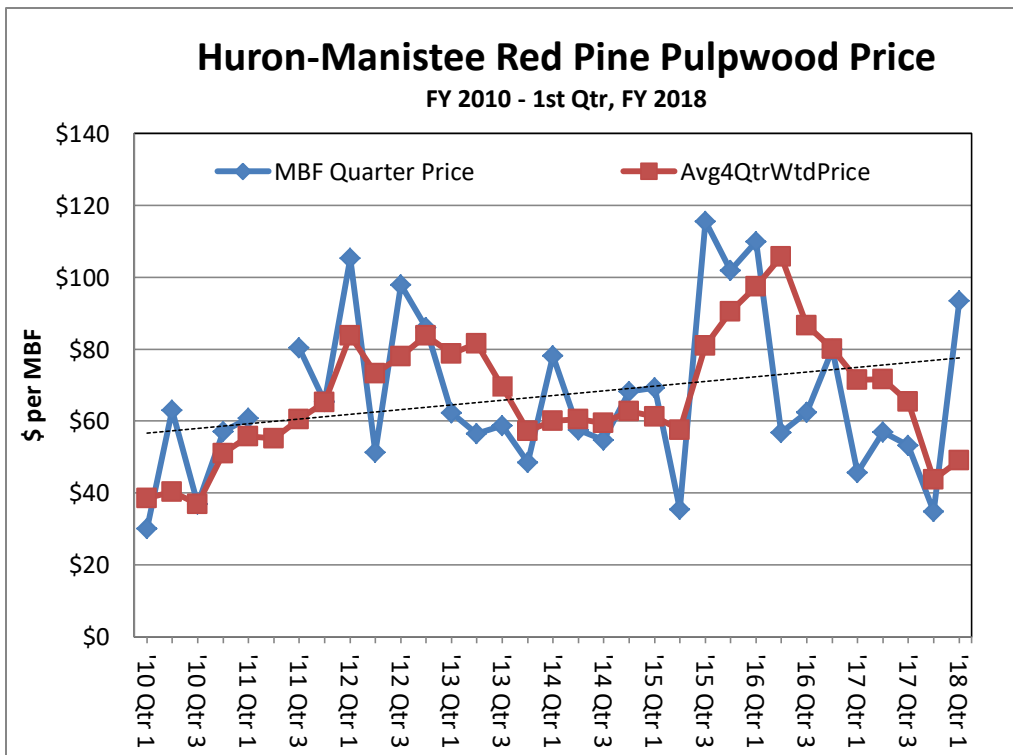
Jack pine pulpwood sale volume further dropped in the 1st quarter, from 311 to 53mbf. There was no jack pine pulpwood sale volume in the 1st quarter of FY 2017 and only 203mbf in the 2nd quarter. Overall, jack pine pulpwood sale volume has been on a downward trend and a majority of quarters have sale volume below 1mmbf. Also, as can be seen in the graph above, each successive year's peak tends to be lower than prior year peaks. Unlike many other products' sale volumes which peak in the 4th quarter, most of the peaks for jack pine sale volume have occurred in the 3rd quarter. Part of the decline in recent years may be due to more jack pine being reported in a combined sale category with red and white pine.



The 1st quarter jack pine pulpwood price fell back from over \$57 to just \$20 per mbf on very low volume. The price for the FY 2014 2nd quarter is a mistake or an anomaly and should not be considered a reliable price for the product. The eight-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.



Quarterly red pine pulpwood sale volumes experience similar, but larger swings to those seen with red pine sawtimber. Sale volumes went from 8.14mmbf in the 4th quarter of FY 2016 down to 1.4mmbf in the 1st quarter of FY 2017, followed by a further decline to .7mmbf in the 2nd quarter and then a rise to 7.2mmbf in the 3rd quarter. The sale volume went up to over 9mmbf in the 4th quarter before falling back to 2.1mmbf in the most recent 1st quarter. There is a slight declining sale volume trend over the past eight years. Sale volumes are not likely to recover much in the coming 2nd quarter.



The H-M red pine pulpwood price dropped from \$53.21 down to \$34.81 per mbf in the 4th quarter FY 2017 and then shot back up to \$93.38 per mbf in the 1st quarter. The price reached record levels over \$100 per mbf in 2015. Overall, prices for the past eight years have been on an increasing trend. It would be surprising if prices for the upcoming 2nd quarter don't decline from the unexpectedly high levels reached in the most recent 1st quarter.