



Forest losses from hurricanes



Acknowledgments



Kisatchie National Forest damage



Stumpage report



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Timber Tales

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Louisiana's Forest Losses from the 2020 Hurricanes

By Michael Blazier

The 2020 hurricane season was historic, and it unfortunately brought unprecedented damage to Louisiana's forests. The most active Atlantic hurricane season was in 2020, generating 30 named storms. Louisiana was hit by 20% of those storms, as four hurricanes and two tropical storms passed through the state. Among this record-setting number of named storms affecting Louisiana were two that substantially damaged its timberlands, Laura and Delta.

Hurricane Laura formed on Aug. 20, 2020, and made landfall one week later near the town of Cameron. As it made landfall, Laura was at the full force of a Category 4 hurricane, with 150 mph winds. This wind speed made it the strongest hurricane to



Figure 1. Timberland damage in Calcasieu Parish. Photo by Michael Blazier.

hit Louisiana since 1856. Laura continued to remain strong as it passed through the southwestern and central parts of the state, remaining at hurricane strength until nearly the Louisiana-Arkansas state line in Claiborne Parish. Laura's path went

through the most heavily forested portions of the state, damaging timberlands in the process. Trees were heavily broken and felled in its path (Figures 1 and 2).

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Figure 2. Timber damage in Calcasieu Parish. Photo by Michael Blazier.

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Unfortunately, the hard-hit region was subjected to a second hurricane soon after Laura. Hurricane Delta formed on Oct. 1 and made landfall near the town of Creole on Oct. 9, which was just 15 miles from where Laura arrived in the state. As the 10th named storm impacting Louisiana within one year, Delta set a record for the state. While at its peak Delta was also a Category 4 hurricane like Laura, it weakened to Category 2 strength (with winds of approximately 100 mph) as it struck Louisiana. After beginning its trek through Louisiana near Laura's point of landfall, Delta tracked more eastward than Laura. Its path went through central and northeastern Louisiana, and it weakened to tropical storm

strength near Alexandria. Although it was weaker than Laura, Delta likely had greater damage to timber than a hurricane of its strength typically would. Forests hit by Laura had many trees felled, leaving remaining trees more exposed to further wind. In addition, Tropical Storm Beta passed through southwestern Louisiana between hurricanes Laura and Delta. The heavy rains of Beta saturated the soil and made trees more susceptible to being thrown over by winds.

Assessing the volume and value of timber lost to these hurricanes was facilitated by coordination between multiple agencies and the LSU AgCenter. Shortly after Hurricane Laura, a hurricane recovery task force was organized and coordinated by the Louisiana Forestry Association.

This task force consisted of representatives from the forestry industry, Louisiana Department of Agriculture and Forestry (LDAF), U.S. Department of Agriculture Forest Service, LSU AgCenter and others. The task force held a series of online meetings to gather information on industry and forestland impacts and efforts among task force partners to determine damages. The LDAF, Forest Service and LSU AgCenter partnered to gather and analyze damage data. The LDAF performed aerial reconnaissance soon after Hurricane Laura passed through the state, and the Forest Service worked with LDAF to integrate that data into geographic information systems. The LSU AgCenter used the aerial data to

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Table 1. Estimated area, volumes and values of timber damaged by Hurricane Laura. All volumes are in tons.

Parish	Acres	Pine pulpwood	Pine chip-and-saw	Pine sawtimber	Hardwood pulpwood	Hardwood sawtimber	Total value of damaged timber
Allen	89,284	422,781	649,921	2,112,027	635,143	1,120,260	\$76,658,574
Beauregard	162,423	438,319	484,016	2,477,904	377,885	909,459	\$143,024,797
Bienville	2,131	14,245	19,612	67,879	4,741	8,516	\$359,725,203
Caddo	273	1,591	2,644	14,937	1,341	4,237	\$5,813,362
Calcasieu	188,292	187,754	214,713	1,018,133	306,100	693,688	\$4,708,346
Caldwell	482	1,487	2,212	9,801	3,837	9,106	\$9,395,022
Cameron	273	35	33	164	55	118	\$15,090,142
Claiborne	3,627	16,252	35,661	217,426	7,842	29,424	\$3,201,387
Evangeline	273	498	704	8,921	857	5,690	\$6,356,728
Grant	25,091	94,134	203,538	2,367,087	83,843	597,268	\$4,527,148
Jackson	4,208	15,329	35,537	92,857	27,188	44,463	\$20,683,414
Jefferson Davis	11,780	7,699	7,316	60,421	26,430	95,272	\$59,476,954
LaSalle	774	3,709	5,985	24,808	5,043	11,561	\$867,802
Lincoln	2,176	6,266	9,092	62,597	11,805	43,102	\$21,603,510
Natchitoches	8,630	23,237	63,665	271,808	75,705	212,119	\$111,376,960
Ouachita	14,976	10,234	19,023	149,478	64,395	294,719	\$1,583,582
Rapides	89,233	230,377	575,918	2,915,649	342,109	1,108,238	\$166,261,100
Sabine	3,433	11,372	28,872	112,306	11,178	27,944	\$147,681,426
Union	6,908	21,818	33,928	257,720	27,318	113,138	\$598,071
Vernon	160,416	772,971	1,570,221	8,119,990	362,541	1,125,467	\$7,736,205
Webster	2,053	11,456	38,269	100,138	5,899	10,642	\$12,822
Winn	20,004	97,541	205,052	950,094	158,458	445,705	\$7,194,623
Totals	796,739	2,389,116	4,205,945	21,412,158	2,539,723	6,910,146	\$1,166,614,600

Table 2. Estimated area, volumes and values of timber damaged by Hurricane Delta. All volumes are in tons.

Parish	Acres	Pine pulpwood	Pine chip-and-saw	Pine sawtimber	Hardwood pulpwood	Hardwood sawtimber	Total value of damaged timber
Allen	17,093	80,942	124,429	404,354	195,274	214,477	\$28,274,102
Beauregard	26,892	72,571	80,137	410,260	95,398	150,577	\$23,680,284
Calcasieu	29,958	29,872	34,162	161,990	74,684	110,369	\$12,196,802
Caldwell	1,677	5,177	7,699	34,114	21,341	31,695	\$3,020,428
East Feliciana	3,420	7,412	20,709	225,557	31,643	130,938	\$14,442,674
Grant	5,503	20,646	44,642	519,179	30,963	131,000	\$24,428,616
Natchitoches	7,030	18,929	51,863	221,420	106,851	172,796	\$17,598,638
Ouachita	1,134	775	1,440	11,321	8,048	22,321	\$1,566,547
Rapides	16,156	41,712	104,276	527,909	106,186	200,658	\$30,103,355
Vernon	26,289	126,674	257,328	1,330,706	99,227	184,441	\$58,951,853
West Feliciana	4,050	2,452	7,927	108,266	72,569	384,445	\$23,360,247
Winn	20,004	97,541	205,052	950,094	265,837	445,705	\$59,476,953
Totals	159,208	504,710	939,670	4,905,176	1,108,027	2,179,427	\$297,100,504

Forestry Stats at a Glance:

22

PARISHES DAMAGED
BY HURRICANE LAURA

80,000

ACRES OF TIMBER LOST
FROM LAURA

\$1.2

BILLION OF TIMBER DAMAGED
DURING HURRICANE LAURA

12

PARISHES DAMAGED
DURING HURRICANE DELTA

\$297

MILLION OF TIMBER LOST
DURING HURRICANE DELTA

\$1.5

BILLION IN TOTAL TIMBER
DAMAGE DURING BOTH
HURRICANES IN 2020

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determine the forestland area lost in each parish and the Forest Inventory Analysis data of the Forest Service to estimate the timber volumes lost within the lost forestland area. These procedures were repeated after Hurricane Delta.

Hurricane Laura damaged forests in 22 parishes with a total area of lost timber of nearly 800,000 acres. This area is roughly equal to the entire acreage of Beauregard Parish. A total of \$1.2 billion of timber was damaged by Laura. The top parishes in terms of timber value lost were all located in southwestern, central and north central Louisiana (Table 1). Vernon and Rapides parishes were especially hard hit due to the presence of the Kisatchie National Forest, which has large areas of relatively old, large trees.

Forests of 12 parishes sustained damages from Hurricane Delta. The total value of timber lost to Delta was approximately \$297 million. As with Laura, the parishes losing the highest volumes and values of timber were those with the Kisatchie National Forest. Vernon and Rapides parishes were once again hit hard by the hurricane; Winn Parish also lost a high amount of timber volume and value (Table 2).

In total, the hurricanes of 2020 wrought approximately \$1.5 billion in timber damage. This value is worth nearly twice what timber cutting generates in mill-delivered timber revenues in one year in Louisiana. The volumes of lost timber could conservatively supply enough wood to keep one paper mill, six paneling mills and 26 sawmills operating for one year. Unfortunately, there is little potential to salvage this downed timber. Salvage logging is inherently hazardous and time-consuming because trees are felled haphazardly

by the winds (Figures 1 and 2). The repeated hurricanes, tropical storm and rains that have inundated the state made much of the affected area inaccessible for months afterwards. Within about two weeks of trees being felled, fungal degradation of logs eliminates their value for salvage as sawtimber, the most valuable forest product. In 2021, a high priority must be placed on protection of the remaining forests in the hurricane-affected areas. Downed and standing damaged trees are an attractant to insects and diseases, which can spread to healthy surviving trees. Furthermore, downed trees increase the risk of wildfires. There is also a need for further accounting of the damages done to Louisiana forestry by the 2020 hurricanes. The lost values of timber described here account for only the loss of standing timber; the economic impact of losing timber is compounded by the need to “go back to square one” for forests that must be replanted instead of ever reaching their full potential for producing forest products. In addition, the vast numbers of trees lost in urban and suburban areas reduces property values.

Although these losses are challenging, forests have great resiliency. The lush climate and soils of Louisiana grow some of the most productive forests in the world, so in the years ahead much of this affected area could be back on track for growing timber. The LSU AgCenter, LDAF, Natural Resource Conservation Service, USDA Forest Service, and Farm Service Agency all provide expertise and resources to help in forest remediation and restoration. Any forest landowners in the damaged areas can contact their local offices for these agencies to get assistance.

Michael Blazier is a professor and forest management specialist at the Hill Farm Research Station.

Louisiana Stumpage Report

Fourth Quarter 2020

The fourth quarter 2020 stumpage price report indicates increases for all product classes except hardwood pulpwood, which declined from the prior quarter.

Product Class	Price Per Ton	% Change from Prior Quarter
Pine sawtimber	\$24	+4
Pine chip-and-saw	\$18	+13
Pine pulpwood	\$7	+17
Oak sawtimber	\$42	+2
Hardwood sawtimber—mixed grade	\$35	+7
Hardwood pulpwood	\$7	-13

— State average stumpage prices (\$ per ton) of Louisiana.

— This document is intended for use by forestry stakeholders of Louisiana. The source of these prices is proprietary in nature; prices are rounded per agreements to disseminate them to the public.

First Quarter 2021

The first quarter 2021 stumpage price report indicates declines in all sawtimber types and an increase in hardwood pulpwood prices relative to the fourth quarter of 2020.

Product Class	Price Per Ton	% Change from Prior Quarter
Pine sawtimber	\$23	-4
Pine chip-and-saw	\$18	0
Pine pulpwood	\$7	0
Oak sawtimber	\$41	-2
Hardwood sawtimber—mixed grade	\$31	-11
Hardwood pulpwood	\$8	+13

— State average stumpage prices (\$ per ton) of Louisiana.

— This document is intended for use by forestry stakeholders of Louisiana. The source of these prices is proprietary in nature; prices are rounded per agreements to disseminate them to the public.

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was provided by USDA NIFA grant 2018-67014-27507. The project is a collaboration between the LSU AgCenter, Louisiana Tech University, USDA Forest Service Southern Research Station in Pineville and Indiana University of Pennsylvania. Funding for the project detailed in the fall 2020 issue’s article “Conservation easement landowners’ willingness to adopt forest management practices” is provided by a cooperative

agreement with the Louisiana USDA Natural Resource Conservation Service (NRCS). The project is being conducted in collaboration with Louisiana NRCS, the LSU AgCenter and Mississippi State University. Articles in this issue were made possible through funding and collaboration with the USDA Forest Service Southern Research Station in Pineville, Louisiana USDA NRCS and Louisiana Department of Agriculture and Forestry.



Hurricane Laura and Wild Turkeys in Kisatchie National Forest

*By Chad Argabright, Cody Cedotal
and Bret Collier*

Wild turkeys are a very resourceful and resilient species that thrives in a variety of habitat types across North America. Highly adaptable, wild turkeys regularly cope with a wide array of environmental conditions ranging from simple variation in weather conditions to significant natural disasters. In the southeastern United States, the

most common natural disaster comes in the form of hurricanes. Hurricane damage most often includes flooding via storm surge or heavy rains and extreme wind along the hurricane's path. Both can cause long-term damage to wild turkey habitats. Recently, Hurricane Laura affected a wide swath of western Louisiana from the Gulf Coast to the Arkansas border. Portions of the Kisatchie National Forest and the

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Fort Polk and Peason Ridge wildlife management areas, where a long-term collaborative research project between the Louisiana Department of Wildlife and Fisheries, U.S. Department of Agriculture Forest Service, U.S. Department of Defense and the School of Renewable Natural Resources at Louisiana State University is in progress, were directly in the path of Hurricane Laura. This enabled researchers to evaluate how the areas used by wild turkeys were impacted by Hurricane Laura.

What damage was done?

One form of hurricane damage is flooding. Short-term flooding that lasts a couple days does not usually have a direct effect on wild turkeys, as most turkeys can avoid the flooding by moving to higher ground or seeking refuge in treetops. Nest loss due to hurricanes is infrequent because most hurricanes along the Gulf Coast occur between June and October, which is well after most of the wild turkey nesting season. For example, in 2020, over 80% of nests were initiated by June 1. While coastal flooding is a significant threat during hurricanes, upland flooding in areas similar to the Kisatchie National Forest is usually short-lived. Hurricane Laura dropped 4 to 5 inches of rain over several hours, but the water had dissipated across most areas outside of hardwood riparian corridors by the next day.

The second, and likely greater cause of damage in upland systems during hurricanes, is wind. Even the largest trees begin to break or uproot in winds over 90 mph, and the Kisatchie National Forest study

What is of significantly more importance for wild turkeys is the long-term effects of the damage to the forest and the loss of habitat due to Hurricane Laura. Reports from the AgCenter indicated that Vernon Parish experienced approximately \$360 million in timber losses across 160,000 acres, and that the region may have lost 750,000 acres costing \$1.1 billion in damage due to Hurricane Laura.

area saw consistent gusts from 90 to 110 mph during Hurricane Laura. Hurricane Laura passed through our study areas around noon on August 27, so wild turkeys were on the ground when the storm hit. Interestingly, in past studies there has been evidence of direct mortality due to hurricanes resulting in approximately 5% of tagged birds being killed during hurricanes, and evidence suggests that the turkeys were crushed by falling trees or branches, perhaps while on the roost at night. However, in Louisiana, we were monitoring 29 wild turkeys during the storms, and none died as a direct result of Hurricane Laura.

What is of significantly more importance for wild turkeys is the long-term effects of the damage to the forest and the loss of habitat due to Hurricane Laura. Reports from the AgCenter indicated that Vernon Parish experienced approximately \$360 million in timber losses across 160,000 acres, and that the region may have lost 750,000 acres costing \$1.1 billion in damage due to Hurricane Laura. The loss of upland, fire-maintained pines will impact wild turkey nesting ecology in the near

term until timber removal and prescribed fire can be reapplied to the landscape. Additionally, the national forest saw significant damage to both riparian and upland hardwoods interspersed throughout the pine forests. Wild turkeys regularly use these hardwood stands, which provide diverse plant communities and hard mast. Finally, because of the significant amount of tree fall, we expect that movements by wild turkeys will change, as wild turkeys usually avoid areas that are difficult to walk through and areas where visibility is limited. The wide distribution of dead snags and fallen timber across the landscape, when combined with additional sunlight hitting the ground and the burst of vegetative growth that will follow, will likely cause wild turkeys to avoid heavily impacted areas for some time. The impact of Hurricane Laura was disastrous, but with ongoing management such as timber salvage operations, reforestation efforts and frequent prescribed burning by the USDA Forest Service, U.S. Department of Defense and other agencies, the negative short-term effects can be lessened. In fact, the affected area may become an even more diverse and attractive forest for wild turkeys in the future.

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Wide-ranging damages sustained in Louisiana's Kisatchie National Forest

By Mary Anne S. Sayer

Forest landscapes are constantly changed by natural disturbances, and the piney woods of Louisiana's Kisatchie National Forest are no exception. Extreme wind events recently reshaped portions of the forest's 182,000-acre Calcasieu Ranger District, which falls within Rapides and Vernon parishes. A 60-mile tornado path in December 2019 devastated 2,500 acres of pine and hardwood timber near Kincaid and

Valentine lakes. With summer's end, 75% of this loss was salvaged only to be followed by hurricanes Laura and Delta destroying an additional 95,000 acres across the forest. Light to moderate hurricane damage also occurred across 200,000 of the forest's acreage. Immediate actions of local U.S. Department of Agriculture Forest Service staff and the Southern Area Incident Management Team Gold ensured the safety of

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Above: Throughout the Kisatchie National Forest, red cockaded woodpecker cavity trees are identified by white bands. Hurricane Laura caused many cluster trees with artificial cavities to snap at the tree height of cavity installation. Photo by Matt Pardue, KNF Wildlife Biologist.

Left: In a research study of underplanted longleaf pine seedling growth on the Southern Research Station's Palustris Experimental Forest, Hurricane Laura uprooted and snapped many trees in the slash pine overwood. Fortunately, less damage was done to a second installation of the study on the nearby Louisiana Department of Wildlife and Fisheries Little River Wildlife Management Area. Photo by Mary Anne Sword Sayer.

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nearby landowners, cleared roads of downed timber, and began an assessment of timber losses. They are currently guiding salvage and reforestation efforts.

When Mother Nature took aim at the majestic pines of Kisatchie National Forest (KNF), timber losses were lamented and rightly so. Most downed KNF timber ranged in age between 60 and 100 years of age. The rotation age of Kisatchie's loblolly pine is 80 years, and that of shortleaf and longleaf pine is 120 years, indicating much of this lost resource was in its prime. Of equal concern are storm effects on unique nontimber assets. For example, the KNF is home to a showcase of conservation focused on restoring its once vast longleaf pine ecosystems.

Longleaf restoration success on the Vernon and Evangeline units was not only impacted by tree loss but also by disruption of a ground layer dominated by plants such as bluestem grasses that provide fuel uniformity during prescribed fires. Longleaf pine ecosystems require open stands filtering sunlight to the forest floor as well as frequent fires to perpetuate native flora and fauna. Recent hurricanes pummeled parts of the Calcasieu Ranger District where decades of dedicated management re-created a longleaf pine landscape like that cutover in the early 1900s. Both the Calcasieu Ranger District and Fort Polk Military Base in Vernon Parish contain important reference ecosystems that provide examples of native upland and flatwoods longleaf pine forests. Information from these distinct forests guides longleaf pine restoration in the western Gulf region and is one reason why this part of Vernon Parish is highlighted

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as a significant landscape in the America's Longleaf Restoration Initiative. Over coming years, ground-layer recovery will be monitored and prescribed fires will be tailored to reestablish the cycle of sunlight, fuel production and fire that sustains these ecosystems.

Efforts to conserve KNF's federally listed species, such as the red-cockaded woodpecker (RCW), were also set back by Louisiana's late summer hurricanes. Artificial cavities are commonly used to enhance roosting and nesting habitat within RCW clusters, which can contain as many as 20 mature trees. The Calcasieu Ranger District currently monitors close to 300 active RCW clusters. Many cluster trees with artificial cavities snapped at a height of about 22 feet where cavities were inserted. As hurricanes Laura and Delta advanced, their wake contained displaced RCW clusters amid timber debris. As soon as it was safe, chainsaw crews cut paths through the downed trees to access damaged RCW clusters. The goal was insertion of new cavities in surviving trees near affected RCW clusters to shelter displaced birds. Rapid action to save Kisatchie's RCW clusters not only preserved long-term efforts to grow a healthy RCW population but also ensured these clusters would continue providing breeding pairs to enrich RCW populations throughout longleaf country as restoration efforts continue.

Planted seedlings are vital to longleaf pine restoration, and the Palustris Experimental Forest on 7,500 acres of the Calcasieu Ranger District is credited with a legacy of

experiments leading to modern-day containerized seedlings and seasonal prescribed fire guidelines. In addition to sustaining stands that feed current longleaf pine stem growth models, this experimental forest now serves as an outdoor longleaf pine laboratory. While Hurricane Laura's winds in excess of 100 mph toppled intermittent trees throughout the Palustris, they caused sweeping damage — by uprooting and snapping — to a new stand conversion study designed to optimize longleaf seedling growth under the partial shade of mature slash pines. An assessment of overwood damage indicated that recovery as a replicated study is not possible. This five-year effort of the Forest Service's Southern Research Station and Kisatchie National Forest is considered a significant nontimber casualty of Hurricane Laura. Elsewhere on the Palustris Experimental Forest, tree damage is being inventoried with information added to long-term data sets.

Also impacted by Hurricane Laura was the 566-acre Stuart Seed Orchard on the Catahoula Ranger District in Grant Parish, where loblolly, shortleaf, longleaf and slash pinecones are collected annually. Each tree in the orchard is a first- or second-generation selection that was reproduced vegetatively. This is called a ramet. The orchard's cones supply a portion of the seed to regenerate southern pines throughout the Southeast and are central to shortleaf and longleaf restoration efforts in the western Gulf region. In addition to wind-loss of the immature 2020 cone crop slated for harvest in late September, 362 cone-producing ramets were destroyed or severely damaged by Hurricane Laura. After extensive orchard cleanup, lost ramets will

be replaced by those most recently selected for superior vigor in the western Gulf region.

Beyond wind-thrown timber, delayed loss of scattered trees throughout KNF is likely to occur over the next several years. Visible tree hazards within recreation areas, on trails and adjacent to roads were immediately addressed by a partnership between KNF and the U.S. Forest Service Forest Health Protection (FHP) Alexandria Field Office. Most of this work was completed by midfall, allowing many popular hunting camps, campgrounds and trails to reopen. Presently, a few extensively damaged recreation areas on the KNF remain closed. Special funding at the national level has been requested to aid these repairs. Extreme wind that stretches and twists mature trees can cause "hidden" damage that reduces the flow of water from roots to shoots. Whether this damage leads to water stress followed by poor tree health and insect or disease susceptibility depends on multiple factors, such as rainfall, stand density and soil type. This damage lag causes considerable concern when patches of trees surviving a tornado or hurricane later experience water stress, which, in turn, may attract insect pests, such as bark beetles. Recently installed research where 2019 tornado damage occurred on the KNF is being conducted by the Southern Research Station to predict the likelihood of a post-tornado bark beetle outbreak in stands of different densities. Results will help KNF silviculturists stay one step ahead of bark beetle infestations after future tornadoes.

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USDA Forestry Assistance

By Rick Williams

Hurricanes and tornadoes swept through Louisiana during 2020, causing catastrophic damage to homes, farms and forests. Many landowners and public agencies' forestlands were damaged by these major storms. For those affected by these storms, there is help available from a variety of sources. This article will highlight assistance available from the Natural Resource Conservation Service (NRCS). The NRCS can assist forestland owners whose lands have suffered damage from the major storm events during 2020. NRCS staff can make an on-site visit or use information obtained from a qualified forestry professional to plan a course of corrective action. The course of action will depend upon the amount and type of damage that occurred on the property. Some of the available options include woody residual treatments, site preparation and tree planting, or forest stand improvement.

Woody residual treatment is the treatment of residual woody material that is created because of management activities or natural disturbances, such as ice storms, tornadoes, hurricanes, wildfires and other natural causes, to reduce the fuel load, improve access and achieve management objectives. A variety of methods is available to conduct a woody residual treatment, including piling, burning, chipping, mulching, lop and scatter, crushing, and off-site removal. The method chosen to clean up the debris should be capable of reducing the debris so that it does not interfere with other management activities.

Site preparation and tree planting may be used if the stand of trees is a total loss or damage is so severe that the residual trees will not be a viable

option to manage. There are several site preparation alternatives, but with a lot of tree damage the more likely option will be to use heavy equipment to shear and pile the debris. The piled debris may be burned if conditions allow for burning. The site preparation treatment must be followed by tree planting. This is an excellent opportunity for landowners to move their forestland goals to meet their objectives.

If the damage is not too severe and there are enough standing residual trees following the major storm events, a landowner could select from an array of improvement practices to clean up the debris. There are many practice options to select from under forest stand improvement. There are many other forestry practices that may be drawn

For a landowner to get started with the process for NRCS assistance, contact one of the following individuals. These individuals will assign the evaluation of your property to the appropriate service staff.

For NRCS assistance: Contact the district conservationist administering the resource area where your parish is located.

Louisiana Area Resource Units (LARU)

- **LARU 1:** Glenn Austin, Natchitoches Field Office, 318-357-8366 Ext. 3. **Parishes:** Caddo, Bossier, Bienville, DeSoto, Red River and Natchitoches.
- **LARU 2:** Brant Bradley, Ruston Field Office, 318-255-3136 Ext. 3. **Parishes:** Webster, Claiborne, Union, Lincoln, Jackson, Caldwell and Ouachita.
- **LARU 6:** Dana Shuff, Colfax Field Office, 318-627-3751 Ext. 3. **Parishes:** Grant, LaSalle, Catahoula, Rapides and Avoyelles.
- **LARU 7:** Corby Moore, DeRidder Field Office, 337-463-8555 Ext. 3. **Parishes:** Beauregard, Allen, Vernon and Sabine.
- **LARU 8:** Josh Soileau, Opelousas Field Office, 337-942-2530 Ext. 3. **Parishes:** Evangeline and St. Landry.
- **LARU 11:** Andrea Bridgewater, Lake Charles Field Office, 337-474-1583 Ext. 3. **Parishes:** Calcasieu, Jefferson Davis and Cameron.

upon to restore a forested property, and an on-site inspection will determine what's best.

The most important thing to remember when dealing with storm-damaged timber is not to rush to hasty decisions. With a little work and planning, damaged stands can be brought back, and within a few years it is hard to tell they were ever damaged. Secondly, assistance is available. There will be paperwork and eligibility requirements, but this is doable. Going through the process will at least provide you with some options for dealing with the woody debris in your forest.

Rick Williams is the Louisiana State Forester with the U.S. Department of Agriculture Natural Resource Conservation Service.



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