

Forestry Report

A PUBLICATION OF F&W FORESTRY SERVICES, INC. // ALBANY, GEORGIA

Winter 2022-23 // NO. 155

Good Times, Bad Times, You Know We’ve Had Our Share



By Marshall Thomas, President of F&W Forestry Services, Inc.

Unfortunately, 2022 ended with a slowing economy, dour forecasts, declining stumpage prices, and lumber-adjusted housing starts well under 1.2 million (a benchmark for demand). Other than that, we are just fine. The trees are still growing, our land is not shrinking, and we still have one of the most robust markets for trees in the world. But I think the next six months may not be a lot of fun.

Our timber price graphs (pages 2 and 3) show most products flat to declining.

However, Southern pine sawtimber prices are still higher than they were before the pandemic and in the North, softwood pulpwood and sawtimber prices are rising

while hardwood sawtimber prices are mostly declining. Unfortunately, hardwood is what really matters in the North.

Lumber use-adjusted housing starts were at 1.062 million units in November (see page 8), down from 1.408 million units a year ago, which doesn’t bode well for next year, reflecting rising interest rates, high housing prices,

(continued on page 7)

Exciting Changes Coming Soon

F&W Forestry is pleased to share some exciting news about the *F&W Forestry Report*. Beginning with the Spring 2023 issue, we will introduce a new and improved newsletter with an updated design and even more relevant content and information for our readers.

One of the primary changes will be the redesign of the timber price graphs to better show timber product prices in snapshots that make it easier to compare prices within and between regions. We will also address other design issues to make the overall newsletter more reader- and print-friendly.

In addition to design changes, we will convert the newsletter from print to digital-only format, allowing readers to receive the newsletter by email in a timelier manner.

This redesign and conversion to digital will provide us the flexibility to offer more content and more detailed data, without being limited to eight pages. And, because we are eliminating all print and postage costs, we are also discontinuing the newsletter subscription fee to non-client subscribers. This will enable the newsletter to reach an even broader audience.

To ensure you do not miss an issue, please scan the QR code below or visit www.fwforestry.net/subscribe to access a form where you may enter your information. If you have any questions about this transition, please contact Ansley Benton at abenton@fwforestry.com. 🌲



Southern Timber Prices

2022 FOURTH QUARTER PINE & HARDWOOD STUMPAGE PRICE RANGE* (TONS)

	PINE PULPWOOD	PINE SMALL SAWTIMBER	PINE LARGE SAWTIMBER	HARDWOOD PULPWOOD	HARDWOOD SAWTIMBER
SOUTHEAST					
LAFAYETTE, AL	\$7–14	\$17–25	\$22–38	\$6–15	\$28–38
GAINESVILLE, FL	\$15–26	\$28–54	\$34–62	\$1–10	\$17–32
MARIANNA, FL	\$9–11	\$31–35	\$36–55	\$6–7	\$25–35
ALBANY, GA	\$9–12	\$23–32	\$34–55	\$4–9	\$20–30
MACON, GA	\$6–10	\$17–21	\$26–29	\$6–8	\$22–30
STATESBORO, GA	\$12–22	\$23–33	\$26–40	\$8–12	\$25–35
FOUNTAIN INN, SC	\$8–11	\$16–21	\$23–27	\$7–10	\$18–35
CENTRAL REGION					
CLINTON, TN	\$3–10	\$0–15	NA	\$3–8	\$35–55
PARIS, TN	\$7–7	\$7–7	NA	\$4–7	\$35–65
WEST GULF					
EL DORADO, AR	\$0.25–8	\$8–13	\$17–31	\$4–6	\$25–35
CORINTH, MS	\$4–8	\$16–22	\$20–25	\$20–25	\$45–75
HUNTSVILLE, TX	\$4–8	\$8–12	\$18–30	\$4–6	\$28–32
TEXARKANA, TX	\$6–9	\$13–16	\$30–35	\$6–10	\$25–30
MID ATLANTIC					
CHARLOTTESVILLE, VA	\$7–12	\$15–20	\$17–25	\$4–8	\$15–40

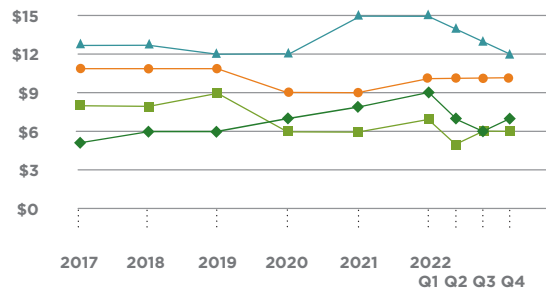
*All prices based on sales handled by or reported to F&W offices. If no sales occurred, prior quarter’s sales and other data are used to compile price range. Price ranges are due to different locations, timber quality, logging conditions, type of harvest, and local market conditions.

Southern Timber Prices

TIMBER STUMPAGE PRICE AVERAGES ACROSS F&W'S SOUTHERN REGION

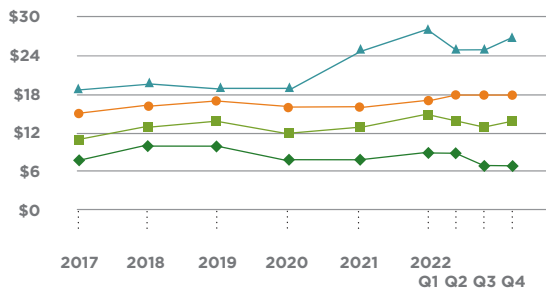
PINE PULPWOOD AVERAGE (TONS)

▲ SOUTHEAST / ◆ CENTRAL REGION / ■ WEST GULF / ● MID ATLANTIC



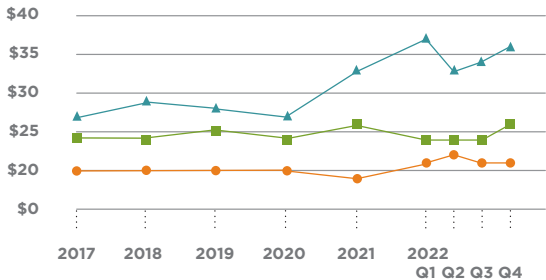
PINE SMALL SAWTIMBER AVERAGE (TONS)

▲ SOUTHEAST / ◆ CENTRAL REGION / ■ WEST GULF / ● MID ATLANTIC



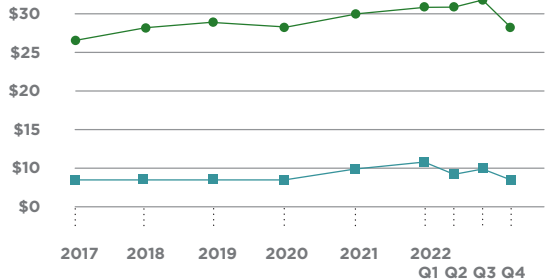
PINE LARGE SAWTIMBER AVERAGE (TONS)

▲ SOUTHEAST / ■ WEST GULF / ● MID ATLANTIC



SOUTHEAST HARDWOOD PRICES (TONS)

■ HARDWOOD PULPWOOD / ● HARDWOOD SAWTIMBER



F&W Forestry Report

For further information on material in this report or to discuss your forestry needs, contact the nearest F&W office or the Albany headquarters at:

PO Box 3610, Albany, GA 31706-3610
(229) 883-0505 / fax (229) 883-0515
www.fwforestry.com

Marshall Thomas, President
Jeff Jordan, Chief Operating Officer
Jody Strickland, Chief Business Officer
Sonya Farmer, Chief Financial Officer
Stephen Logan, Chief Information Officer

The F&W Forestry Report is produced by:
Bates Associates / PO Box 191386
Atlanta, GA 31119-1386 / (770) 451-0370
batespr@bellsouth.net

REGIONAL OFFICES

LaFayette, AL
T.R. Clark
(334) 864-9542

El Dorado, AR
Eric Sumner
(870) 864-8092

Redding, CA
John Vona
(206) 384-7440

Orange Park, FL
Bryan Croft
(352) 377-2924

Marianna, FL
Doug Hall
(229) 449-1537

Albany, GA
Chad Hancock
Doug Hall
(229) 883-0505

Eatonton, GA
T.R. Clark
(334) 864-9542

Statesboro, GA
Wade McDonald
(912) 489-1655

Corinth, MS
Jason Potts
(662) 665-6163

Glens Falls, NY
Wayne Tripp
(518) 480-3456

Herkimer, NY
Wayne Tripp
(315) 868-6503

Tupper Lake, NY
Tom Gilman
(518) 359-3089

Strattanville, PA
Wayne Tripp
(315) 868-6503

Fountain Inn, SC
Nathan McClure
(864) 230-1664

Clinton, TN
Rick Sluss
(865) 457-5166

Dover, TN
Jason Potts
(662) 665-6163

Huntsville, TX
Chris Bartley
(936) 435-9223

Montpelier, VT
Tom Gilman
(518) 359-3089

Charlottesville, VA
Glen Worrell
(434) 296-1464

Pearisburg, VA
Rick Sluss
(865) 640-5430

INTERNATIONAL OFFICES

Fountains Forestry UK, Ltd
Scotland
England
Wales

F&W
Uruguay
Brazil

Cabinet Coudert
France

AFFILIATED COMPANIES

Stuntzner
Dallas, OR

FWS Forestry Services
California, LLC
Redding, CA

INVENTORY, MAPPING & PLANNING

James Walter / (540) 921-1254
Dwight Sheppard / (229) 883-0505 x124
Scott Howell / (229) 883-0505 x136

FINANCIAL REPORTING

Sonya Farmer / (229) 883-0505 x138
Kelly Courtney / (229) 883-0505 x174

ENVIRONMENTAL CERTIFICATION

Andy Carlo / (802) 223-8644 x26

FOREST OPERATIONS

Brent Williamson / (229) 407-0227



Fountains Land
AN F&W COMPANY

PRINCIPAL BROKER

Jody Strickland
(478) 954-8058

MANAGING BROKER, NORTHERN U.S.

Michael Tragner
(802) 223-8644

MANAGING BROKER, SOUTHERN U.S.

Rob Routhier
(229) 883-0505 x123

Northern Timber Prices

2022 FOURTH QUARTER STUMPAGE PRICE RANGE*

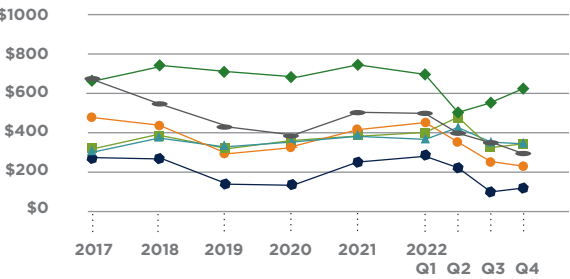
	RED OAK (MBF)	BLACK CHERRY (MBF)	HARD MAPLE (MBF)	SOFTWOOD SAWTIMBER (MBF)	HARDWOOD PULPWOOD (TONS)	SOFTWOOD PULPWOOD (TONS)
RUMFORD, ME ^I	\$275-400	NA	\$325-450	\$150-225	\$4-7	\$2-4
MONTPELIER, VT ^I	\$275-400	NA	\$325-500	\$130-200	\$3-6	\$1-3
GLENS FALLS, NY ^I	\$150-300	\$300-500	\$325-550	\$40-250	\$3-6	\$3-10
HERKIMER, NY ^I	\$200-400	\$275-500	\$375-650	\$40-250	\$5-10	\$2-10
TUPPER LAKE, NY ^I	NA	\$250-350	\$375-550	\$100-250	\$4-6	\$2-4
CLARION, PA ^D	\$450-800	\$350-750	\$450-800	NA	\$2-7	\$1-4
BLUEFIELD, WV ^D	\$100-125	\$100-125	\$200-250	NA	\$2-3	\$1-2

*All prices based on sales handled by or reported to F&W offices. If no sales occurred, prior quarter's sales and other data are used to compile price range. Price ranges are due to different locations, timber quality, logging conditions, type of harvest, and local market conditions. (D) = Doyle (I) = International (S) = Scribner

TIMBER STUMPAGE PRICE AVERAGES ACROSS F&W'S NORTHEAST REGION

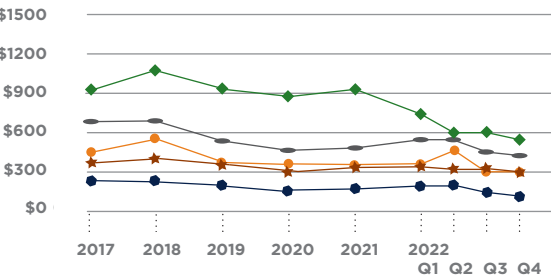
RED OAK AVERAGE (MBF)

▲ RUMFORD, ME / ● GLENS FALLS, NY / ● HERKIMER, NY / ◆ CLARION, PA
■ MONTPELIER, VT / ● BLUEFIELD, WV



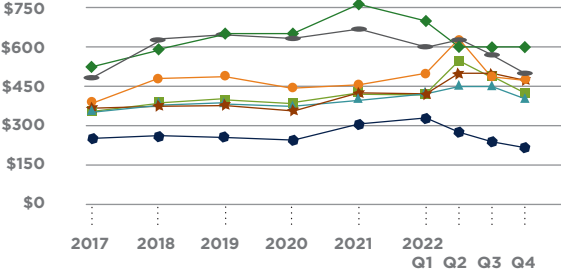
BLACK CHERRY AVERAGE (MBF)

● GLENS FALLS, NY / ● HERKIMER, NY / ★ TUPPER LAKE, NY / ◆ CLARION, PA
● BLUEFIELD, WV



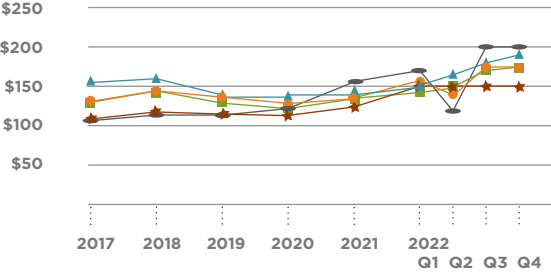
HARD MAPLE AVERAGE (MBF)

▲ RUMFORD, ME / ● GLENS FALLS, NY / ● HERKIMER, NY / ◆ CLARION, PA
■ MONTPELIER, VT / ● BLUEFIELD, WV / ★ TUPPER LAKE, NY



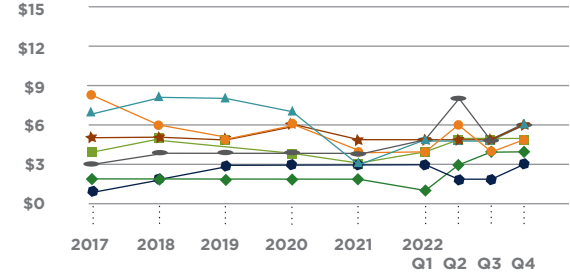
SOFTWOOD SAWTIMBER AVERAGE (MBF)

▲ RUMFORD, ME / ● GLENS FALLS, NY / ● HERKIMER, NY
■ MONTPELIER, VT / ★ TUPPER LAKE, NY



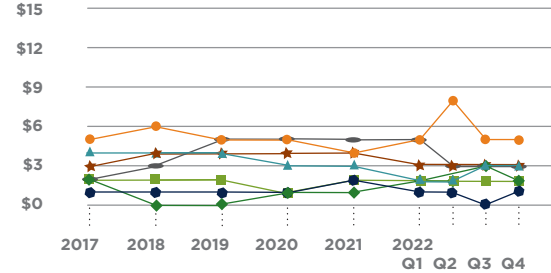
HARDWOOD PULPWOOD AVERAGE (TONS)

▲ RUMFORD, ME / ● GLENS FALLS, NY / ● HERKIMER, NY / ◆ CLARION, PA
■ MONTPELIER, VT / ● BLUEFIELD, WV / ★ TUPPER LAKE, NY



SOFTWOOD PULPWOOD AVERAGE (TONS)

▲ RUMFORD, ME / ● GLENS FALLS, NY / ● HERKIMER, NY / ◆ CLARION, PA
■ MONTPELIER, VT / ● BLUEFIELD, WV / ★ TUPPER LAKE, NY



Forest Management Trends In The South

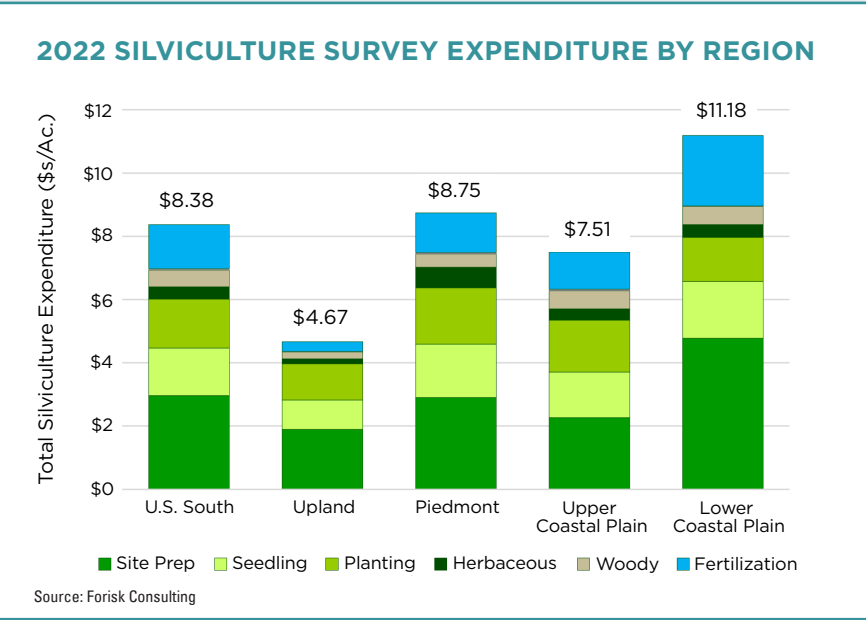
A new report provides interesting insights into silvicultural trends across the U.S. South in the decade following the housing crash and Great Recession and finds that intensive management of timberland remains an attractive investment.

Forestry analytics firm Forisk Consulting has been conducting biennial surveys of forest managers and owners on common forest management practices since 2012 and has accumulated one of the largest datasets of silviculture activities and trends. The 2022 survey collected costs and revenue data on nine major topics, including site preparation and regeneration, competition control, fertilization, thinning and final harvests, site index, property costs, inventory management, forest certification, and other forest-related products and services.

The Forisk survey began four years after the 2008 housing bust and Great Recession, during a time of low sawtimber demand and prices. It continued through the resurgence in lumber demand that began during the COVID-19 pandemic, which saw unexpected demand for wood products and lumber prices skyrocketing to all-time highs.

Since the survey was first conducted, the number of acres captured has tripled to cover 24.6 million acres. Survey participants have also increased three-fold and include timberland investment management organizations (TIMOs) and investment managers, forest industry and real estate investment trusts (REITs), independent owners, and forestry consultants. Most participants own or manage more than 10,000 acres of timberland in the South, with non-industrial private forest owners' lands reported by forestry consultants, including F&W.

The survey divides the South into four physiographic regions—Upland, Piedmont, Upper Coastal Plain, and Lower Coaster Plain—to distinguish any potential geographic differences in



management practices and benchmark performance.

Following are some 2022 survey highlights along with 10-year trends in intensive forest management.

Regeneration

Over the last decade, the average number of trees planted per acre (TPA) has declined about 5 percent, from an average of 593/acre in 2012 to 566/acre in 2022. At the same time, seedling survival has held steady, averaging around 88.5 percent. When the survey began, second generation and "other" types were the predominate seedlings planted. But over time this has shifted, with respondents in the 2022 survey reporting planting around 90 percent of their acres in second generation and controlled mass-pollinated seedlings, likely indicating that genetic gains are becoming a more important factor in forest regeneration.

Competition Control

The survey found a trend of decreasing use of herbaceous control on newly planted acres. In 2012, more than 93 percent of the respondents reported using herbaceous control treatments but by 2022, usage fell to less than 60 percent. Woody control applications have remained consistent at around 1 percent since the survey began measuring comparably for this

treatment in 2018.

Fertilization

More land managers are opting to fertilize their forests. Back in 2012, approximately 50 percent of the respondents reported applying fertilizer treatments. This dipped to less than 30 percent in 2018 before reaching a high of 80 percent in 2022.

Thinning & Final Harvest

The average age for first thinning in 2022 was 15 years, up from 14 in 2012, while second thinnings have remained constant at around 21 years. The age of final harvest has increased over the survey cycle, rising by 4 years since 2012 from 29 years to 33 years in 2022. The survey noted that the average age was higher than expected given that intensive forest management leads to shorter rotations. However, Forisk attributes "later clearcut ages with deferred harvesting by timberland owners during and after the Great Recession," and that respondents have consistently said over the life of the survey that the managed age for newly planted stands is a little more than 25 years.

Silviculture Expenditures

In total, forestry managers in the South spent \$8.38 per acre on silviculture expenditures in 2022,

(continued on page 5)

Interest In Nature-Based Carbon Solutions Surge, NCX Hits Snags

Business net neutrality goals and environmental, social, and governance (ESG) policies have caused demand for carbon commodities to explode, and the market for nature-based carbon solutions is booming. About \$2 billion in credits were sold in 2021, up from \$520 million in 2020, and sales are up 11 percent in the first three quarters of 2022, according to the *Wall Street Journal*.

The voluntary carbon offset market is still very young and as it develops and evolves, it is oftentimes confusing and extremely complicated. So complicated, in fact, that the Forest Landowners Association put together a six-part webinar series for landowners called Forest Carbon University.

In simple terms, there are several players involved in generating and selling forest carbon offsets: a forest landowner, a project developer, a third-party auditor, a carbon offset program/registry, and a credit broker or buyer.

New players continue to enter the nature-based carbon business seeking to provide forest landowners with access to the voluntary market, with several programs specifically designed to reduce the high costs and administrative burdens that present challenges for participation by smaller landowners. F&W has primarily been working on behalf of its landowner clients with Anew, Finite Carbon, Mercuria/LandYield, and NCX.

The NCX program is unique in that it

is based on one-year harvest deferral contracts and has no minimum acreage requirement to enroll. NCX maintains that one-year accounting provides more flexibility for landowners and has the potential to increase enrollment in carbon offset programs. The company uses proprietary remote-sensing technology to determine standing timber and harvest potential for each participating forest. NCX held its first enrollment cohort in the spring of 2021 and planned to offer enrollment cycles every three months. Following the completion of its inaugural program, the company said it paid almost \$2.5 million to 119 landowners for sequestering more than two million tonne-years of carbon across 1.17 million acres of forests.

But NCX has encountered hurdles as it continues to develop its program. Last June, Verra, the nonprofit which operates the world's most widely used voluntary carbon crediting program, declined to adopt the tonne-year accounting used by NCX for its Verified Carbon Standard (VCS) following three months of public comment. The organization indicated it could change its decision in the future and NCX leaders responded that they are committed to moving the conversation forward with Verra. Despite this setback, NCX said tonne-year accounting "is already in use by other verification bodies" and they continue to promote the program and enroll landowners, but participation has dropped. (Meanwhile, Verra

has approved a carbon accounting methodology for Improved Forest Management, see page 7.)

Since the inaugural cycle in the spring of 2021, participation in the NCX program skyrocketed, rising to 577 landowners in the summer 2021 cycle and reaching a high-water mark of 1,779 landowners in the winter 2022 cycle. However, landowner participation slipped in the spring 2022 cycle, with 1,376 landowners enrolling. Following the Verra announcement, enrollment in the fall 2022 cohort fell to around 550 landowners, according to an analysis of company news and enrollment posts.

NCX announced in November that it laid off 40 percent of its team, citing economic pressures and uncertainty. But in a blog post, the company co-founders added that increased scrutiny has caused "concern and confusion about what is 'good' that has now led to broad cynicism about nature-based solutions and the perception that it's safer for companies to do nothing than to invest in nature." They also acknowledged that the company hasn't acted quickly enough to expand its product offerings. They pledged to be more attuned to market feedback, test new product offerings, and to honestly assess the resulting data on what the market values. 🌱

TO ACCESS THE FOREST CARBON UNIVERSITY, GO TO: [TINYURL.COM/YPX2PASH](https://tinyurl.com/ypx2pash)

FOR MORE INFORMATION ABOUT TONNE-YEAR ACCOUNTING, GO TO: [TINYURL.COM/4C7BHD3V](https://tinyurl.com/4c7bhd3v)

Forest Management Trends In The South (continued)

including site prep, seedlings and planting, competition control, and fertilization, up 3 percent from the 2020 survey. However, these average costs vary by region and underscore how forest investments need to match local market conditions (see graph). Across the regions, the majority of these costs are associated with stand

establishment, with site prep averaging 30 percent, seedlings at 40 percent, and competition control and fertilizer at 25 percent. The lower costs of the Upland region are a reflection of the hardwood forests that dominate the area, which has less land under pine management and therefore less acres receiving intensive management activities. Site

prep techniques are more widely used, and costlier, in the Lower Coastal Plain.

The report concludes "intensive management of timberlands remains an attractive and persistent investment across investor types and physiographic regions," although forests and management practices vary from region to region. 🌱

2023 Kicks Off With A Divided Congress; Economic Uncertainty Persists

As Washington turns the corner on 2022, the twin concerns of high inflation and recession cloud predictions for the new year. The Biden administration achieved a number of policy wins in its second year with the help of a narrowly dominant Democrat Congress, especially in the areas of climate change and mitigation despite weathering a number of cliffhangers on whether they were going to get there. But where national policies head in 2023 will be greatly influenced by the nation's economic health, a newly split Congress with narrow party majorities, a conservative Supreme Court, and an administration already looking towards the 2024 elections.

President Biden's climate policy successes in 2022 were a milestone in terms of scope and reach. The Inflation Recovery Act (IRA) passed by Congress last August is the largest investment in history to address climate change. It provides for unprecedented amounts of funding across the federal government for conservation, renewable energy, and biofuel programs to reduce or capture carbon emissions. Coming to the U.S. Department of Agriculture over the next five years are billions of dollars for existing programs such as the Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Programs. (The Conservation Reserve Program did not receive additional funds.) The IRA will

also send almost \$1.5 billion to the states through the U.S. Forest Service for tree planting and related activities.

The 2022 midterm elections impact how Washington operates over the next two years. The end of the Democrat trifecta of holding both houses of Congress and the presidency transitions to a split Congress. The new House Republican majority (222 to 212) entails new leadership and it remains to be seen how effectively they will work with the Senate and the Biden administration. Almost no one predicts the level of partisanship will lessen with the 2024 elections on the horizon. The Senate increased its Democrat balance of power 51 to 49 and counts three independents to caucus with them most of the time.

As the new Congress takes shape, a legislative priority will be to reauthorize the existing Farm Bill in 2023. The Farm Bill remains a significant vehicle for adopting and modifying agriculture and forest policies and programs on private lands and climate change is expected to dominate on the natural resource side of things. Hearings began in 2022 but drafting a new bill has not begun. The Senate Agriculture Committee leadership is expected to remain unchanged with Debbie Stabenow (D-Mich.) as chair and John Boozman (R-Ark.) as ranking member, but the House will see a change. The new House Agriculture Committee

chairman will be Glenn (G.T.) Thompson, a Republican from Pennsylvania, and the current chairman, David Scott (D-Ga.), will transition to the committee's ranking Democrat. Notable is Congress' only forester, Bruce Westerman (R-Ark.), will chair the House Natural Resources Committee beginning in 2023, which has jurisdiction over federal forest lands and parks as well as fisheries and wildlife. Threatened and endangered species designations often have a critical impact on how private lands are managed.

The conservative Supreme Court is expected to continue a path of restraining the executive branch's authority. In 2022, the Court limited the U.S. Environmental Protection Agency's (EPA) ability to regulate power plant emissions related to climate change (West Virginia vs. EPA). The Court heard arguments in the fall of 2022 about EPA's regulatory reach over "waters of the U.S.," also referred to as WOTUS, under the Clean Water Act. With a decision expected to come down later this year, followers of the Court believe the justices will also rule conservatively in what EPA can regulate.

Private forest landowners stand to benefit greatly going forward from national climate change policies and programs, a newly authorized Farm Bill, and less restrictive regulations on private lands, particularly if the economy proves to be resilient. 🌲

Working Forests Education Campaign

A new campaign promoting the many significant contributions that working forests make to society has launched, with a goal of increasing knowledge and understanding of the U.S. forestry sector.

Created and supported by a broad range of forestry companies and trade associations, the Working Forests Initiative (WFI), through a unified voice, seeks to establish and advance a common understanding of the broad

range of environmental, economic, and societal benefits generated by working forests, including the numerous sustainable products made from wood and the important role forests play in clean water and as a natural climate solution.

The five-year campaign launched in the fall and employs data-driven approaches to reach a targeted audience of select public and private leaders,

policy makers, and influencers through websites, online media outlets, and directly to individual devices.

The first phase of the campaign will focus on building awareness and communicating sector contributions, with an emphasis on stewardship, sustainability, and the regenerative nature of working forests.

For more information about WFI, visit www.workingforestsinitiative.com. 🌲

First Carbon Accounting Methodology For Forest Management Approved

A new methodology to help forest projects verify their carbon credits has been approved by the world's leading carbon crediting organization.

Verra accepted the first-of-its-kind carbon accounting methodology for Improved Forest Management (IFM), designed to provide more measurable proof of climate impact and solve access challenges for small forest landowners.

The methodology was developed by the American Forest Foundation (AFF) and The Nature Conservancy (TNC) to be used for the organizations' Family Forest Carbon Program (FFCP). After a rigorous multi-year evaluation process, the methodology is now officially accepted for use in the U.S. and the world.

This is the first forestry methodology verified by Verra to use an innovative concept called a dynamic baseline rather than a projected baseline. The methodology compares the carbon sequestered on lands enrolled in a carbon program to a control group, or synthetic composite, of highly similar forests that are not enrolled in

the program. By measuring the difference between the forests over time, the methodology isolates the program as the key intervention that can be credited with creating the carbon benefit. This provides more discernable proof of additionality. A project has additionality only if the carbon sequestration and storage would not have occurred absent the project.

The following activities can apply under this methodology:

- Enrichment planting
- Release of natural regeneration via management of competing vegetation
- Stand irrigation and/or fertilization
- Reducing timber harvest levels
- Deferring harvest/extending rotations or cutting cycles
- Designating reserves
- Altering fire severity via fuel load treatments

The Family Forest Carbon Program is uniquely designed to help owners of forests as small as 30 acres participate in carbon projects. Traditionally, forest carbon projects have been created on properties of

5,000 acres or more, with small forest properties kept out of the market because of high upfront costs and the complexity of launching these projects. AFF estimates that 61 percent of the climate mitigation potential in U.S. forests lies with smaller, family-owned properties.

FFCP, which requires a 20-year commitment, is currently enrolling landowners in Maryland, Massachusetts, New York, Pennsylvania, Vermont, and West Virginia, with plans to expand to additional regions this year. The program will hold its first measurement and verification cycle using the new methodology in early 2023, leading to the first transfer of verified carbon credits to buyers thereafter.

Verra is a non-profit organization that operates the world's leading carbon crediting program, the Verified Carbon Standard (VCS) Program, as well as other programs in environmental and social markets. 🌳

MORE INFORMATION ABOUT THE IFM METHODOLOGY CAN BE FOUND AT: [TINYURL.COM/3E4YTP2M](https://tinyurl.com/3E4YTP2M)



Marshall Thomas (continued)

and a threatening economic outlook. Forecasts are for single-family unit construction to continue to decline in 2023. Unfortunately, multi-family is on the rise, which doesn't use as much lumber.

Our rule of thumb is that the lumber use-adjusted starts need to be above 1.2 million units in order for there to be price pressure on sawtimber stumpage prices. We got there for a while, prices rose, and now that we are below that benchmark, prices will probably fall again. Especially with fairly dry weather.

One bright spot is pellets—our exports to Europe in October were

almost twice as high as a year ago, likely driven by the war in Ukraine and the loss of Russian and Ukrainian pellets.

Random Links framing lumber composite was down to pre-pandemic levels (\$420) in early December and lumber futures are down to where they were in the month before COVID-19.

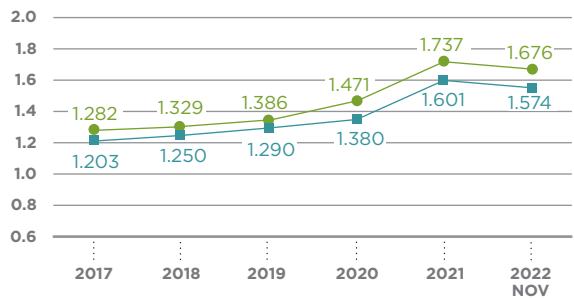
Timber rotation lengths are longer now than 10 years ago, and we are planting better genetic stock than a decade ago. See page 4 for an article on trends in Southern forest management. Two interesting news articles on carbon—NCX is stumbling on its way to being a viable provider

of carbon credits (page 5), but the American Forest Foundation and The Nature Conservancy got a carbon accounting protocol approved for their Family Forest Carbon Program (page 7), designed for small landowners in the U.S. and the world.

If there is a recession this year, all we can do is hope we get through it and that the economy rebounds in the latter part of the year and maybe next winter we will have the combination of demand and wet weather we need to test the upper limits of our stumpage prices post-COVID-19. We still need more of our share of good times. 🌳

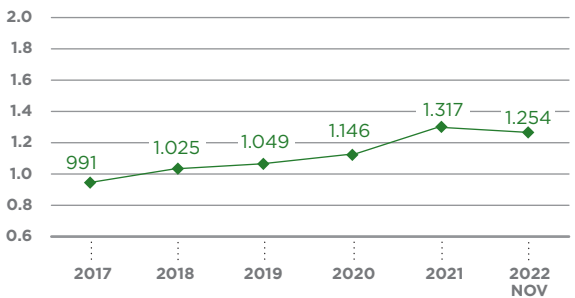
TIMBER MARKET INDICATORS

● HOUSING PERMITS / ■ HOUSING STARTS



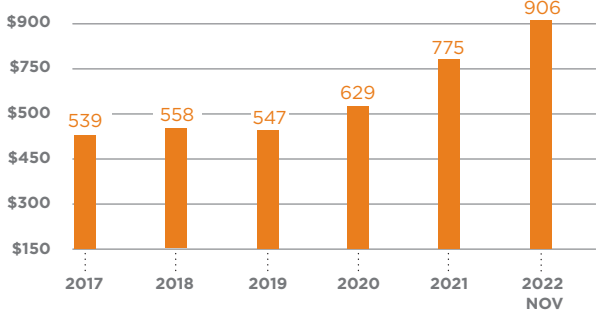
IN MILLIONS OF UNITS (2022 AVERAGE THROUGH NOVEMBER)
Source: US Department of Commerce

F&W'S LUMBER-USE ADJUSTED HOUSING STARTS



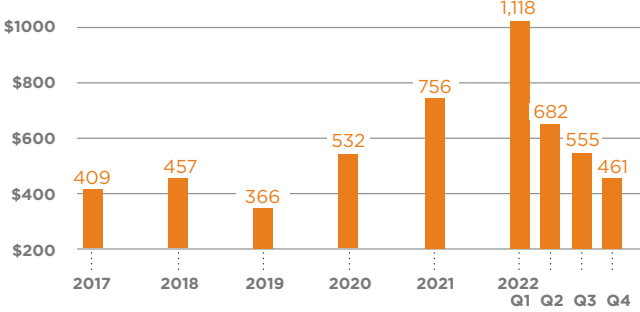
IN MILLIONS OF UNITS; TOTAL HOUSING STARTS WITH MULTI-FAMILY STARTS REDUCED TO 40 PERCENT TO BETTER REFLECT LUMBER USAGE (2022 AVERAGE THROUGH NOVEMBER)
Source: US Census and F&W Forestry Services

RESIDENTIAL CONSTRUCTION



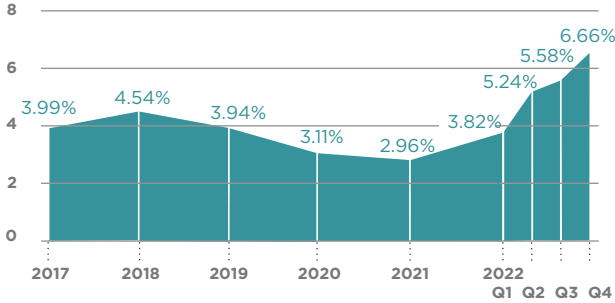
IN BILLIONS OF DOLLARS (2022 AVERAGE THROUGH NOVEMBER)
Source: US Department of Commerce

LUMBER PRICES



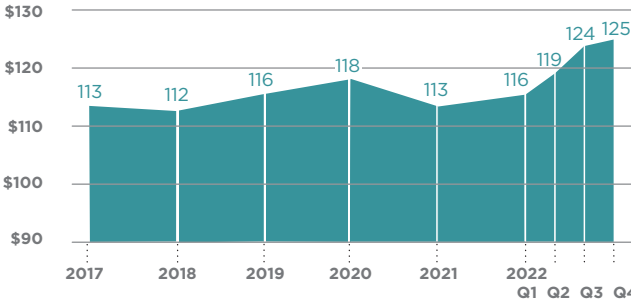
SOUTHERN PINE—\$/MBF
Source: Random Lengths Southern Pine Composite Index

MORTGAGE RATES



30-YEAR FIXED RATE
Source: Freddie Mac

US DOLLAR



US DOLLAR VALUE AGAINST 26 MAJOR TRADING PARTNERS
Source: Federal Reserve