



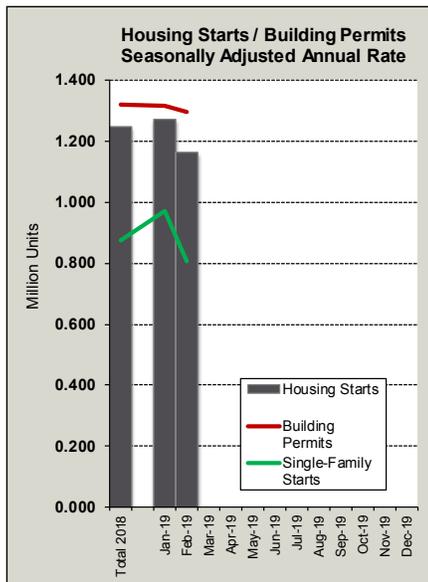
Hope springs eternal with the birth of new forests and a new baseball season. Winter is finally behind us. The late snow made for a challenging planting season, which is still ongoing for some folks. The main lesson is to be ready to go early in the season so you have more flexibility if your plans are delayed. If you're done planting, now would be a good time to plan a harvest, thinning, or spray project. Log prices have rebounded from late last year and it looks to be a good year for selling logs.

If you want to plan a timber harvest or other forest operation, please give me a call at (503) 654-2221 or send me an email at bkeller@woodlandmgmt.com. In addition to timber harvests, Woodland offers a variety of services—including reforestation, timber cruising, management plans, competition control in plantations, forestland valuations, and road maintenance. - Brent



MARKET WATCH: HOUSING, LUMBER AND LOGS

HOUSING STARTS

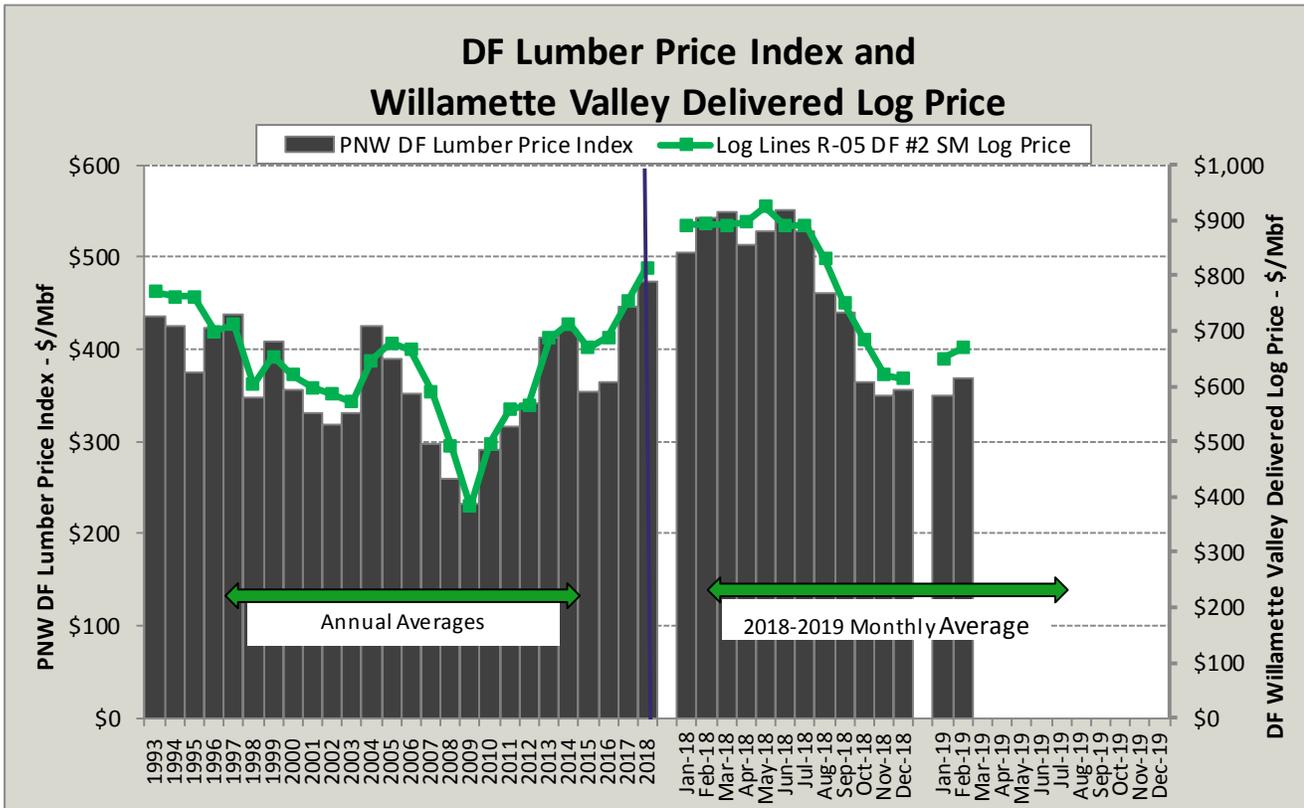


U.S. housing starts decreased 8.7% overall in February. Single-family starts dropped 17% and building permits were down 1.6%. Economists are puzzled, citing job and wage growth, new household formations, etc. as positive factors that should be leading to stronger housing starts. Costs are a factor, and perhaps the weather.... (Wall Street Journal, 3/8/19).

February 2019 Housing Starts (million units, seasonally adjusted):					
	Feb 2019	Jan 2019	Monthly Difference	Feb 2018	Annual Difference
All Starts	1.162	1.273	-8.7%	1.290	-9.9%
Single-Family Starts	0.805	0.970	-17.0%	0.900	-10.6%
Building Permits	1.296	1.317	-1.6%	1.323	-2.0%
Single-Family Building Permits	0.821	0.821	0.0%	0.886	-7.3%

Source: U. S. Census Bureau

LUMBER & LOGS



DF lumber prices stepped up in February, as shown above. Poor weather limited log delivery and helped to boost prices. Hopefully January was the bottom of the cycle. [Note that lumber and log prices are on different scales in the chart.]

- February DF #2S log prices, as reported by Log Lines, came up \$19 to \$669/Mbf, which is 2.9% above the prior month, 25.1% below February 2018, and 8.1% below the 5-year average.
- At \$369/Mbf, the DF lumber index price for February increased 5.6% over January, and was 32.1% below February 2018, and 9.8% below the 5-year average.

February 2019 Douglas-fir Prices:							
	Feb 2019	Jan 2019	Change from Previous Month	Feb 2018	Change from Previous Year	5 Yr Annual Average	Current month compared to 5 Yr Annual Average
Logs	\$ 669	\$ 650	2.9%	\$ 893	-25.1%	\$ 728	-8.1%
Lumber	\$ 369	\$ 349	5.6%	\$ 543	-32.1%	\$ 409	-9.8%

Sources: Log Lines Willamette Valley DF #2S monthly average price & WWPA Pacific NW Coast Douglas-Fir monthly



MARKET NEWS

WWPA Lumber Track Report

January Softwood Lumber production increased over December in both volume and mill utilization. When comparing January 2019 with January 2018, the volumes and utilization rates are about the same. See the chart for details. (Western Lumber Facts, 2/8/19)

Forecasting Housing Starts

In March, the U.S. Census Bureau reported revised housing starts data for 2018 at 1.318 million units, a 1% increase over the 2017 housing starts. According to a survey of five analysts, conducted by Random Lengths in January, the forecasts for 2019 ranged from 1.23 to 1.31 million units (chart to the right from Random Lengths). When the five forecasts were averaged, they indicated 1.272 million starts in 2019, a 3.5% decrease from reported starts in 2018.

Analysts pointed to tight housing supply, rising mortgage rates, a volatile stock market, and the prevalence of high rates of student and consumer debt. These factors negatively influence trust in the market and affordability. Additionally, in the 4th quarter of 2018, builder optimism began to slide.

However, the above forecasts were created in January when it was assumed that interest rates would continue to rise in 2019. In the first three months of 2019, interest rates have actually declined and analysts do not agree on where the market is currently headed. For example, Bloomberg analysts are optimistic and call the lower interest rates a tailwind in the market. On the other hand, Fannie Mae and the Mortgage Bankers Association have further reduced their housing starts forecasts in March, to 1.256 and 1.274, respectively. (Random Lengths, 1/4/19) (Fannie Mae, 3/11/19) (Mortgage Bankers Assoc., 3/21/19) (Bloomberg, 3/22/19)

Herbicide Ruling Delayed

Oregon expected to be the first state to ban the herbicide aminocyclopyrachlor (ACP) in March, after it was linked to thousands of deaths of Ponderosa Pines when it was applied in their proximity. In an unexpected turn, ACP's manufacturer (Bayer) called on the Oregon Department of Agriculture (ODA) to postpone the

Western U.S. Softwood Lumber Production 2019 Year-to-Date Total (Bbf)		Western U.S. Softwood Lumber Production Monthly Total (Bbf)	
2019 YTD Production	1.26	Jan 2019	1.26
2018 YTD Production	1.256	Dec 2018	1.031
Change from Previous Year	0.3%	Change from Previous Month	22.2%
		Jan 2018	1.256
		Change from Previous Year	0.3%
2019 YTD Production as a % of Capacity	82%	Production as a % of Capacity Jan 2019	82%
2018 YTD Production as a % of Capacity	82%	Production as a % of Capacity Dec 2018	77%
Change from Previous Year	0%	Change from Previous Month	5%

Western Lumber Facts

The Forecasts of the Analysts 2019 Housing Starts (thousands)			
	Single-Family	Multifamily	Total
National Association of Home Builders	897	371	1,268
Fannie Mae	903	362	1,265
Mortgage Bankers Association	903	385	1,288
APA - The Engineered Wood Association	850	380	1,230
RISI	920	390	1,310
Average	895 (+1.5)	378 (-0.3)	1,272 (+0.9)

() = % change from average of the analysts' projections for 2018

rule for 90 days, in order to give the company “sufficient time to provide additional facts, data and arguments” into the public record. ODA has temporarily delayed the ban on ACP, pending a public comment period that will close April 5. (The Bulletin, 3/26/19)

New Smoking Rules in Oregon

In January, the Oregon Board of Forestry and the Oregon Department of Environmental Quality (DEQ) approved rule changes allowing more controlled burns during the fall and spring months in an effort to head off massive wildfires and heavy smoke like the state experienced in the Summer of 2018.

According to the Oregon Department of Forestry (ODF), the rule changes put the onus on individual communities by calling on them to "voluntarily develop response plans" to protect people particularly vulnerable to smoke, and they include the flexibility of using controlled burns more often and to increase the opportunities for landowners to reduce wildfire risk near communities by thinning overcrowded forests and burning the woody debris. (KDRV, 3/7/19)

Wildfire Technology in the Lands Package

The Lands Package passed by Congress and signed by the president included measures to improve wildfire monitoring technology. It will require agencies to outfit fire crews with GPS locators and deploy drones to scout out and map blazes. This should lead to the ability to map wildfires in real-time. Currently, fire maps are updated daily and this makes it difficult to know where the danger zones are located in real-time. (Spokesman-Review, 3/21/19)

Oregon Completes Bond Sale for Elliott

Oregon sold \$100 million in bonds in March to pay a portion of the \$221 million Elliott State Forest's obligation to the state's Common School Fund. State Treasurer Tobias Read announced that investors from around the country quickly purchased the bonds offered at 3.83% interest over 20 years.

The bond sale is the cornerstone of a plan to retain public ownership of the Elliott State Forest and separate it from its requirement to raise revenue for the Common School Fund. Critics complain that the bond sale will cost taxpayers \$200 million over the 20-year period, and it is still unclear how the Common School Fund will be compensated for balance of the land value.

Oregon State University and the Department of State Lands are only in the beginning stages of developing a plan to turn the forest into a place for long-term, large-scale studies managed by the OSU College of Forestry. The ultimate ownership of the forest is also undecided. The university may end up owning the land or it may only manage it for the state. Detailed plans are not expected to be made public until December 2019. (Register-Guard, 3/20/19) (OPB, 3/21/19) (Cascade Policy Institute, 3/22/19)

The Devil's Staircase

In an unprecedented show of unity, every Oregon law-maker voted in favor of the public lands package in February, a package of 120 different bills that passed in both the U.S. House and Senate. It was afterwards signed by President Trump in March. The most notable legislation that will affect Oregon is a scaled-down version of the Oregon Wildlands Act, which included the creation of the Devil's Staircase National Monument. At 30,000 acres, Devil's Staircase is a remote canyon of old-growth rainforest northeast of Reedsport and would become the largest wilderness area in Oregon's Coast Range. Representative DeFazio called this area "one of the last truly wild places in the United States."

The Wilderness Package also included these changes:

- Designation of more than 250 miles of Oregon rivers, limiting development along the streams, and it will protect southwest Oregon's Chetco River from mining—this gives Oregon the most river miles protected under the Wild and Scenic Rivers Act in the Lower 48 states
- The removal of 688 acres from a Wilderness Study Area to allow for better wildfire protection of the unincorporated community of 5,000 north of Bend Oregon
- The management of a tributary of the North Umpqua River for fish habitat—called the Frank and Jeanne Moore Wild Steelhead Special Management Area
- Nationally, the package permanently reauthorizes the recently-expired Land and Water Conservation Fund that takes revenue from oil and gas drilling to support a wide range of conservation projects

(Statesman Journal, 2/26/19 & 3/12/19) (Oregonian, 3/12/19)

California Gets Bold in Wildfire Prevention

In a bold move to get a head start on fire season, California Gov. Gavin Newsom used an emergency declaration to bypass environmental regulations in preparing for the next wildfire season. Newsom claimed the declaration necessary to prevent further loss of life, as activists voiced frustration and firefighters cheered.

"The increasing wildfire risks we face as a state mean we simply can't wait until a fire starts in order to start deploying emergency resources," Newsom said in a statement ahead of declaring a state of emergency.

Newsom plans to double the amount of forestland treatments previously planned in 2019, bringing greater protection to 200 communities. He has even called on the National Guard for help. In addition to accelerating tree clearing activities, Newsom also requested innovative ideas from the private sector to help fight California fires. He wants to tap into Silicon Valley and "California's spirit of creativity" to find solutions to reduce wildfire threats. (AP, 3/5/19)

USFS Litigation Costs

Within the U.S. Forest Service (USFS) budget justification for Fiscal Year 2020, are details of over \$9 million in settlement awards and attorneys' fees paid in the last eight years, related to the Equal Access to Justice Act (EAJA), Endangered Species Act (ESA) and amounts paid in settlement for all litigation against the agency.

The EAJA was a well-intentioned law authorizing the payment of attorney's fees to citizens and groups who successfully sue the federal government. Critics allege; however, it has been abused over time by environmental groups as a low-risk means of stopping forest management for myriad reasons—many not related to the protection of wildlife or the environment. This constant barrage of litigation not only contributes to the agency's budget woes, but also to what is being called a bureaucratic paralysis, making it difficult to proceed with meaningful management objectives. (Healthy Forests, 3/23/19)

iPhone App Tests Lumber Strength

Scientists at Mississippi State University have developed a new iPhone app, called Smart Thumper that determines the strength of lumber. The App uses soundwaves or vibrations to determine wood stiffness, which correlates to wood strength. The idea is that builders can use the App to compare lumber and select the most suitable pieces of lumber for jobs that require more strength, like for headers and joists. (Forestry Source, March 2019)

CPTPP Eliminates Canadian Lumber Tariffs Gradually

The Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) is the successor to the Trans-Pacific Partnership (TPP), from which the U.S. withdrew in 2017. The remaining original 11 TPP members adopted the new trade agreement without the U.S. and the new agreement took effect January 2018. Australian tariffs on Canadian plywood were eliminated immediately, but tariffs to other countries will be phased out over time. Japan is Canada's largest trading partner in the CPTPP. The Japanese tariffs on Canadian lumber, plywood and veneer will be phased out over the next 15 years. While B.C. lumber producers have not yet benefitted from the CPTPP, they are optimistic that the agreement will bolster trade in Asia. (Random Lengths, 3/1/19)

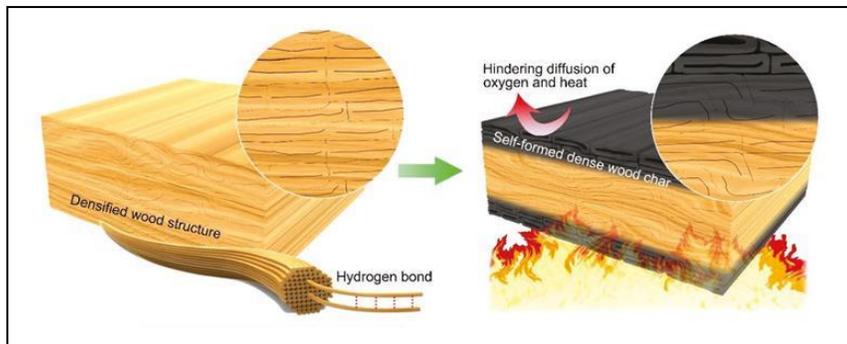
Another California Power Company Blamed for Wildfire

In recent months, Pacific Gas and Electric (PG&E) was accused of having their power lines starting the deadly Camp fire in 2018 and the wine country fires in 2017. In response, PG&E declared bankruptcy to help shield itself from a mountain of financial liability. In March, Southern California Edison (SCE) was blamed with starting the 2017 Thomas fire after two power lines slapped into each other during a period of high winds.

Although SCE previously acknowledged its equipment likely started a fire in Santa Paula in 2017, its claims that the company was probably not responsible for a second, larger blaze that began earlier in the same

evening. If the court upholds the investigative findings, SCE would likely be responsible for more than \$1.3 billion in insurance claims filed by Thomas fire victims and for the \$400 million in claims filed after the Montecito landslides. Investigators said they believed the utility could also face charges of involuntary manslaughter, unlawfully causing a fire causing great bodily injury and negligently maintaining their equipment. (LA Times, 3/13/19)

Fire-Proof Wood?



The use of structural wood in building is limited by both its flammability and susceptibility to collapse on burning. Chemistry World reports that a recent study shows densified wood can take twice as long to burn as regular wood and it is 3.5 times the strength of natural wood. When exposed to flame, the densified wood develops a layer of

char, which hinders the transfusion of oxygen and heat, and can preserve the strength of the wood for up to 82 times longer than natural wood exposed to flame. The densified wood is made by chemically softening and compressing wood to remove the spaces between the cell walls. (Chemistry World, 3/6/19)

Capturing More Carbon

A new study has added to a growing body of evidence that young temperate forests may be better at pulling CO₂ out of the atmosphere than older, more established rain forests.

Researchers at the Birmingham Institute of Forest Research in the United Kingdom modeled carbon storage in old-growth and regrown forests between 1981 and 2010 using recent data on forest ages as well as the latest global land cover change data set produced by the University of Maryland. Their results reveal that intact, old-growth forests sequestered 950 million to 1.11 billion metric tons of carbon per year while younger forests—those that have been growing less than 140 years—stored between 1.17 and 1.66 billion metric tons per year.

The researchers explain that recently harvested and replanted forests receive more sunlight, which promotes quick growth. These trees and plants were able to extract carbon from the air and incorporate it into their biomass more quickly than mature trees that must contend with crowding and less sunlight. (Pacific Standard, 2/27/19)