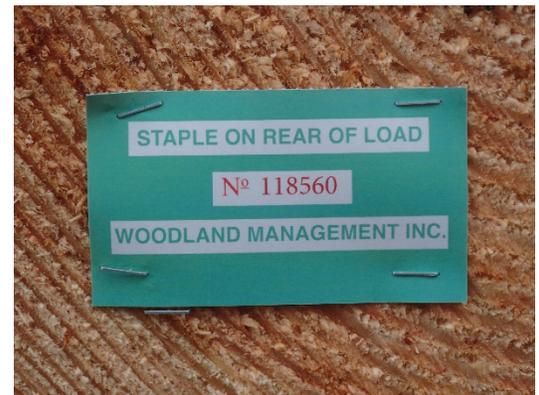




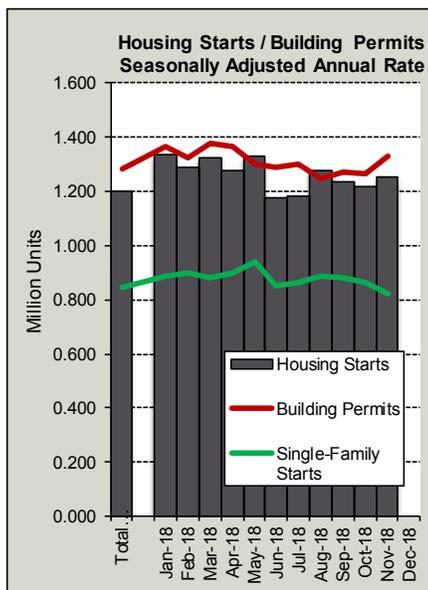
Well, the rough weather of late is great if you're selling logs, as buyer's inventories get strained, but not so great if you're trying to get trees in the ground, as snow covers planting units and slows down lifting at the nurseries. Such is the life of a forest manager. When the market hit well publicized 20-year highs last year, many folks became motivated to harvest their timber, and by the time they were ready to harvest, had missed the market peak. Current prices remain relatively high, but if you want to hit the next peak, don't wait until it comes, or you might miss it. Get your ducks in a row now.

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

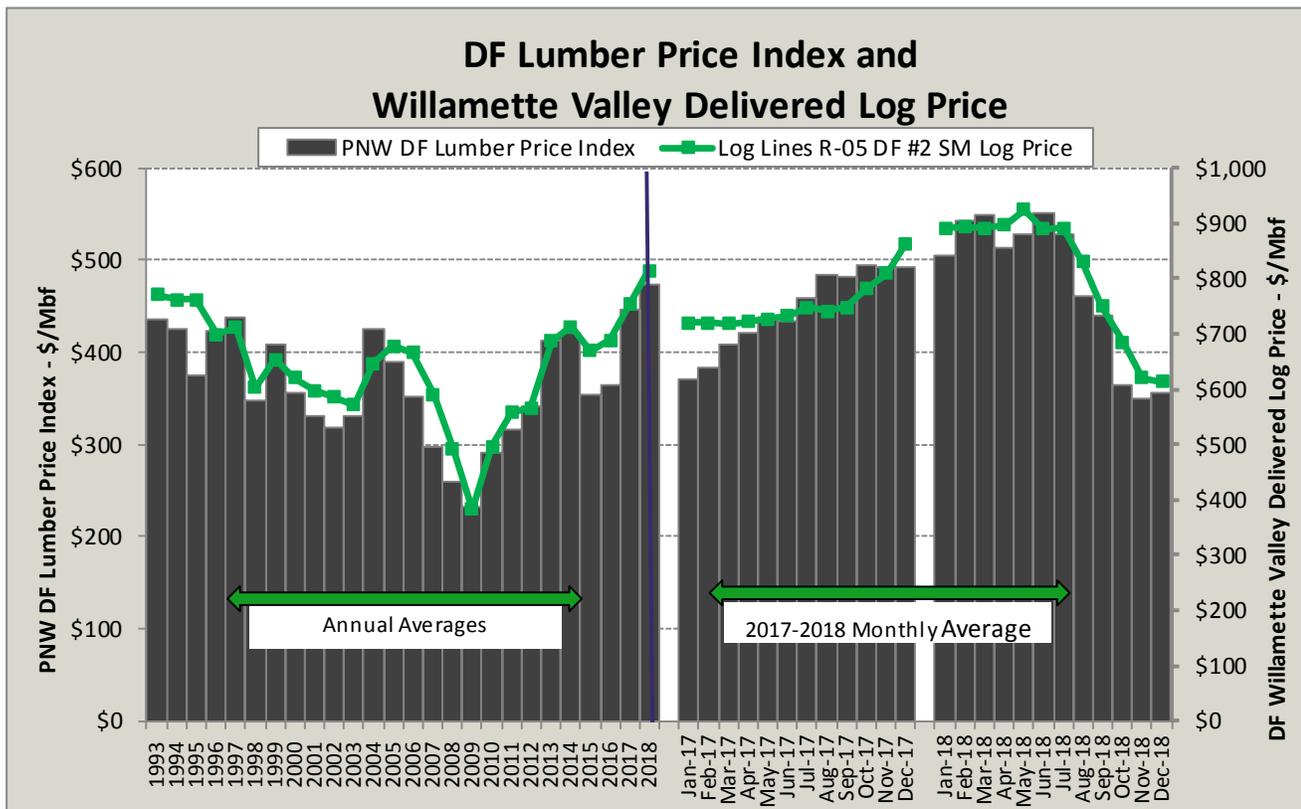


January housing start information was not released by the US Census Bureau in January due to the government shutdown. This information is dated.

	Nov 2018	Oct 2018	Monthly Difference	Nov 2017	Annual Difference
All Starts	1.256	1.217	3.2%	1.303	-3.6%
Single-Family Starts	0.824	0.864	-4.6%	0.948	-13.1%
Building Permits	1.328	1.265	5.0%	1.323	0.4%
Single-Family Building Permits	0.848	0.847	0.1%	0.864	-1.9%

Source: U.S. Census Bureau

# LUMBER & LOGS



DF lumber prices increased a bit in December, while log prices had another slight drop, as shown above. Log prices fell a few dollars and lumber prices were up a few dollars – perhaps this is the bottom. [Note that lumber and log prices are on different scales in the chart.]

- December DF #2S log prices, as reported by Log Lines, dropped \$8 to \$614/Mbf, which is 1.13% below the prior month, 28.9% below December 2017, and 15.6% below the 5-year average.
- At \$355.56/Mbf, the DF lumber index price for December increased 1.8% from November 2018, 27.8% below November 2017, and 13% below the 5-year average.

December 2018 Douglas-fir Prices:							
	Dec 2018	Nov 2018	Change from Previous Month	Dec 2017	Change from Previous Year	5 Yr Annual Average	Current month compared to 5 Yr Annual Average
Logs	\$ 614	\$ 621	-1.1%	\$ 863	-28.9%	\$ 728	-15.6%
Lumber	\$ 356	\$ 349	1.8%	\$ 492	-27.8%	\$ 409	-13.0%

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

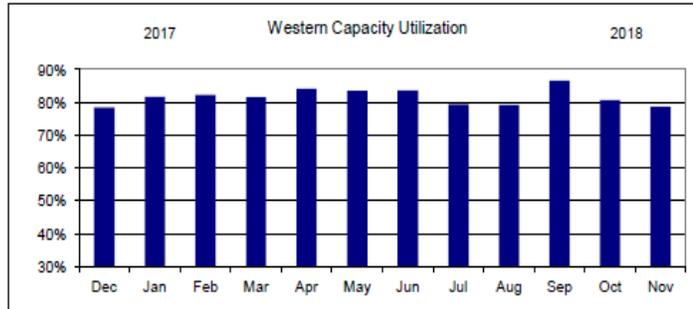


## MARKET NEWS

### **WWPA Lumber Track Report**

Early data indicate that western U.S. softwood lumber production in November was 1.106 Bbf, a 2.7% drop from November 2017 and 15.2% lower than the month prior. WWPA also reported that utilization dropped below 80% in November.

While November data shows a slowdown, overall 2018 U.S. lumber production was up 4.8% from 2017. Averaged across the first ten months of the year, U.S. mill utilization held steady at 87%, an increase of one percentage point over 2017.



Coastal mills reported 84% utilization over the first ten months of 2018, which is five percentage point higher than last year. (WWPA, 1/4/19 & 1/15/19) [Note: We generally believe mills begin to have pricing power when utilization exceeds 80%.]

### **Oregon Considers Timber Property Tax Change**

A bill was been introduced in January in the Oregon Legislature (HB 2152) that would sunset all special forest tax assessments utilized by Oregon timberland owners to be able to afford to manage their forests under Oregon's land use laws. The bill is currently in the House Committee on Revenue and it is uncertain whether and how it will proceed. However, it is broad-ranging and could be damaging to timberland owners.

Oregon's Land Use Laws recognize the public value of keeping forests as forests. The current tax structure for forest owners is designed to allow them to keep forests as forests by taxing forestland at a favorable rate based on land value for forestry. The forest owner is taxed at time of harvest, under the timber harvest tax, when revenue to pay the tax is available. If passed, HB 2152 would tax a forest owner when there is no forest income to pay the tax. To reduce tax burdens a landowner may need to harvest timber early to reduce the value of the property for a lower tax, convert the forest to a use with less tax burden, or convert the forest to a different use that has a value equitable to the tax burden. None of these options facilitate land use goals to keep forests as forests.

The Oregon Small Woodland Association (OSWA) is encouraging all family forestland owners to contact their legislators to let them know how it will impact their ability to own timberland and continue to manage it for timber and other natural resource benefits.

## **Housing Market Refreshed**

Recently reduced interest rates are being credited with a fresh breeze of homebuyers in the U.S.—now 4.5% compared to 5% in December 2018. The number of home loan applicants rose 13.5% for the week ending Jan. 11, 2019 from the week earlier. Economists also note that the rate of home price increases is slowing as incomes are rising and home inventory is increasing. While there is still some level of uncertainty, there is also some anticipation of a robust Spring housing market. Yahoo Finance reported, “After a months’ long slowdown, the U.S. housing market may have bottomed.” (Yahoo Finance, 1/17/19)

## **Home Remodeling Remains Strong**

The National Association of Home Builders’ (NAHB) reported continued strength in its January 2018 survey of builders. The survey looked at several components of the remodeling industry: major additions and alterations, minor additions, alterations, home maintenance and repair, calls for bids, 3-month work commitment, and backlog. “Many of the fundamentals for the remodeling market, including demographics and economic and employment growth, remain favorable,” said NAHB Chief Economist Robert Dietz. “However, remodelers continue to face challenges in keeping their prices competitive while dealing with the increasing costs of labor and building materials.” (NAHB, 1/17/19)

## **Overall, Lumber Sales Were Up in 2018**

Despite the big price spike, Random Lengths reports that its retailer survey showed revenues and profits were up in 2018, but expectations for 2019 are down. In the table below, we show the percentage of western retailers reporting up/same/down to the survey questions (Random Lengths, 11/30/18)

	Up	Same	Down
2018 Wood Product Sales in \$ v. 2017	75	12	13
2018 Wood Product Margins v. 2017	50	25	25
2018 Company Profits v. 2017	75	0	25
Sales Expectations for 2019 v. 2018	38	37	25
Inventory Levels in \$ 11/18 v. 11/17	50	0	50
More optimistic than a year ago?	38	12	50

## **Sudden Oak Death Threatens Conifers**

Oregon’s Sudden Oak Death (SOD) task force recently hired Mason Bruce & Girard to determine the cost of treatment, lost timber value due to that treatment, the cost to certify exports as being SOD-free, effects on tourism and impacts to landowners, and cultural values of Indian tribes.

The pathogen that attacks tan oaks has spread from nine acres in 2001 to over 500 acres in 2018, It can also cross-breed with the pathogen EU1, from Europe. That is an aggressive strain that attacks Douglas-fir. The cross-bred variant could put Oregon forestry at risk.

If the quarantine area spreads, there is fear that that any plant product would not be purchased in other countries without an official declaration that the item is SOD-free. This could affect all of the state’s plant-

based exports—from timber to nursery stock. Read more about the current area of quarantine, means of detection, and treatment protocols on Attachment 4. (Curry Coastal Pilot, 1/1/19)

### **Fire Fighters for Hire**

Since the 1980s, the Forest Service began contracting with private firefighting companies to assist in fire suppression. The private firefighting industry has grown to over 150 such companies, employing more than 12,000 crew members in the U.S.

Recently, the private insurance industry has begun offering private firefighting services and pre-fire mitigation on its home policies. Many insurance companies offer this service complimentary.

Intermixing the private crews with the existing incident management organization can sometimes bring conflict, depending on the fire status and the organization in command. Some jurisdictions view the insurance company crews as personnel that need to be protected, rather than fellow firefighters engaged in the fire fight. “It’s a common thing—no big deal. We rarely turn them away,” said Scott McLean, public information officer for CAL FIRE, “But if there’s an evacuation order for the area the house is in, they cannot come in.” (Boise State Public Radio, 12/31/18 & Wildfire Today, 1/3/19)

### **Declining Softwood Lumber Trade**

Overall global trade of softwood lumber in the first nine months of 2018 was down 2.5% as compared to the same period last year. China, Japan, and the United Kingdom reduced their imports, while the U.S. and continental Europe increased their imports in 2018. These are some of the highlights:

#### **North America**

After U.S. lumber imports reached a 10-year high in 2Q2018, volumes fell 3.5% in 3Q2018, which was still 10% more than in 2017. The Canadian share of imported softwood lumber has fallen from 95% of total softwood imports in 2016 to 91% in 2018. Lumber prices in the U.S. plummeted during the summer and fall, with major grades falling about 40%.

#### **Northern Europe**

Lumber exports from both Finland and Sweden slowed substantially in the late summer. The biggest decrease in Finnish exports in 2018 have been shipments to China and Saudi Arabia. Both Finland and Sweden have maintained shipments in the European market in 2018 with only minor changes in shipped volumes from 2017. Lumber prices in both Finland and Sweden have remained fairly stable during most of 2018.

#### **United Kingdom**

The U.K. is the world’s third largest importer of softwood lumber, after the U.S. and China. However, imported lumber to the U.K. fell by 20% during the first nine months of 2018. Import prices for lumber have trended upwards in the past few years to reach a three-year high in 2Q2018, followed by a decline of 7.3% in 3Q2018.

## China

A gloomier outlook by Chinese consumers and a shortage of credits for many provincial governments and state-run firms have contributed to reduced demand for forest products in China. As a result, total softwood lumber imports to China have slowed in 2018, with volumes in the first nine months falling 11% as compared to the same period in 2017. Imports were down from all supplying countries except Russia. (Wood Resources International, 1/11/19)



## California Fire: The World's Costliest Natural Disaster in 2018

### Five largest natural catastrophes in 2018 by overall losses (in U.S. billions)



SOURCE Munich Re Group

The overall economic impact of the natural disasters across the world in 2018 was \$160 billion and the U.S. led the charts for having the top 3 costliest natural disasters in 2018.

With an overall loss of \$16.5 billion, California's Camp Fire was the world's costliest natural disaster in 2018. Taking second place was Hurricane Michael at \$16 billion and in third place was Hurricane Florence at \$14 billion. (USA Today, 1/8/19)



## Forest Service Chief Applauds Executive Order

Briefly mentioned last month, President Trump issued an executive order (EO) in December 2018 titled "Promoting Active Management of America's Forests, Rangelands and other Federal Lands to Improve Conditions and Reduce Wildfire Risk." These are a few of the directives included in the EO:

- The USDA and Department of the Interior are directed to develop goals and implementation plans for wildfire prevention programs. As part of that effort, the Secretary of the Interior is directed to review 2019 budget justifications and give due consideration to several objectives, including treating 750,000 acres of DOI-administered lands to reduce fuel loads, treating 500,000 acres of DOI-administrated lands to protect water quality and mitigate severe flooding and erosion risks arising from forest fires, treating 750,000 acres of DOI-administered lands for native and invasive species, reducing vegetation giving rise to wildfire conditions through forest health treatments by increasing health treatments as part of DOI's offering for sale 600 million board feet of timber from DOI-administered lands, and performing maintenance on public roads needed to provide access for emergency services and restoration work.
- The Secretary of Agriculture is directed to review 2019 budget justifications and give all due consideration to treating 3.5 million acres of Forest Service lands to reduce fuel load, treating 2.2 million acres of Forest Service lands to protect water quality and mitigate severe flooding and erosion risk arising from forest fires, treating 750,000 acres of Forest Service lands for native and invasive species, reducing vegetation giving rise to wildfire conditions through forest health treatments as part

of USDA's offering for sale at least 3.8 billion board feet of timber from Forest Service lands, and performing maintenance on roads needed to provide access on Forest Service lands for emergency services and restoration work.

- By March 31, the Secretary of Interior and Secretary of Agriculture are also directed to identify salvage and log recovery options from lands damaged by fire during the 2017 and 2018 fire seasons, insects, or disease. In addition, they are asked to streamline agency administrative and regulatory processes and policies relating to fuel reduction in forests, rangelands, and other federal lands.

Vicki Christiansen, chief of the USDA Forest Service, has spoken out in support of the executive order, saying, "The USDA Forest Service applauds today's executive order and the President's commitment to focusing more robust efforts toward active management of American forests and grassland...We will use all the tools available to us, including mechanical treatments, prescribed fire, and unplanned fire to mitigate the risk of catastrophic wildfire." (Biomass, 12/31/18)

### **Side Effects of the Great Lumber Price Spike of 2018**

*Random Lengths* interviewed lumber traders to see whether the 2018 price spike might change buying/selling practices. They found:

- Current market conditions argue against establishing contracts. Contracts seemed a smart play when prices were increasing, but contracts became a liability on the way down. Some contrarian buyers, however, think this might be a good way to get into contracts again as mills are pushing for them.
- Some buyers switched to other species to find price relief and end users found the challenges of switching species less than anticipated. Builders that favored SPF will now take a look at Douglas Fir or Hem-Fir.
- Just-in-time purchasing patterns could change as buyers with credit and storage space consider stocking up when prices are lower. Others are still firmly in the buy-as-needed camp. (Random Lengths, 11/9/18)

### **Christmas Trees Imported Non-Native Insects to Oregon**

Non-native insects potentially entered Oregon on about 8,000 imported Christmas trees from North Carolina in 2018. The elongate hemlock scale was found on imported Fraser Fir trees. The tiny insect attacks hemlock trees as well as Douglas-fir and spruce trees. The insects cause trees to lose needles and become susceptible to other insects.

"Anytime we get an invasive species it is a concern because we don't know how it will interact with our native environment and our native species," said Danny Norlander of the Oregon Department of Forestry.

The main concern is that the insects could become established in the state and cause widespread harm. Officials have warned that post-holiday trees should be cut-up and the pieces put in garbage bags and thrown away.

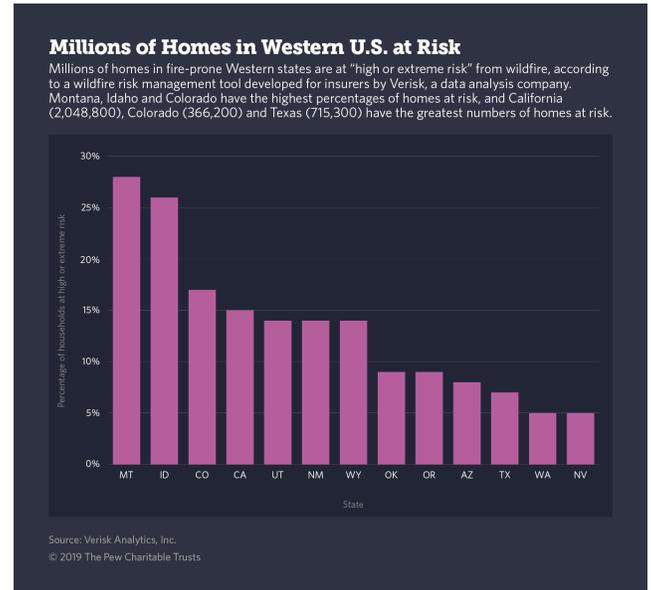
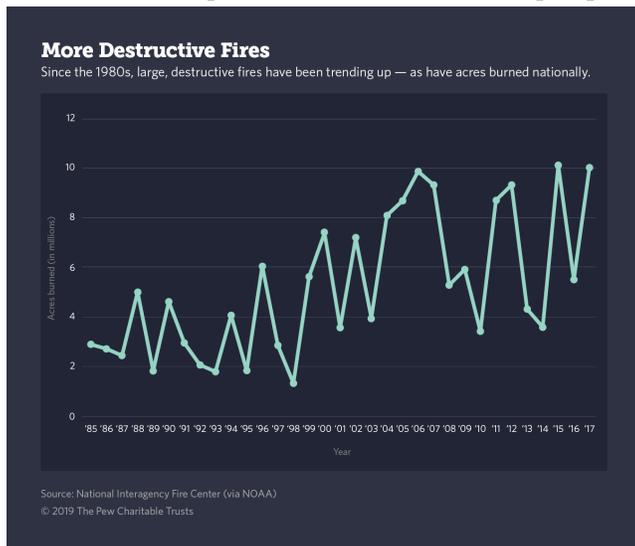
In the past, many of the discarded trees were used in fish habitat restoration projects. This year, some counties will work to chip all the discarded trees and send them to a composting facility that bakes the wood chips at 131-143 degrees for at least three days, destroying any pests or pathogens. (AP, 12/29/18 & Tillamook Headlight Herald, 1/8/19)

## Insuring Homes in Fire Hazard Zones

In the western U.S., some homes in fire-prone areas are being denied insurance coverage. While most homeowners in these zones can still get a policy, insurers often make coverage conditional on the management of trees and undergrowth near the home. Some homeowners might get denied by several insurers before finding one willing to take on the risk.

The tightening insurance is the result of fires becoming more destructive and the increase of homes being built in areas classified as high risk or extreme risk of wildfire.

California's insurance department doesn't have data on how many homes have been denied insurance in that state, but since 2014, more than 15,000 homes in medium or extreme fire-risk areas have turned to the California Fair Access to Insurance Requirements Plan, which insurance companies created to serve people unable to find coverage elsewhere. Premiums are rising in high-risk areas.



Since 1993, Boulder County Colorado has required everyone who builds a house on the western side of the county — where the city ends and the Rocky Mountains begin — to do wildfire mitigation work. They created the Wildfire Partners program in 2014 to clear up confusion about mitigation best practices and push more homeowners to take part. The program is staffed by forestry and fire protection experts and advised by insurance companies that have pledged to insure families who complete work on their property and receive a certification. (PEW Trusts, 1/3/19)

## **Sustainable Forestry Certification: Harming Forestry?**

A coalition of forest scientists is calling for an immediate review of international policies of sustainable forest certification systems—including the Forest Stewardship Council (FSC)—to take a look at their views opposing genetically modified trees. The coalition believes the current policies are not in line with current scientific evidence.

This petition follows the release of a major report on The Potential for Biotechnology to Address Forest Health from the National Academy of Sciences that has identified biotechnologies as key tools for helping to manage forest health and associated pest epidemics.

The petition states, “FSC bans organizations that are directly or indirectly involved in the introduction of genetically modified organisms in forestry operations. The result of these bans and research restrictions is to stop the very thing sustainable forest management systems demand they need before making an informed decision: information.”

“Sustainable forest certification systems are in a good position to take a leadership role with responsibly used biotech trees,” said Adam Costanza, a senior research scientist with the National Council for Air and Stream Improvement. “We can’t afford to turn our backs on tools that might stop forest pests, increase productivity, and combat changing climates.” (KTVZ, 1/7/19 & OSU, 1/8/19)

## **California Governor Wants a Lot More \$ for Firefighting**

On his first full-day in office, Calif. Governor Gavin Newsom requested \$105 million in new funding that would be in addition to the \$200 million already earmarked for forestry management by the Legislature last fall.

Newsom plans to use the funds for more helicopters and fire engines, the repair of firefighting aircraft, about 100 remote infrared cameras that can help detect fires, better alert systems and new technologies for tapping satellite images. He also wants funding for mental health services for first responders, and more funds to increase the number of Cal Fire firefighters.

Additionally, Newsom wants to spend \$10 million this year and \$50 million next year on overhauling the state’s 911 system. If approved, those expenses would be passed on to Californians through a fee on their monthly phone bills.

Oregon’s governor Brown joined Newsom and Governor Inslee from Washington State in sending a letter to President Trump requesting double the federal government’s financial investment for managing federal forestlands in those states. (NY Times, 1/14/19)

## **PG&E Pursues Bankruptcy**

Pacific Gas & Electric (PG&E), the primary gas and electricity supplier to the northern half of California, announced that it would seek bankruptcy as “the only viable option” as the giant California utility faces

billions of dollars in liability claims from two years of deadly wildfires, a sum that would exceed its insurance and assets.

Fire investigators determined PG&E to be the cause of at least 17 of 21 major Northern California fires in 2017, and it is also suspected in some of the 2018 wildfires that have been described as the worst in state history.

After intense lobbying by the state's investor-owned utilities, which includes PG&E, Southern California Edison and San Diego Gas and Electric, won a legislative shield from having to bear the cost of 2017 fires. The law allows them to pass the cost of wildfires onto their customers in the form of higher rates. Now they are seeking the same for the 2018 fires. State law requires them to compensate property owners for fire damage caused by their equipment, regardless of whether negligence is proved.

The company's troubles pose a challenge to the state's elected officials and regulators, who will ultimately decide whether part of the solution will be raising already high electricity rates. PG&E has asked regulators for permission to raise nearly \$2 billion from ratepayers over three years, starting in 2020, with more than half the proceeds going to cover its wildfire prevention work. If approved by the California Public Utilities Commission, the average residential customer's bill would go up 6.4%, or \$10.57 per month.

There is worry that the bankruptcy, if it moves forward, will severely limit the wildfire mitigation program that PG&G began to enact in 2018. Called the Community Wildfire Safety Program, the utility put money and resources into setting up a wildfire monitoring center, hiring contract firefighters, establishing weather stations, implementing a power shut-off system and replacing wooden poles and fire-prone equipment. But wildfire experts and energy policy officials said a bankruptcy judge will probably limit PG&E's ability to invest in that program, endangering what many see as a crucial part of California's effort to prevent future wildfires. (NY Times, 1/14/19 & San Francisco Chronicle, 1/21/19)

## **What are WOTUS?**

In December 2018, the EPA and the Department of the Army proposed a clear, understandable, and implementable definition of "waters of the United States" (WOTUS). This has become necessary due to several years of legal challenges to the definition as it pertains to the Clean Water Act that forbids "discharge of a pollutant" without a permit. Discharge, in turn, is defined as the addition of a pollutant to "navigable waters," which are "the Waters of the United States."

The new proposed definition excludes groundwater, all ephemeral features, ditches, and most artificial lakes and ponds constructed in upland (including water storage reservoirs, farm and stock watering ponds, and log cleaning ponds). Additionally, adjacent wetlands must have "direct hydrologic surface connection" to otherwise covered waters.

The proposed change is now undergoing a period of public comment. Once the transition to the new rule is completed, the EPA estimates cost savings to the regulated community may be up to \$430 million annually. Further litigation is anticipated. (American Forest Resource Council, December 2018)

## **New Lignin News—From Biomass to 3-D Printing**

Researchers have learned how gribble, a tiny crustacean, uses a digestive protein called hemocyanin to break down natural lignin in wood. This revelation could help scientists develop cheaper, more efficient ways to turn wood into biofuel. Scientists have been able to reproduce this process in a lab setting, treating wood samples with hemocyanin. When treated with the proteins, the samples released twice as much sugar. The effect is similar to a variety of thermochemical pre-treatments used in commercial wood processing.

Lignin gives plants rigidity and makes biomass resistant to being broken down into useful products. While this discovery may lead to a simplification in the process of converting wood biomass into biofuel, there is still much debate over whether the use of biofuel would be better for our changing climate than leaving the forests alone to store carbon. It is estimated that in order to replace 2% of the world's energy with biofuel, the worldwide timber harvest would need to double.

Tennessee's Oak Ridge National Laboratory (ORNL) found that lignin works well as a major ingredient in a recipe for making a compound for 3D printing. Researchers combined a melt-stable hardwood lignin with conventional plastic, a low-melting nylon, and carbon fiber to create a composite with just the right characteristics for extrusion and weld strength between layers during the 3D printing process. "Finding new uses for lignin can improve the economics of the entire biorefining process," said ORNL project lead Amit Naskar. The lignin-nylon composite is patent-pending and work is ongoing to refine the material and find other ways to process it. (UPI Science News, 12/3/18 & ORNL Press Release, 12/19/18)